44th INTEGRATED ANNUAL REPORT 2019-20

VISION

To be the World's Leading Power Company, Energizing India's Growth

MISSION

"Provide Reliable Power and Related Solutions in an Economical, Efficient and Environment Friendly Manner, Driven by Innovation and Agility"

CORE VALUES

ICOMIT

Integrity
सत्यनिष्ठा

Customer Focus
ग्राहक को प्रधानता

Organisational Pride
संगठन पर गौरव

Mutual Respect and Trust
परस्पर विश्वास एवं आदर

Innovation and Learning
नवप्रवर्तन एवं ज्ञानार्जन

Total Quality and Safety
संपूर्ण गुणवत्ता एवं सुरक्षा

CORPORATE OBJECTIVES

BUSINESS PORTFOLIO GROWTH

- To sustain NTPC's position as the leading power generation company in the world.
- To broad base the generation mix with significant proportion of clean energy sources.
- To enable the generation fleet to operate at optimum efficiency while meeting the demand and stability in the grid.
- To diversify into emerging businesses and markets across the power value chain including coal mining, power trading, ancillary services, E-mobility, storage and related adjacencies.
- To establish a strong services brand in domestic and international markets.

CUSTOMER FOCUS

- To foster a collaborative style of working with customers, growing to be a preferred brand for supply of quality and reliable power.
- To expand the customer portfolio through profitable diversification into downstream business inter alia E-mobility and direct supply.
- To ensure rapid commercial decision making, using customer specific information, with adequate concern for the interest of the customer.
- To adapt business models and organisation structures to capture value which is progressively shifting towards the customers.

AGILE CORPORATION

- To ensure effectiveness in business decisions and responsiveness to changes in the business environment by:
  - Adopting a portfolio approach to new business development.
  - Continuous and co-ordinated assessment of the business environment to identify and respond to opportunities and threats
- To create lean organization and business processes.
- To develop a learning organization having knowledge-based competitive edge in current and future businesses.
- To develop a culture of curiosity and innovation in learning and adopting new technologies, business models and operational philosophies in line with the evolving market and changing customer needs

PERFORMANCE LEADERSHIP

- To continuously strive for innovation in reducing costs, enhancing operational flexibility and in addressing changing customer needs.
- To continuously improve on project execution time and cost in order to sustain long term competitiveness.
- To effectively leverage Information Technology to drive process efficiencies and enable system flexibility in line with the market needs.
- To create capabilities to attain leadership in the new and emerging businesses.
- To embed quality and safety in all systems and processes.
- Support evolution of power markets to meet customer needs through products, platforms, services etc. to create a win-win opportunity across stakeholders.
- To lead development efforts in the Indian power sector through stakeholder consultation.
- To assist in capacity creation of key stakeholders.

HUMAN RESOURCE DEVELOPMENT

- To enhance organizational performance by institutionalizing an objective and open performance management system.
- To align individual and organizational needs and develop business leaders by implementing a career development system.
- To build a lean organization with diverse skills and high ability to adapt to change
- To build and sustain a learning organization of competent world-class professionals.
- To institutionalize core values and create culture of team-building, ownership, empowerment, equity, innovation and openness which would motivate employees and enable achievement of strategic objectives.

FINANCIAL SOUNDNESS

- To maintain and improve the financial soundness of NTPC by prudent management of the financial resources.
- To continuously strive to reduce the cost of capital through prudent management of deployed funds, leveraging opportunities in domestic and international financial markets.
- To promote innovative funding models to support entry into new businesses and sustain long term growth.
- To develop appropriate commercial policies and processes which would ensure remunerative tariffs, balance capital work-in-progress and minimize receivables.

SUSTAINABILITY AND CORPORATE SOCIAL RESPONSIBILITY

- To deliver business and environmental value through projects which are beneficial for business and larger ecosystem.
- To ensure sustainable power development by ensuring minimal wastage across operations.
- To actively contribute towards societal development.
- To lead the sector in the areas of resettlement and rehabilitation and environment protection including effective ash-utilization, peripheral development and energy conservation practices.

RESEARCH & DEVELOPMENT

- To undertake R&D initiatives in sync with the overall business portfolio.
- To pioneer the adoption of reliable, efficient and cost-effective technologies by carrying out fundamental and applied research in alternate fuels and technologies.
- To collaborate with leading institutes, technology players and service providers, particularly in the area of power plant construction, generation technology, operations, renewable energy sources, storage, e-mobility, etc. that can contribute towards efficiency, reliability and environment friendliness.

REFERENCE INFORMATION

Registered Office

NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi-110 003
Phone No.: 011-2436 0100
Fax No. . 011-2436 1018
Email: ntpccc@ntpc.co.in
Web site: www.ntpc.co.in
CIN: L40101DL1975GOI007966

Registrar & Share Transfer Agent for Equity Shares

M/s Alankit Assignments Limited,
Alankit House, 4E/2, Jhandewalan Extension,
New Delhi-110055
Contact Person: Shri Mahesh pandey,
Shri Surinder Sharma
Tel No.: 011-42541234
Fax No.: 011-41543474
Email: alankit_ntpc@alankit.com

Depositories

National Securities Depository Limited
Central Depository Services (India) Limited

Shares listed at

National Stock Exchange of India Limited
BSE Limited

Subsidiaries (as on 31.03.2020)

NTPC Electric Supply Company Ltd.
NTPC Vidyut Vyapar Nigam Ltd.
Kanti Bijlee Utpadan Nigam Ltd.
Bhartiya Rail Bijlee Company Ltd.
Patratu Vidyut Utpadan Nigam Ltd.
Nabinagar Power Generating Company Ltd.
NTPC Mining Ltd.*
THDC India Ltd.@
North-Eastern Electric Power Corporation Ltd.@
*Incorporated on 29/8/2019
@Acquired w.e.f. 27/3/2020

Company Secretary

Ms. Nandini Sarkar

Auditors

1. M/s S.K.Mehta & Co.
2. M/s S.N.Dhawan & Co LLP
3. M/s Varma & Varma
4. M/s Parakh & Co.
5. M/s C.K.Prusty & Associates
6. M/s B.C.Jain & Co.
7. M/s V.K.Jindal & Co.

Bankers

Allahabad Bank
Axis Bank
Bank of India
Canara Bank
Central Bank of India
HDFC Bank
ICICI Bank
IDBI Bank
Indian Overseas Bank
IndusInd Bank
Oriental Bank of Commerce
Punjab & Sind Bank
Punjab National Bank
State Bank of India
Syndicate Bank
Union Bank
United Bank of India
UCB
Yes Bank

SUPPORT 'GREEN INITIATIVE'

GREEN INITIATIVE IN THE CORPORATE GOVERNANCE

The Ministry of Corporate Affairs has takes a "Green Initiative in the Corporate Governance" by allowing paperless compliances by the companies and has issued circulars stating that service of notice/ documents including Annual Reports can be send by e-mail to its members. To support this green initiative of the Government in full measure, members who have not registered their e-mail addresses, so far, are requested to register their e-mail address, in respect of electronic holdings with the Depository through their concerned Depository Participants. Members who hold shares in physical form are requested to get their e-mail address registered with Alankit Assignments Limited, RTA of the Company.

CONTENTS

CONTENTS

Annual General Meeting

Date	:	**24th September, 2020**
Time	:	**10:30 A.M.**
Venue/Mode	:	**Video Conferencing ("VC")/ Other Audio-Visual Means ("OAVM")**

NTPC, Simhadri Super Thermal Power Project

About the REPORT

SCOPE OF THE REPORT

The NTPC Integrated* Annual Report has been prepared in accordance with the <IR> Framework laid down by the International Integrated Reporting Council (IIRC). Also, other frameworks such as GRI Standards "Comprehensive" with EUSS, National Voluntary Guidelines (NVGs), United Nations Sustainable Development Goals (UN SDGs) and the United Nations Global Compact (UNGC) principles has been referenced in the content preparation. The financial and statutory information in this report is in accordance with the requirements of the Companies Act, 2013, Indian Accounting Standards, the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and the Secretarial Standards.

BOUNDARY OF THE REPORT

This report covers the business activities of NTPC Limited and its Joint Ventures & Subsidiaries covering electricity generation (Thermal, Renewables, Hydro), Consultancy, Business Development, NETRA and Energy Trading. All stations/ plants considered in current report are located in India and are under operation. The report covers data and information for the period April 1, 2019 to March 31, 2020. There have been considerable changes in the installed capacity of power generation plants during this reporting period. Also, there is change in share ownership structure of the company due to disinvestment by GoI. The details have been provided in the manufacturing capital section of this report.

REPORT METHODOLOGY

For collection of data on performance indicators, a uniform approach is followed across all NTPC stations. Collected data is then processed at individual operating stations in accordance with universally accepted methodologies following approaches of measurement, calculation and analysis. There is no re-statement or significant change in measurement methods applied in this report with respect to the previous report, except if mentioned, wherein applicable. Report content and aspect boundary provided in the report has been reviewed and approved by top management of the company.

ASSURANCE OF THE REPORT

Non-financial information in this report, has been independently assured by M/s KPMG , India. A reasonable assurance was conducted in accordance with ISAE 3000 Standards, covering qualitative and quantitative information.

NTPC appreciates feedback from all stakeholders. For any additional information regarding sustainability report, please reach out to the addresses given below:

Headquarter

NTPC Limited
(A Govt. of India Enterprise)
NTPC Bhawan,
Core-7, Scope Complex
7, Industrial Area, Lodhi Road
New Delhi-110003

CSO's Office

Engineering Office Complex (EOC)
NTPC Limited
Sector - 24, Noida - 201 301 (U.P.)
Email- sustainability@ntpc.co.in
Phone: (+91) 120 - 2410350,
Fax: (+91) 120 - 2410500

*First Integrated Report

View of NTPC Ramagundam Super Thermal Power Project

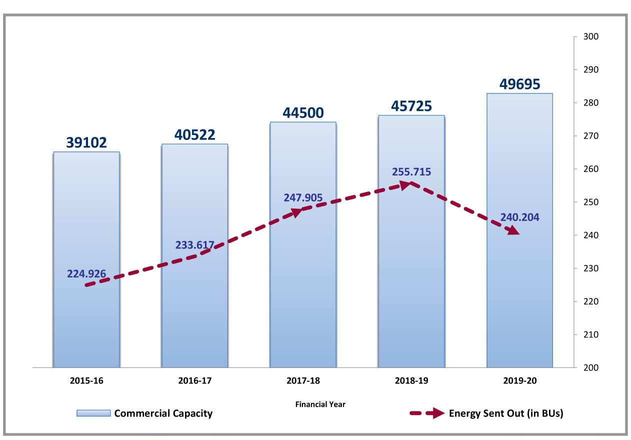
THE YEAR AT A GLANCE

		2019-20	2018-19
Gross generation	Million Units	259618	274454
Commercial generation	"	257829	273540
Energy sent out	"	240204	255715
Sale of energy (including electricity duty)*	₹ Crore	96841	89316
Profit before tax	"	14466	12673
Profit for the year	"	10113	11750
Dividend	"	2968	4923
Dividend tax	"	608	1000
Retained profit	"	6537	5827
Total fixed assets	"	230171	216827
Net worth	"	113569	107408
Total non-current borrowings including current maturities	"	152694	127430
Capital employed	"	147014	131354
Net cash from operations	"	22014	16157
Value added	"	37587	33571
No. of employees	Number	17398	18359
Value added per employee	₹ Crore	2.16	1.83
Debt to equity	Ratio	1.35	1.19
Debt service coverage ratio (DSCR)	Times	2.07	2.21
Interest service coverage ratio (ISCR)	Times	4.45	5.26
Return on capital employed	%	10.48	12.51
Face value per share	₹	10.00	10.00
Dividend per share	"	3.00	5.97**
Book value per share	"	114.78	108.55
Earnings per share	"	10.22	11.88

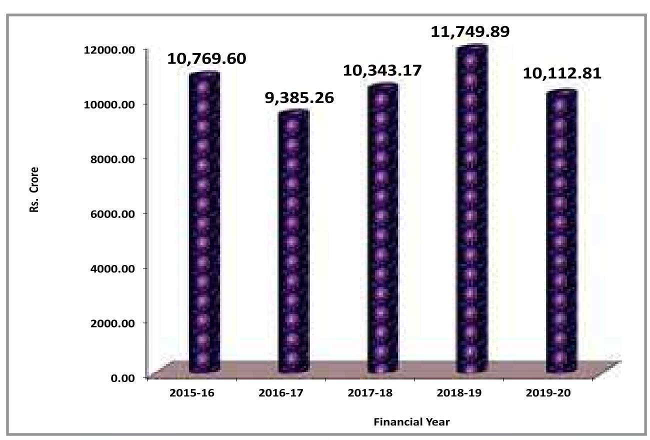
* Including Sale of energy through trading.
** Bonus Shares issued in March 2019 in the proportion 1 equity share for every 5 existing equity share

THE YEAR AT A GLANCE

Commercial Capacity & Energy Sent Out



Profit for the Year



Letter to Shareholders

Dear Shareholders,

We are in the midst of a global public health crisis which is threatening the entire humanity. The spread of COVID-19 virus has presented extraordinary challenges to the global economy and human livelihood. Our Government has taken steps for containing the spread of COVID-19. Everyone has been rightfully applauding the front line Corona warriors including medical professionals and essential service providers. Your Company is also provider of essential services.

Electricity is an essential part of our lives. Its importance has further increased during this period as it is critical in providing emergency services and facilitating lifesaving equipment. Electricity supply along with internet services has been the key to keep the businesses, hospitals, schools and offices running as a majority of people have started working from home. This has clearly brought additional responsibility on your Company and the work being done at the power stations to keep up the generation is noteworthy and needs to be acknowledged and applauded.

At the same time, your Company has taken all the measures to keep the generators on bar to meet the grid demand while complying with the required protocols as specified by the Government of India, State Government and local administration where we have operations and the situation is being reviewed on a daily basis. Further, your Company has maintained constant communication and dialogue with all the stakeholders. Your Company has also taken proactive measures to prioritize the health of its employees and their families.

As a responsible organization, your Company has extended support to Government agencies in every possible manner. This has been done by supplying essential food items for the needy as well as providing medical equipment and hospital facilities to the local authorities.

Before presenting the performance highlights, I would like to say thanks to each one of you for your continued support and investment in NTPC. This is also wishing that all of you stay safe and healthy.

Physical Performance:

Your Company had shown outstanding performance in FY'20 as well and achieved several milestones in operations, new capacity addition and on the renewable energy front.

Your Company has set a new benchmark by adding 5,290 MW of commercial capacity, which is the highest ever achieved in any year since inception. Another important event has been the acquisition of Government of India's stake in NEEPCO and THDC which has added substantial hydro capacity to your Company's portfolio. Even during the COVID period, 984 MW of commercial capacity has been added, which demonstrates NTPC's inherent resilience. With all these, your Company has become a 63 GW Company.

On the generation front, the Company's group generation stood at over 290 BUs in FY 20. There is slight decrease in the total generation when compared to previous year due to reduction in demand and extended monsoon season. However, we could significantly reduce the under recovery of capacity charges when compared to previous years and improved machine availability. In FY20, your Company's PLF has consistently maintained a positive difference of over 12% as compared to the National PLF. Company's coal stations achieved a PLF of 68.20% during the year 2019-20 as against National PLF of 55.89% and four stations of NTPC figured in top ten stations list of the country in terms of PLF.

Your Company has recorded the highest ever single day generation of 977.07 MUs on July 28, 2020. Additionally, your Company's 1st and the oldest Unit, Singrauli Unit#1 which was put to commercial operation in 1982 has registered a PLF of 101.96% in Q1 FY21, which is the highest in the country. The feat achieved by the 38 years old Unit strongly reflects the Operation and Maintenance practices being adopted by your Company and the competency of people operating the Units.

Financial Performance:

In FY'20, your Company recorded a profit of ₹ 10,112.81 Crore. The profit before tax is ₹ 14,465.92 Crore as against ₹ 12672.52 Crore in the previous year, registering an increase of 14.15%. The total income has crossed ₹ 1,00,000 Crore for the first time and the Company declared dividend of ₹ 3,117 Crore to shareholders. This is the 27th consecutive year that the Company has paid dividend.

In FY'20, your Company incurred capital expenditure of ₹ 36,618 Crores (including ₹ 11,500 Crores for acquisition of GoI stake in THDC and NEEPCO).

Renewable Energy:

Your Company has changed its focus completely and is pursuing renewable capacity addition aggressively. We have taken the decision not to acquire any further land for thermal projects in near future and the entire focus will be on carbon free sources.

Contracts have been awarded and work has started for adding over 2 GW of solar PV capacity during the year by winning various tenders through competitive bidding. Currently over 2,400 MW of RE projects are under construction including 237 MW of floating solar projects on water bodies within NTPC's existing power stations. In order to get access to large tracts of land for RE projects, discussions are in progress with State Governments for allocation of land parcels for setting up of renewable projects. These would be developed under Ultra Mega Renewable Energy Power Parks scheme of the Government of India.

Further, your Company is working on partnerships with agencies like National Investment and Infrastructure Fund (NIIF) and ONGC (a Maharatna Company and India's largest crude oil and natural gas Company) who have shown interest in working with your Company in renewable space.

To optimize cost, improve competitive edge, bring synergy in operations and to add renewables with a focused approach, your Company has taken decision for formation of a separate subsidiary Company for carrying out renewable energy business. **By 2032, your Company is aiming to add 32 GW of renewables both by organic and inorganic route and targeting to become the largest renewable energy Company in India.**

Sustainability:

Your Company has taken a major leap and adopted integrated reporting for sustainability performance disclosure along with financial disclosure. Your Company is committed to bring fundamental changes in the way of operating business to transform ourselves as the most sustainable power producer and a supplier of choice. Aligned with its sustainability priorities, your Company has formed its board level Sustainability committee to oversee ESG and climate change related issues.

In its quest to deliver sustainable and affordable energy, your Company's recent acquisition gave access to large operational hydro capacity. With this, the total zero-carbon based energy capacity reached 7%. Your Company is targeting to achieve 30% capacity through non-fossil sources by 2032. Further, with targeted RE addition, we anticipate to reduce our specific CO_2 emissions substantially over next few years.

Your Company is enhancing resource efficiency through reduced coal consumption by adopting co-firing with biomass and optimization of water consumption. Your Company is committed to championing the circular economy. Ash utilization has improved by 16% when compared to previous year. Significant thrust is being put on further increasing ash utilization effectively on a sustained basis. Further, your Company is also focusing on developing Waste-to-Energy plants and significant action has already been taken.

Your Company is diligently following ESG principles and have implemented strong ethics, fair corporate governance, effective risk management, extensive stakeholder engagement and stringent safety measures at all of its establishments.

Corporate Social Responsibility has been another focus area of your Company. Several initiatives are being taken to improve the socio-economic condition of people living nearby NTPC's plants.

An example of highly effective corporate governance practices at your Company is the fact that your Company has been adjudged as the winner of the prestigious CII-ITC Sustainability Award 2019, a great feat reflecting utmost transparency and integrity and following sustainability practices diligently.

Coal Mining:

Coal mining has been another important area, your Company is actively pursuing to reduce its dependence on coal suppliers, optimize the cost of generation, ensuring maximum dispatch of power and thereby increasing generation share.

In FY20, your Company extracted 11.15 MMT of coal from its captive mines, registering an increase of 52.5% over previous year. Coal production has started at one more mine, Talaipalli. With this, three mines are under operation and mining operations at two more mines are also in advanced stage. To further speedup the mining activity, a separate mining subsidiary, NTPC Mining Limited has been incorporated. **By 2030, your Company is aiming to meet 40% of its coal requirement from captive mines.**

Inorganic Growth:

Pursuing inorganic growth path – your Company acquired Government of India's stake in NEEPCO and THDC which gave access to 3,294 MW capacity, out of which 2,625 MW is hydro and 142 MW renewables. The acquisition helps your Company in balancing its portfolio.

Your Company has also participated in bidding for acquisition of stressed assets admitted through NCLT and has emerged as winner in 600 MW Jhabua bid. It is expected that the transaction will be completed soon.

Fund Raising:

In its endeavor to become a 130 GW Company by 2032, your Company has envisaged an aggressive capital expenditure plan which is also aligned with the National Infrastructure Pipeline of the Government of India. An action plan has been prepared by your Company for capital expenditure of over ₹1 lakh crore for the period of 2019-2024.

Your Company has adopted a dynamic debt strategy for raising long term debt at optimal cost for meeting its capital requirement. Your Company is also putting emphasis on a proactive refinancing strategy to leverage the market conditions for availing low cost debt. The success of this strategy can be gauged by the decreasing weighted average cost of borrowings which stood at 6.81% for FY20 and is expected to reduce further.

In FY20, your Company mobilized external commercial borrowings of JPY Equivalent to USD 750 Million, which was the largest ever syndicated JPY loan raised by any Indian Corporate from offshore Samurai loan market under automatic route of RBI and also the highest ever single foreign currency loan raised by your Company.

Market Environment:

Many power sector reforms are being introduced by the Government for bringing efficiency and discipline in the sector. Along with this, new market mechanism designs have been under discussion to promote competition thereby providing affordable power to the consumers.

Real Time Market (RTM) has been introduced w.e.f June 01, 2020. With this, generators will get opportunity to sell the on-bar surplus power and Discoms will get opportunity to meet any incremental power requirement. This scheme will provide the generators an opportunity to dispatch more power and at the same time generate additional revenue.

With the success of Security Constrained Economic Dispatch scheme on pilot basis, the scheme has been further extended till March 2021 covering all the willing generators so that the cheaper power will be scheduled first. This will ensure optimal dispatch in the country benefitting the customers.

Under Atmanirbhar Bharat Abhiyan, the government has facilitated Discoms with loans for clearing their dues of the generators. This is a mutually beneficial scheme as it will reduce the interest liability of the Discoms and at the same time increase the liquidity for the generators.

These are expected to bring positive changes and help in long-term sustainability of the power sector.

New Business Areas:

Your Company is actively pursuing new business areas and exploring various options for diversification of its business operations to maintain the growth trajectory.

Your Company is actively pursuing green hydrogen portfolio which aligns well with NTPC's large renewable growth plans. Your Company is working with various agencies who are pioneers in hydrogen technology and aims to have a significant share in hydrogen economy. Your Company is focusing on carbon free mobility solutions including EV charging, EV transportation / Hydrogen FCEV transportation. Your Company is also actively looking at power distribution, Waste-to-Energy, Consultancy Business and increasing global footprint.

With acquisition and participation in the bidding process for stressed assets, we have opened a new avenue for growth.

Digital Initiatives:

Your Company is taking various digital initiatives to simplify various processes, bring efficiency, speed and transparency. PRADIP (e-office) has been launched for faster processing, transparency and to avoid paper consumption. Your Company is also considering AI/ML tools for power plant operation to increase efficiency, safety, cost optimization and reduce downtime.

International Business:

Your Company is actively considering increasing geo-strategic reach. Offices were opened in Myanmar and Kenya. With this, your Company has started operations in three countries abroad.

I am pleased to inform you that your Company has received Project Management Consultancy contacts for setting up of solar projects at Togo and Mali through International Solar Alliance (ISA). Discussions are also underway with various countries for setting up solar capacity up to 10 GW through ISA platform.

Your Company is actively looking at the Middle East and African continent for business opportunities. Agreements were made with various countries for cooperation in the power sector and it is expected that we would be able to materialize few contracts.

Looking Ahead:

Since inception, your Company has maintained leadership in all aspects of power generation business. Your Company is working on adopting the latest tools and technologies to maintain leadership.

Needless to mention that the competition has become part of your Company's culture. Your Company is continuously working on increasing market share to retain leadership. Steps are being taken for bringing cultural changes to respond quickly to changes in the power sector.

Tireless efforts are underway for maximizing profitability. Steps have been taken for eliminating under recovery by ensuring fuel availability and controlling equipment forced outage. Various optimization and technological measures are being taken for resource utilization and keeping expenses under control.

On behalf of the NTPC family, I assure you that your Company will continue to put tireless efforts for maximizing profitability and bring value to its shareholders. I once again assure you that your Company has a great future ahead.

I take this opportunity to place on record my sincere thanks and gratitude to the Government of India, particularly Ministry of Power, Ministry of Coal, Ministry of Railways, Ministry of Environment, Forest and Climate Change, Ministry of New and Renewable Energy, DIPAM, CERC, CEA, CAG, State Governments, our valued Customers, Auditors, Vendors, other authorities and agencies that provide unstinted support.

I convey my appreciation to my colleagues on the Board for their invaluable contribution in strengthening the Company. I express my special thankfulness to the investors and shareholders for their sustained support to the Company.

With best wishes,

Yours sincerely,

(Gurdeep Singh)
Chairman & Managing Director

NTPC Limited
CIN: L40101DL1975GOI007966
Regd. Office: NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road, New Delhi-110 003
Tel. no.: 011-24360959 Fax: 011-24360241
Email: csntpc@ntpc.co.in Website: www.ntpc.co.in

NOTICE

NOTICE is hereby given that the **44th Annual General Meeting** of the Members of NTPC Limited will be held on **Thursday, 24th September, 2020 at 10.30 a.m.** through Video Conferencing ("VC")/ Other Audio-Visual Means ("OAVM"), to transact the following businesses:

ORDINARY BUSINESS:

1. To consider and adopt:
   (a) the Audited Standalone Financial Statements of the Company for the financial year ended 31st March, 2020, the reports of the Board of Directors and Auditors thereon; and
   (b) the Audited Consolidated Financial Statements of the Company for the financial year ended 31st March, 2020 and the report of the Auditors thereon.
2. To confirm payment of interim dividend and declare final dividend for the year 2019-20.
3. To fix the remuneration of the Statutory Auditors for the year 2020-21 .

SPECIAL BUSINESS:

4. **To appoint Shri Anil Kumar Gautam (DIN: 08293632), as Director (Finance) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Anil Kumar Gautam (DIN: 08293632), who was appointed as Director (Finance), by the President of India, vide Ministry of Power Order No. 8/3/2019-Th-1 dated 18th October 2019 and subsequently appointed as an Additional Director and designated as Director (Finance) by the Board of Directors with effect from 18th October, 2019 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Director (Finance) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.

5. **To appoint Shri Ashish Upadhyaya (DIN: 06855349), as Government Nominee Director and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Ashish Upadhyaya (DIN: 06855349), who was appointed as Government Nominee Director, by the President of India, vide Ministry of Power Order No. 20/8/2016-Coord (Pt-V) dated 14th January, 2020 and subsequently appointed as an Additional Director by the Board of Directors with effect from 22nd January 2020 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Government Nominee Director of the Company on terms & conditions as may be fixed by the Government of India and he shall not be liable to retire by rotation.

6. **To appoint Shri Dillip Kumar Patel (DIN: 08695490), as Director (Human Resources) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Dillip Kumar Patel (DIN: 08695490), who was appointed as Director (Human Resources), by the President of India vide Ministry of Power Order No. 8/4/2019-Th-1 dated 31st December 2019 and subsequently appointed as an Additional Director and designated as Director (Human Resources) by the Board of Directors with effect from 1st April 2020 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Director (Human Resources) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.

7. **To appoint Shri Ramesh Babu V (DIN: 08736805), as Director (Operations) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

   Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Ramesh Babu V (DIN: 08736805), who was appointed as Director (Operations), by the President of India vide Ministry of Power Order No. 8/7/2019-Th-1 dated 25th March 2020 and subsequently appointed as an Additional Director and designated as Director (Operations) by the Board of Directors with effect from 1st May 2020 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Director (Operations) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.

8. **To appoint Shri Chandan Kumar Mondol (DIN: 08535016), as Director (Commercial) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Chandan Kumar Mondol (DIN: 08535016), who was appointed as Director (Commercial), by the President of India vide Ministry of Power Order No. 8/15/2019-Th.1 (A-1) dated 10th June 2020 and subsequently appointed as an Additional Director and designated as Director (Commercial) by the Board of Directors with effect from 1st August 2020 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Director (Commercial) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.

9. **To appoint Shri Ujjwal Kanti Bhattacharya (DIN: 08734219), as Director (Projects) of the Company and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:**

Resolved that pursuant to the provisions of Section 149, 152 and other applicable provisions, if any, of the Companies Act, 2013, Rules made thereunder, Shri Ujjwal Kanti Bhattacharya (DIN: 08734219), who was appointed as Director (Projects), by the President of India vide Ministry of Power Order No. 8/19/2019-Th.1 dated 26th August 2020 and subsequently appointed as an Additional Director and designated as Director (Projects) by the Board of Directors with effect from 28th August, 2020 to hold office until the date of this Annual General Meeting, in terms of Section 161 of the Companies Act, 2013 be and is hereby appointed as Director (Projects) of the Company on terms & conditions as may be fixed by the Government of India and he shall be liable to retire by rotation.

10. **To alter Objects Clause of Memorandum of Association of the Company and in this regard to consider and if thought fit, to pass the following resolution as a Special Resolution:**

"Resolved that pursuant to the provisions of Section 13 and other applicable provisions, if any, of the Companies Act, 2013 and the Rules framed thereunder (including any statutory modification or re-enactment thereof for the time being in force) and subject to such other approvals as may be necessary, consent of the members of the Company be and is hereby accorded for the following modification in the Objects Clause of the Memorandum of Association of the Company:

I. Existing clause III A (1) of the objects clause shall be substituted with following clause III A (1):

To plan, promote and organise an integrated and efficient development of Thermal, Hydel, Nuclear power and power through Non-Conventional/Renewable Energy Sources including generation from municipal or other waste materials in India and abroad including planning, investigation, research, design and preparation of preliminary, feasibility and definite project reports, construction, generation, operation & maintenance, Renovation & Modernisation of power stations and projects, transmission, distribution, sale of power generated at Stations in India and abroad in accordance with the national economic policies and objectives laid down by the Central Government from time to time, the management of front and back-end of nuclear fuel cycle and ensure safe and efficient disposal of waste.

II. Existing clause III A. 4(a) of the objects clause shall be substituted with following clause III A. 4(a):

To carry on the business of purchasing, selling, importing, exporting, producing, trading, manufacturing or otherwise dealing in all aspects of planning, investigation, research, design and preparation of preliminary, feasibility and project reports, construction, generation, Operation & Maintenance, Renovation & Modernisation of Power Stations and Projects, Transmission, distribution, sale of Thermal, Hydro, Nuclear power and power generated through Non- Conventional Renewable Energy sources, power development, Electric Mobility (e-mobility) including leasing, hypothecation, procurement of e-vehicles and batteries, installation, operation and maintenance of infrastructure for electric charging , battery swapping, usable water by conversion of waste water or sea water, value added products involving sand, silica, fly ash, residue from Flue Gas Desulphurization Unit etc. and also to undertake the business of other allied/ancillary industries including those for utilisation of steam generated at power stations, and other by-products and install, operate and manage all necessary plants, establishments and works.

III. B. Heading "OBJECTS INCIDENTAL OR ANCILLARY TO THE ATTAINMENT OF THE MAIN OBJECTS" be substituted with new heading "MATTERS WHICH ARE NECESSARY FOR FURTHERANCE OF THE OBJECTS SPECIFIED IN CLAUSE III (A) ARE:-"

IV. C: "OTHER OBJECTS": Heading "OTHER OBJECTS" be deleted and its contents shall be merged with Clause III B.

Further resolved that the Chairman & Managing Director, Director (Finance) and Company Secretary of the Company, be and are hereby severally authorized do all such acts, deeds, matters and things as may be necessary and incidental for giving effect to this Resolution, including agreeing to any change to the aforesaid amendments in the Memorandum of Association of the Company, as may be required by the Registrar of Companies and/or any Statutory/Regulatory Authority."

11. **To alter Articles of Association of the Company and in this regard to consider and if thought fit, to pass the following resolution as a Special Resolution:**

"Resolved that pursuant to the provisions of Section 14 and other applicable provisions, if any, of the Companies Act, 2013 and the Rules framed thereunder (including any statutory modification or re-enactment thereof for the time being in force) and subject to such other approvals as may be necessary, consent of the members of the Company be and is hereby accorded for the following modification in the Articles of Association of the Company:

S.No.	Existing Article	Proposed amendment
1	**Article 1** **Interpretation**	- In the definition of "the Act or the said act", for the words "The Companies Act 1956", the words "The Companies Act 2013" shall be substituted.
2	**Article 2** **Table "A" not to Apply**	- In the heading of the Article 2 "Table A" shall be substituted with "Table F". - the words "Table A" and "First Schedule" shall be substituted with "Table F" and "Schedule I," respectively.
3	**Article 5** **Capital**	Existing Article shall be substituted with the following Article: - The Authorised Share Capital of the Company shall be such amount and shall be divided into such shares as may from time to time be provided in Clause V of the Memorandum of Association with power to increase or reduce the capital and divide the shares in the capital of the Company for the time being into Equity Share Capital and Preference Share Capital and to attach thereto respectively any preferential, qualified or special rights including as to voting, privileges or conditions as may be determined in accordance with these presents and to modify or abrogate any such rights, privileges or conditions in such manner as may for the time being be permitted by the said Act.
4	**Article 6** **Allotment of Shares**	- The words "Section 81," "Section 79" and "Section 77A" shall be substituted with the words "Section 62," "Section 53," "Section 68," respectively. - The words "(subject to Section 54)" are added between word "transferred or" and "for any services".
5	**Article 7** **Right of Members or Debenture holders to Certificate**	- The words "Listing Agreement" shall be substituted with SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015 (hereinafter referred to as SEBI LODR). - "three months" shall be substituted with "two months". - "One month shall be substituted with "a period, as may be prescribed under SEBI LODR". - Following sentence has been added at the end of the clause: "The provision of this Articles of Association shall mutatis mutandis apply to issue of Certificate of Debenture."
6	**Article 10.A** **Call paid in advance**	- The words "Section 92" shall be substituted with the words "Section 50".
7	**Article 15A** **Register and Index of Members**	- The words "Section 150 and 151," shall be substituted by the words "Section 88". - For the words "Companies Act 1956", the words "Companies Act, 2013" shall be substituted in paragraph 1 and 2.
8	**Article 16 (a)** **Transfer & Transmission of Shares/Debentures**	- The words "Listing Agreements between the Company and the Stock Exchanges" shall be substituted with the words "SEBI LODR".
9	**Article 16(b)** **Transfer & transmission of Shares/Debentures**	- The words "Section 111 and 111A" shall be substituted by the words "Section 58 and 59". - The words "Listing Agreements with the Stock Exchanges and Section 22A of the Securities Contracts (Regulation) Act, 1956" shall be substituted with the words "SEBI LODR."
10	**Article 16 (c)** **Transfer & Transmission of Shares/Debentures**	- For the words "Section 108," the words "Section 56" shall be substituted. - For the words "Companies Act 1956", the words "Companies Act, 2013" shall be substituted.
11	**Article 21 A** **Further issue of shares**	- The existing Article 21A shall be substituted with the following clause : "Where at any time, it is proposed to increase the subscribed capital of the Company by allotment of further shares then, the Board of Directors may issue further shares in accordance with the Act and the Rules framed thereunder to-(a) persons who, at the date of offer, are holders of equity shares of the Company; such offer shall be deemed to include a right exercisable by the person concerned to renounce the shares offered to him or any of them in favour of any other person; or (b) employees under any scheme of employees" stock option; or(c) any persons, whether or not those persons include the persons referred to in clause (a) or clause (b) above."
12	**Article 23A** **Buy Back of Shares**	- For the words "Section 77A, 77AA and 77B," the words "Section 68, 69 and 70" shall be substituted.

S.No.	Existing Article	Proposed amendment
13	**Article 24** **Reduction of capital**	- For the words "Section 100-104", the words "Section 66" shall be substituted.
14	**Article 25** **Sub-division and consolidation of shares**	- For the words "Sub-Section (i) (a) to (e) of Section 94", the words Section 61 shall be substituted.
15	**Article 25 (A) (c)** **Securities in Depositories to be in fungible form**	- The words "Nothing contained in Sections 153 of the Act shall apply to a Depository in respect of securities held by it on behalf of the beneficial owners" shall be deleted.
16	**Article 26** **Payment of Commission**	- The words "Section 76," shall be substituted with "Section 40".
17	**Article 28** **Power to Borrow**	- For the words "Section 58A, 292 and 293" the words "Sections 73, 179, 180 & other applicable provisions" shall be substituted.
18	**Article 29** **Issue at discount etc. or with special privileges**	- For the words "Section 79 and 117" the word "provisions" shall be substituted.
19	**New Heading added**	- Heading "GENERAL MEETING" shall be added above Article 30.
20	**Article 30** **Notice of General meeting**	- The words "with the consent, in writing, of all the members entitled to receive notice of same, any General Meeting may be convened by such shorter notice and in such manner as those members may think fit" shall be substituted with the words "subject to provisions of Section 101 of the Act, General Meeting can be held at shorter notice".
21	**Article 32** **Quorum**	- Article 32 shall be substituted with the following article: - "The quorum for a general meeting shall be as provided in Section 103 of the Act."
22	**Article 33** **Chairman of General Meeting**	- The words "Vice-Chairman" shall be substituted with "Senior most Director" at both places.
23	**Article 35 A** **Postal Ballot**	- The words "Companies (Passing of Resolutions by Postal Ballot) Rules, 2001" shall be substituted with "Companies (Management and Administration) Rules, 2014".
24	**Article 37** **Form of Proxy**	- Article 37 shall be substituted with the following article: - Every instrument of proxy for a specified meeting or otherwise shall as nearly as circumstances will admit be in the form as may be provided under the Act/ rules made thereunder.
25	**Article 39** **Board of Directors**	- Reference to Department of Public Enterprises Office memorandum No. DPE/11 (2)/97-Fin dated 22nd July, 1997 shall be substituted with reference to Department of Public Enterprises Office memorandum No. 22 (1)/2009-GM dated 4th February, 2010.
26	**Article 41 (i)(a)** **Appointment of Board of Directors**	- The words "including Vice-Chairman" shall be deleted.
27	**Article 41 (i)(b)** **Appointment of Board of Directors**	- The words "Section 314" shall be deleted.
28	**Article 41 (iii)** **Appointment of Board of Directors**	- The words "Section 255," shall be substituted with "Section 152". - For the words "the proviso to sub-section (2) of Section 263" the words "Section 162" shall be substituted.
29	**Article 41A** **Additional Directors**	- For the words "Section 260 and 284," the words "Section 161(1)" shall be substituted.

S.No.	Existing Article	Proposed amendment
30	**Article 42** **Alternate Director**	Article 42 shall be substituted with the following: "The President may appoint, in consultation with the Chairman of the Company, an alternate director to act for a Director during his absence for a period of not less than three months from India. No person shall be appointed as an alternate director for an independent director unless he is qualified to be appointed as an independent director under the provisions of the Act. An alternate director shall not hold office for a period longer than that permissible to the Original Director in whose place he has been appointed and shall vacate the office if and when the Original Director returns to India.
31	**Article 42A** **Nominee Directors** **(New Article)**	- Inserted following new clause : The Board may appoint any person as a Director under Section 161 (3) who is nominated by the Government of India by virtue of its shareholding in the Company pursuant to the guidelines framed by the Department of Public Enterprises from time to time.
32	**Article 43 (ii)** **Appointment of Chairman**	- For the words "Section 292 and 293," the words "Section 179 and 180" shall be substituted.
33	**Article 50A** **Quorum**	- The existing article shall be substituted with the following : "The quorum necessary for the transaction of business of the Board of Directors shall be as provided in Section 174 of the Act."
34	**Article 51** **Board may set up Committees**	- For the words "Section 292," the words "Section 179" shall be substituted.
35	**Article 55** **Specific Powers given to Directors**	- In Article 55(13), the words "Section 292" shall be substituted with "Section 179".
36	**Article 57(ii)** **Division of profits**	- For the words "Section 205," the words "Section 123" shall be substituted.
37	**Article 57(iv)** **Division of Profits**	- For the words "Section 205," the words "sub-Section (5) of Section 123" shall be substituted.
38	**Article 59B** **Capitalization of Reserves**	- The words "Companies Act, 1956 or" shall be deleted in Article 59B (1) and 59B(2).
39	**Heading to be changed**	- For Heading "ACCOUNTS", heading "ACCOUNTS & STATUTORY REGISTERS" shall be substituted above Article 60.
40	**Article 60** **Inspection by members of accounts and books of the Company**	- Article 60 shall be substituted with the following clause : **Statutory Registers** a. The books of account and books and papers of the Company, or any of them, shall be open to the inspection of directors in accordance with the applicable provisions of the Act and the relevant Rules. b. No member (not being a director) shall have any right of inspecting any books of account or books and papers or document of the Company except as conferred by law or authorised by the Board. c. The Company shall keep and maintain at its registered office all statutory registers as may be prescribed under the Act for such duration as the Board may, unless otherwise prescribed, decide, and in such manner and containing such particulars as prescribed by the Act and the Rules. The registers and copies of annual return shall be open for inspection during 11.00 a.m. to 1.00 p.m. on all working days, other than Saturdays, at the registered office of the Company by the persons entitled thereto on payment, where required, of such fees as may be fixed by the Board but not exceeding the limits prescribed by the relevant Rules.
41	**Article 61** **Accounts to be audited annually**	- The existing article shall be substituted with the following : "Once at least in every financial year, the accounts of the Company shall be examined and a report on the true and fair view of the state of Company"s affairs as at the end of the Financial Year and profit or loss and cash flow as per Section 143 of the Act shall be given by one or more auditors."

S.No.	Existing Article	Proposed amendment
42	**Article 62** **Appointment of Auditors**	- For the words "Section 619", the words "Section 139 (5)" shall be substituted.
43	**Article 69(i)** **Director"s and other"s right to indemnity**	- The words "Section 201(i)" shall be deleted.
44	**Article 69(ii)** **Director"s and other"s right to indemnity**	- For the words "Section 633," the words "Section 463" shall be substituted.
45	**Article 69 (iii)** **Insurance (New Article)**	- New Article 69(iii) "Insurance" shall be added and it shall be read as under : "The Company may take and maintain any insurance as the Board may think fit on behalf of its present and/or former directors, key managerial personnel and employees for indemnifying all or any of them against any liability for any acts in relation to the Company for which they may be liable but have acted honestly and reasonably."
46	**Article 70** **Not responsible for acts of others**	The words "Section 201" shall be deleted.

Further resolved that the Chairman & Managing Director, Director (Finance) and Company Secretary of the Company be and are hereby severally authorized do all such acts, deeds, matters and things as may be necessary and incidental for giving effect to this Resolution, including agreeing to any change to the aforesaid amendments in the Articles of Association of the Company, as may be required by the Registrar of Companies and/or any Statutory/Regulatory Authority."

12. To ratify the remuneration of the Cost Auditors for the financial year 2020-21 and in this regard to consider and if thought fit, to pass the following resolution as an Ordinary Resolution:

    "Resolved that pursuant to the provisions of Section 148 and all other applicable provisions of the Companies Act, 2013 and the Companies (Audit and Auditors) Rules, 2014 [including any statutory modification(s)], the Company hereby ratifies the remuneration of ₹ 41,08,000/- (Rupees forty-one lakh and eight thousand only) as approved by the Board of Directors payable to Cost Auditors appointed by the Board of Directors of the Company to conduct the audit of the cost records of the Company for the financial year 2020-21 as per detail set out in the Statement annexed to the Notice convening this Meeting.

    Further resolved that the Board of Directors of the Company be and is hereby authorized to do all acts, deeds, matters and things as may be considered necessary, desirable or expedient for giving effect to this resolution."

13. To raise funds up to ₹ 15,000 Crore through issue of Bonds/Debentures on Private Placement basis and in this regard to consider and if thought fit, to pass following resolution as a Special Resolution:

    Resolved that pursuant to Section 42 and other applicable provisions of the Companies Act, 2013 read with Rule 14 (1) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 and any other applicable statutory provisions (including any statutory modification or re-enactments thereof) the Board of Directors of the Company (the "Board") be and are hereby authorized to make offer(s) or invitation(s) to subscribe to the secured/unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures ("Bonds") up to ₹ 15,000 Crore in one or more tranches/series not exceeding 30 (thirty), through private placement, in domestic market for capex, working capital and general corporate purposes, during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2021-22 whichever is earlier in conformity with rules, regulations, notifications and enactments as may be applicable from time to time, subject to the total borrowings of the Company approved by the shareholders under Section 180 (1) (c) of Companies Act, 2013.

    Further resolved that the Board be and is hereby authorized to do or delegate from time to time, all such acts, deeds and things as may be deemed necessary to give effect to private placement of such Bonds including but not limited to determining the face value, issue price, issue size, tenor, timing, amount, security, coupon/interest rate, yield, listing, allotment and other terms and conditions of issue of Bonds as it may, in its absolute discretion, consider necessary.

By order of the Board of Directors

Nandini Sarkar

(Nandini Sarkar)
Company Secretary

Place: New Delhi
Date: 28th August, 2020

Notes: -

1. In view of Covid-19 pandemic situation, the Ministry of Corporate Affairs ("MCA") has vide its circular dated May 5, 2020 read together with circulars dated April 8, 2020 and April 13, 2020 (collectively referred to as "MCA Circulars") permitted convening the Annual General Meeting ("AGM") through Video Conferencing ("VC") or Other Audio Visual Means ("OAVM"). In accordance with the MCA Circulars, provisions of the Companies Act, 2013 ('the Act') and the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("SEBI Listing Regulations"), the AGM of the Company is being held through VC / OAVM. This AGM shall be deemed to be held at the Registered Office of the Company .

2. In compliance with the MCA Circulars and SEBI Circular dated May 12, 2020, Notice of the AGM along with the Annual Report 2019-20 is being sent only through electronic mode to those Members whose email addresses are registered with the Company/ Depositories. Members may note that the Notice and Annual Report 2019-20 will also be available on the Company's website www.ntpc.co.in, websites of the Stock Exchanges, i.e., BSE Limited and National Stock Exchange of India Limited at www.bseindia.com and www.nseindia.com respectively. The AGM Notice is also disseminated on the website of CDSL (agency for providing the Remote e-Voting facility and e-voting system during the AGM) i.e. www.evotingindia.com. Detailed procedure for updating email ID details for shareholders are given at S.No. 12 below.

3. Since this AGM is being held through VC / OAVM pursuant to the MCA Circulars, physical attendance of members has been dispensed with. Accordingly, the facility for appointment of proxies by the members will not be available for this AGM and hence the Proxy Form and Attendance Slip are not annexed hereto. However, in terms of the provisions of Section 112 and Section 113 of the Act, representatives of the Members such as the President of India or the Governor of a State or body corporate can attend the AGM through VC/OAVM and cast their votes through e-voting.

4. Members of the Company under the category of Institutional Investors are requested to attend and vote at the AGM through VC.

5. Pursuant to Section 139 of the Companies Act, 2013, the Auditors of a Government Company are to be appointed or re-appointed by the Comptroller and Auditor General of India (C&AG) and in pursuant to Section 142 of the Companies Act, 2013, their remuneration is to be fixed by the Company in the Annual General Meeting or in such manner as the Company in general meeting may determine. The Members of the Company, in 43rd Annual General Meeting held on August 21, 2019, had authorized the Board of Directors to fix the remuneration of Statutory Auditors for the financial year 2019-20. Accordingly, the Board of Directors has fixed audit fee of Rs. 2,03,00,000/- (Rupees Two Crore three lakh only) for the Statutory Auditors for the financial year 2019-20 in addition to applicable GST and reimbursement of actual traveling and out-of-pocket expenses for visits to accounting units. The Statutory Auditors of the Company for the year 2020-21 have been appointed by the C&AG. Accordingly, the Members may authorize the Board to fix an appropriate remuneration of Statutory Auditors as may be deemed fit by the Board for the year 2020-21.

6. The Register of Members and Share Transfer Books of the Company will remain closed from September 18, 2020 to September 24, 2020 (both days inclusive) for the purpose of AGM.

7. The relevant explanatory statement pursuant to Section 102 of the Companies Act, 2013, in respect of Special Businesses, as set out above is annexed hereto.

8. Brief resume of the Directors seeking appointment or re-appointment at Annual General Meeting (AGM), as required under Regulation 36 of SEBI Listing Regulations, is annexed hereto and forms part of the Notice.

9. None of the Directors of the Company is in any way related with each other.

DIVIDEND

10. The Board of Directors, in its meeting held on March 19, 2020, had declared an interim dividend @ 5 % (0.50 paisa per share) on the paid-up equity share capital of the company which was paid on March 31, 2020 . Further, the Board of Directors, in its Meeting held on June 27, 2020 has recommended a final dividend @ 26.5% (Rs. 2.65 per share) on the paid-up equity share capital of the company.

11. The Company has fixed 14th August 2020 as record date for the purpose of payment of final dividend. Final dividend, if approved at the AGM shall be paid on or after 3rd October, 2020.

12. Members, who have not registered their NECS Mandate, are requested to send their NECS Mandate request to the Registrar / Investor Service Department of the Company or to their Depository Participant. Members who have not registered their e-mail addresses/ Bank details can update the same in following manner:

<table>
<tr><td rowspan="3">For shareholders holding shares in Physical Mode</td><td colspan="2">Please send a request letter with following details to the RTA of the Company by post at M/s Alankit Assignments Limited, Alankit House", 4E/2, Jhandewalan Extension, New Delhi-110055 or through email at alankit_ntpc@alankit.com with following details/ documents:</td></tr>
<tr><td>For updating email ID</td><td>For updating Bank account</td></tr>
<tr><td>1. Folio No.
2. Name of Shareholder
3. Copy of PAN and AADHAR (Self attested)

(Signature shall match with the specimen signature available with the Company/ RTA)</td><td>In addition to details required for updating email, following details/ documents are required :
1. Bank Account details like Bank Account number, Name of the Bank & Branch, MICR Code/ IFSC Code,
2. Cancelled Cheque</td></tr>
<tr><td>For shareholders holding shares in Demat Mode</td><td colspan="2">Shareholders can update email IDs, mobile numbers and Bank Account details by contacting their respective Depository Participants as per the process advised by them.</td></tr>
</table>

13. TDS on dividend

In terms of the provisions of the Income Tax Act, 1961 as amended by the Finance Act, 2020, dividend paid or distributed by a Company on or after 1st April, 2020 is taxable in the hands of the Members. The Company is, therefore, required to deduct tax at source at the time of payment of dividend to the Members.

Tax will be deducted at source ("TDS") under Section 194 of the Income tax Act, 1961 (read with Press Release dated May 13, 2020) @ 7.5% on the amount of dividend payable unless exempt under any of the provisions of the Act. However, in case of individuals, TDS would not apply if the aggregate of total dividend distributed to them by the Company during FY 2020-21 does not exceed ₹ 5,000/-. The shareholders are requested to update their PAN with the Company/RTA (in case of shares held in physical mode) and depositories (in case of shares held in demat mode), if PAN is not submitted, Tax at source will be deducted @ 20% as per provisions of Section 206AA of the Income tax Act, 1961.

Tax at source will not be deducted where a member provides Form 15G (applicable to individual in case of dividend) / Form 15H (applicable to an individual above the age of 60 years), provided that the eligibility conditions are being met. Blank Form 15G and 15H can also be downloaded from the link to be given with the email communication in this regard.

In accordance with the provisions of Section 197 of the Income tax Act, 1961, tax will be deducted at a Lower/NIL rate as per the certificate obtained from tax authority, subject to furnishing a self-attested copy of the same. The certificate should be valid for the FY 2020-21 and should cover the dividend income.

In order to provide exemption from withholding tax, the following organisations must provide details as listed below :

i) **Insurance Companies :** A self-declaration that it has full beneficial interest with respect to the shares owned along with Self attested copy of PAN card and copy of registration certificate issued by the IRDAI.

ii) **Mutual Funds:** A self-declaration that they are specified in Section 10(23D) of the Income tax Act, 1961 along with self attested copy of PAN card and registration certificate.

iii) **Alternative Investment Fund (AIF) established in India :** A self-declaration that they are specified in Section 10 (23FBA) of the Act and established as Category I or Category II AIF under the SEBI regulations along with self-attested copy of PAN card and registration certificate issued by SEBI.

For non-resident members, tax is required to be withheld in accordance with the provisions of Section 195 of the Income tax Act, 1961 at applicable rates in force. As per the relevant provisions of the Income tax Act, 1961, the tax shall be withheld @ 20% (plus applicable surcharge and cess) on the amount of dividend payable. However, as per Section 90 of the Act, a non-resident member has the option to be governed by the provisions of the Double Tax Avoidance Agreement ("DTAA") between India and the country of tax residence of the member, if they are more beneficial to the member subject to providing necessary documents i.e. PAN, if any, allotted by the Indian income tax authorities, No Permanent Establishment and Beneficial Ownership Declaration, Tax Residency Certificate (valid on the date of declaration of dividend), declaration in Form 10F, and any other document which may be required to avail the tax treaty benefits by sending email to tdsdiv@ntpc.co.in.

The Company is not obligated to apply the beneficial DTAA rates at the time of tax deduction / withholding on dividend amounts. Application of beneficial DTAA rate shall depend upon the completeness and satisfactory review by the Company, of the documents submitted by non- resident member.

Notwithstanding the above, tax shall be deducted at source @ 20% (plus applicable surcharge and cess) on dividend paid to Foreign Institutional Investors and Foreign Portfolio Investors under section 196D of the Income tax Act, 1961. Such rate shall not be reduced on account of the application of the lower DTAA rate, if any.

To enable us to determine the appropriate TDS / withholding tax rate applicable, we request you to provide the above details and documents not later than Sept 10, 2020.

Further, no claims shall lie against the Company for such taxes deducted.

Kindly note that the aforementioned documents should be emailed to tdsdiv@ntpc.co.in.

INVESTOR EDUCATION AND PROTECTION FUND

14. Pursuant to the provisions of the Companies Act, 2013, the Company has transferred the unpaid or unclaimed final dividend for the financial year 2011-12 and interim dividend for the financial year 2012-13, on or before due dates, to the Investor Education and Protection Fund (IEPF) established by the Central Government. Pursuant to the provisions of IEPF Rules & amendments thereto, the Company has uploaded the details of unpaid and unclaimed amounts lying with the Company as on the date of closure of financial year i.e. March 31,2020 on the website of the Company (www.ntpc.co.in) and also on the website of the Ministry of Corporate Affairs (http://www.iepf.gov.in).

15. Attention of the members is drawn to the provisions of Section 124(6) of the Act which require a company to transfer all shares in respect of which dividend has not been paid or claimed for 7 (seven) consecutive years or more, in the name of IEPF Authority. In accordance with the aforesaid provision of the Act read with the Investor Education and Protection Fund Authority (Accounting, Audit, Transfer and Refund) Rules, 2016, Company has transferred shares to IEPF authority from time to time. Members are advised to visit the web-link: http://www.ntpc.co.in/en/Investors/miscellaneous-download to check details of shares transferred to IEPF authority. The procedure for claiming shares from IEPF account is also available on the website of the Company.

16. Unclaimed final dividend for the financial year 2012-13 and Interim dividend for the financial year 2013-14 will be due for transfer to the Investor Education and Protection Fund of the Central Government on or before 16th November, 2020 and 4th April, 2021 respectively pursuant to the provisions of Section 124 of the Companies Act, 2013. Accordingly, corresponding shares on which dividend has not been paid or claimed for seven consecutive years shall also be liable to be transferred to the account of IEPF.

WEBCASTING

17. In compliance with the provisions of Regulation 44(6) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015, the Company shall provide live webcast of proceedings of AGM from 10.30 A.M. onwards on Thursday, 24th September, 2020 on the website of the Company.

PROCEDURE FOR INSPECTION OF DOCUMENTS:

18. The Register of Directors and Key Managerial Personnel and their shareholding maintained under Section 170 of the Income tax Act, 1961, the Register of Contracts or Arrangements in which the directors are interested, maintained under Section 189 of the Act will be available electronically for inspection by the members during the AGM. All documents referred to in the Notice will also be available electronically for inspection without any fee by the members from the date of circulation of this Notice and up to the date of AGM. Members seeking to inspect such documents can send an email to **agm2020@ntpc.co.in.**

OTHER INFORMATION:

19. Members holding shares in multiple folios in physical mode are requested to apply for consolidation to the Company or its Registrar & Transfer Agent (RTA) along with relevant Share Certificates.

20. **SEBI, vide notification dated 8th June, 2018 has mandated that after 4th December, 2018, except in case of transposition and transmission of shares, requests for effecting transfer of securities shall not be processed unless the securities are held in the dematerialized form with a depository. Accordingly, Shareholders holding shares in physical form, are advised to dematerialize their shares.**

21. Members, holding shares in physical form, may avail the facility of nomination in terms of Section 72 of the Companies Act, 2013 by nominating in the Form-SH 13 as prescribed in the Companies (Share Capital & Debentures) Rule, 2014, any person to whom their shares in the Company shall vest on occurrence of event stated in the Form. Persons holding shares in physical form may send Form-SH 13 in duplicate to RTA of the Company. In case of shares held in dematerialized form, the nomination has to be lodged with the respective DP.

22. The Securities and Exchange Board of India (SEBI) has mandated the submission of Permanent Account Number (PAN) by every participant in securities market. Members are, therefore, requested to update their PAN with their DP/ RTA of the Company.

23. Annual listing fee for the year 2020-21 has been paid to all Stock Exchanges wherein shares of the Company are listed. Also, the Annual Custodian Fee for the year 2020-21 was paid to both Depositories i.e. Central Depository Services (India) Limited and National Securities Depository Limited.

24. Since the AGM will be held through VC/OAVM, the route map of the venue of the Meeting is not annexed hereto.

INSTRUCTIONS FOR JOINING MEETING, REMOTE e-VOTING AND E-VOTING DURING AGM:

25. The Members can join the AGM in the VC/OAVM mode 15 minutes before and after the scheduled time of the commencement of the Meeting by following the procedure mentioned below in the Notice. The facility of participation at the AGM through VC/OAVM will be made available to at least 1000 members on first come first serve basis. This will not include large Shareholders (Shareholders holding 2% or more shareholding), Promoters, Institutional Investors, Directors, Key Managerial Personnel, the Chairpersons of the Audit Committee, Nomination and Remuneration Committee including PRP and Stakeholders Relationship Committee, Auditors etc. who are allowed to attend the AGM without restriction on account of first come first serve basis.

26. The attendance of the Members attending the AGM through VC/OAVM will be counted for the purpose of ascertaining the quorum under Section 103 of the Companies Act, 2013.

27. Pursuant to the provisions of Section 108 of the Companies Act, 2013 read with Rule 20 of the Companies (Management and Administration) Rules, 2014 (as amended) and Regulation 44 of SEBI Listing Regulations (as amended), and MCA Circulars the Company is providing facility of remote e-voting to its Members in respect of the business to be transacted at the AGM. For this purpose, the Company has entered into an agreement with Central Depository Services (India) Limited (CDSL) for facilitating voting through electronic means, as the authorized e-Voting's agency. The facility of casting votes by a member using remote e-voting as well as the e-voting system on the date of the AGM will be provided by CDSL.

28. The Company has appointed Mr. Ranjeet Pandey of M/s Ranjeet Pandey & Associates, Practicing Company Secretaries, to act as the Scrutinizer for conducting the voting and remote e-voting process in a fair and transparent manner.

THE INSTRUCTIONS FOR SHAREHOLDERS FOR REMOTE E-VOTING ARE AS UNDER:

(i) Members of the Company, holding shares either in physical form or in electronic form, as on the cut-off date i.e. Thursday, 17th September 2020, may cast their vote. The remote e-Voting period commences on Monday, 21st September 2020 at 9:00 A.M. (IST) and ends on Wednesday, 23rd September 2020, at 5:00 P.M. (IST). The remote e-Voting module shall be disabled for voting thereafter. Once the vote on a resolution is cast by the Member, the Member shall not be allowed to change it subsequently.

(ii) Shareholders who have already voted prior to the meeting date would not be entitled to vote at the meeting.

(iii) The shareholders should log on to the e-voting website **www.evotingindia.com.**

(iv) Click on "Shareholders" module.

(v) Now enter your User ID

a. For CDSL: 16 digits beneficiary ID,

b. For NSDL: 8 Character DP ID followed by 8 Digits Client ID,

c. Shareholders holding shares in Physical Form should enter Folio Number registered with the Company.

OR

Alternatively, if you are registered for CDSL's EASI/EASIEST e-services, you can log-in at **https://www.cdslindia.com** from **Login** - **Myeasi** using your login credentials. Once you successfully log-in to CDSL's EASI/EASIEST e-services, click on e-Voting option and proceed directly to cast your vote electronically.

(vi) Next enter the Image Verification as displayed and Click on Login.

(vii) If you are holding shares in demat form and had logged on to **www.evotingindia.com** and voted on an earlier e-voting of any company, then your existing password is to be used.

(viii) If you are a first time user follow the steps given below:

	For Shareholders holding shares in Demat Form and Physical Form
PAN	Enter your 10 digit alpha-numeric *PAN issued by Income Tax Department (Applicable for both demat shareholders as well as physical shareholders) • Shareholders who have not updated their PAN with the Company/Depository Participant are requested to use the sequence number sent by Company/RTA or contact Company/RTA.
Dividend Bank Details **OR** Date of Birth (DOB)	Enter the Dividend Bank Details or Date of Birth (in dd/mm/yyyy format) as recorded in your demat account or in the company records in order to login. • If both the details are not recorded with the depository or company please enter the member id / folio number in the Dividend Bank details field as mentioned in instruction (v).

(ix) After entering these details appropriately, click on "SUBMIT" tab.

(x) Shareholders holding shares in physical form will then directly reach the Company selection screen. However, shareholders holding shares in demat form will now reach 'Password Creation' menu wherein they are required to mandatorily enter their login password in the new password field. Kindly note that this password is to be also used by the demat holders for voting for resolutions of any other company on which they are eligible to vote, provided that company opts for e-voting through CDSL platform. It is strongly recommended not to share your password with any other person and take utmost care to keep your password confidential.

(xi) For shareholders holding shares in physical form, the details can be used only for e-voting on the resolutions contained in this Notice.

(xii) Click on the EVSN for NTPC Limited on which you choose to vote.

(xiii) On the voting page, you will see "RESOLUTION DESCRIPTION" and against the same the option "YES/NO" for voting. Select the option YES or NO as desired. The option YES implies that you assent to the Resolution and option NO implies that you dissent to the Resolution.

(xiv) Click on the "RESOLUTIONS FILE LINK" if you wish to view the entire Resolution details.

(xv) After selecting the resolution you have decided to vote on, click on "SUBMIT". A confirmation box will be displayed. If you wish to confirm your vote, click on "OK", else to change your vote, click on "CANCEL" and accordingly modify your vote.

(xvi) Once you "CONFIRM" your vote on the resolution, you will not be allowed to modify your vote.

(xvii) You can also take a print of the votes cast by clicking on "Click here to print" option on the Voting page.

(xviii) If a demat account holder has forgotten the login password then Enter the User ID and the image verification code and click on Forgot Password & enter the details as prompted by the system.

(xix) Shareholders can also cast their vote using CDSL's mobile app "**m-Voting**". The m-Voting app can be downloaded from app Store. Please follow the instructions as prompted by the mobile app while Remote Voting on your mobile.

(xx) Note for Non – Individual Shareholders and Custodians

- Non-Individual shareholders (i.e. other than Individuals, HUF, NRI etc.) and Custodians are required to log on to www.evotingindia.com and register themselves in the "Corporates" module.
- A scanned copy of the Registration Form bearing the stamp and sign of the entity should be emailed to helpdesk.evoting@cdslindia.com.
- After receiving the login details a Compliance User should be created using the admin login and password. The Compliance User would be able to link the account(s) for which they wish to vote on.
- The list of accounts linked in the login should be mailed to helpdesk.evoting@cdslindia.com and on approval of the accounts they would be able to cast their vote.
- A scanned copy of the Board Resolution and Power of Attorney (POA) which they have issued in favour of the Custodian, if any, should be uploaded in PDF format in the system for the scrutinizer to verify the same.
- Alternatively Non Individual shareholders are required to send the relevant Board Resolution/ Authority letter etc. together with attested specimen signature of the duly authorized signatory who are authorized to vote, to the Scrutinizer at email ID rpa@rpalegal.com and to the Company at the email address viz; agm2020@ntpc.co.in (designated email address by company), if they have voted from individual tab & not uploaded same in the CDSL e-voting system for the scrutinizer to verify the same.

PROCESS FOR THOSE SHAREHOLDERS WHOSE EMAIL ADDRESSES ARE NOT REGISTERED WITH THE DEPOSITORIES FOR OBTAINING LOGIN CREDENTIALS FOR E-VOTING FOR THE RESOLUTIONS PROPOSED IN THIS NOTICE:

1. For Physical shareholders- please provide necessary details like Folio No., Name of shareholder, PAN (self attested scanned copy of PAN card) and AADHAR (self attested scanned copy of Aadhar Card) by email to Company/RTA email id.

2. For Demat shareholders -, please provide Demat account details (CDSL-16 digit beneficiary ID or

   NSDL-16 digit DPID + CLID), Name, client master or copy of Consolidated Account statement, PAN (self-attested scanned copy of PAN card), AADHAR (self- attested scanned copy of Aadhar Card) to Company/RTA email id.

INSTRUCTIONS FOR SHAREHOLDERS ATTENDING THE AGM THROUGH VC/OAVM ARE AS UNDER:

1. Shareholder will be provided with a facility to attend the AGM through VC/OAVM through the CDSL e-Voting system. Shareholders may access the same at https://www.evotingindia.com under shareholders/members login by using the remote e-voting credentials. The link for VC/OAVM will be available in shareholder/members login where the EVSN of Company will be displayed.

2. Shareholders are encouraged to join the Meeting through Laptops / IPads for better experience.

3. Further shareholders will be required to allow Camera and use Internet with a good speed to avoid any disturbance during the meeting.

4. Please note that Participants Connecting from Mobile Devices or Tablets or through Laptop connecting via Mobile Hotspot may experience Audio/Video loss due to fluctuation in their respective network. It is therefore recommended to use Stable Wi-Fi or LAN Connection to mitigate any kind of aforesaid glitches.

5. Shareholders who would like to express their views/ask questions during the meeting may register themselves as a speaker by sending their request in advance atleast seven days prior to meeting mentioning their name, demat account number/folio number, email id, mobile number at agm2020@ntpc.co.in. The Company reserves the right to restrict the number of questions and number of speakers, depending upon availability of time as may be appropriate for smooth conduct of the AGM. Members who are not able to join this Meeting over video conferencing will be able to view the live webcast of proceedings of AGM by logging on the e-voting website.

6. The shareholders who do not wish to speak during the AGM but have queries may send their queries on or before 17th September, 2020 mentioning their name, demat account number/folio number, email id, mobile number at agm2020@ntpc.co.in. These queries will be replied to by the company suitably by email.

INSTRUCTIONS FOR SHAREHOLDERS FOR E-VOTING DURING THE AGM ARE AS UNDER:-

1. The procedure for e-Voting on the day of the AGM is same as the instructions mentioned above for Remote e-voting.

2. Only those shareholders, who are present in the AGM through VC/OAVM facility and have not cast their vote on the Resolutions through remote e-Voting and are otherwise not barred from doing so, shall be eligible to vote through e-Voting system available during the AGM.

3. If any Votes are cast by the shareholders through the e-voting available during the AGM and if the same shareholders have not participated in the meeting through VC/OAVM facility, then the votes cast by such shareholders shall be considered invalid as the facility of e-voting during the meeting is available only to the shareholders attending the meeting.

4. Shareholders who have voted through Remote e-Voting will be eligible to attend the AGM. However, they will not be eligible to vote at the AGM.

If you have any queries or issues regarding attending AGM & e-Voting from the e-Voting System, you may refer the Frequently Asked Questions ("FAQs") and e-voting manual available at www.evotingindia.com, under help section or write an email to helpdesk.evoting@cdslindia.com or contact Mr. Nitin Kunder (022- 23058738) or Mr. Mehboob Lakhani (022-23058543) or Mr. Rakesh Dalvi (022-23058542).

All grievances connected with the facility for voting by electronic means may be addressed to Mr. Rakesh Dalvi, Manager, (CDSL,) Central Depository Services (India) Limited, A Wing, 25th Floor, Marathon Futurex, Mafatlal Mill Compounds, N M Joshi Marg, Lower Parel (East), Mumbai - 400013 or send an email to helpdesk.evoting@cdslindia.com or call on 022-23058542/43.

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Annexure to Notice

EXPLANATORY STATEMENT

Item No. 4: Appointment of Shri Anil Kumar Gautam as Director (Finance)

Shri Anil Kumar Gautam (DIN: 08293632), was appointed as Director (Finance), by the President of India vide Ministry of Power Order No. 8/3/2019-Th-1 dated 18th October 2019 till the date of superannuation or until further orders, whichever is earlier and was appointed as an Additional Director w.e.f. 18th October 2019 to hold office up to this Annual General Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. The Company has received a requisite notice pursuant to the provisions of Section 160 of the Companies Act, 2013 in respect of appointment of Shri Anil Kumar Gautam. Shri Anil Kumar Gautam, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Anil Kumar Gautam as Director (Finance) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Anil Kumar Gautam, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No.5: Appointment of Shri Ashish Upadhyaya as Government Nominee Director

Shri Ashish Upadhyaya (DIN: 06855349), was appointed as Government Nominee Director, by the President of India vide Ministry of Power Order No. 20/8/2016-Coord (Pt-V) dated 14th January, 2020 and was accordingly appointed as an Additional Director by the Board of Directors with effect from 22nd January 2020, to hold office up to this Annual General Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. The Company has received a requisite notice pursuant to the provisions of Section 160 of the Companies Act, 2013 in respect of appointment of Shri Ashish Upadhyaya. Shri Ashish Upadhyaya, if appointed, shall not be liable to retire by rotation.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Ashish Upadhyaya, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No.6: Appointment of Shri Dillip Kumar Patel as Director (Human Resources)

Shri Dillip Kumar Patel (DIN: 08695490), was appointed as Director (Human Resources), by the President of India vide Ministry of Power Order No. 8/4/2019-Th-1 dated 31st December 2019, till the date of superannuation or until further orders, whichever is earlier and was accordingly appointed as an Additional Director w.e.f. 1st April 2020 to hold office up to this Annual General Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. The Company has received a requisite notice pursuant to the provisions of Section 160 of the Companies Act, 2013 in respect of appointment of Shri Dillip Kumar Patel. Shri Dillip Kumar Patel, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Dillip Kumar Patel as Director (Human Resources) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Dillip Kumar Patel, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No.7: Appointment of Shri Ramesh Babu V as Director (Operations)

Shri Ramesh Babu V (DIN: 08736805), was appointed as Director (Operations), by the President of India vide Ministry of Power Order No. 8/7/2019-Th-1 dated 25th March, 2020 till the date of superannuation or until further orders, whichever is earlier and was accordingly appointed as an Additional Director w.e.f. 1st May 2020 to hold office up to this Annual General Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. The Company has received a requisite notice pursuant to the provisions of Section 160 of the Companies Act, 2013 in respect of appointment of Shri Ramesh Babu V. Shri Ramesh Babu V, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Ramesh Babu V as Director (Operations) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Ramesh Babu V, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No.8: Appointment of Shri Chandan Kumar Mondol as Director (Commercial)

Shri Chandan Kumar Mondol (DIN: 08535016), was appointed as Director (Commercial), by the President of India vide Ministry of Power Order No. 8/15/2019-Th-1 (A-1) dated 10th June 2020 till the date of superannuation or until further orders, whichever is earlier and was accordingly appointed as an Additional Director w.e.f. 1st August 2020 to hold office up to this Annual General

Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. The Company has received a requisite notice pursuant to the provisions of Section 160 of the Companies Act, 2013 in respect of appointment of Shri Chandan Kumar Mondol . Shri Chandan Kumar Mondol, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Chandan Kumar Mondol as Director (Commercial) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Chandan Kumar Mondol, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No.9: Appointment of Shri Ujjwal Kanti Bhattacharya as Director (Projects)

Shri Ujjwal Kanti Bhattacharya (DIN: 08734219), was appointed as Director (Projects) by the President of India vide Ministry of Power Order No. 8/19/2019-Th-1 dated 26th August 2020 till the date of superannuation or until further orders, whichever is earlier and was accordingly appointed as an Additional Director w.e.f. 28th August 2020 to hold office up to this Annual General Meeting on the basis of recommendation of Nomination & Remuneration Committee including PRP. The Company has received a requisite notice pursuant to the provisions of Section 160 of the Companies Act, 2013 in respect of appointment of Shri Ujjwal Kanti Bhattacharya. Shri Ujjwal Kanti Bhattacharya, if appointed, shall be liable to retire by rotation. The terms and conditions regulating the appointment of Shri Ujjwal Kanti Bhattacharya as Director (Projects) shall be determined by the Government of India.

His brief resume, inter-alia, giving nature of expertise in specific functional area, shareholding in the Company, other Directorship, Membership/ Chairmanship of Committees and other particulars are enclosed with this notice.

None of the Directors, Key Managerial Personnel of the Company or their relatives except Shri Ujjwal Kanti Bhattacharya, is in any way, concerned or interested, financially or otherwise, in the resolution.

The Board recommends the resolution for your approval.

Item No. 10 : To alter objects clause of Memorandum of Association of the Company

Government of India is promoting the usage of electric vehicles as a part of providing energy security by reduction of oil imports along with advantage of reducing the tail-pipe emissions in metropolitan cities. Further, Government of India is already providing incentives for electric vehicles under Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME) scheme. Similar incentives to the electric vehicle users are being envisaged and being provided by various states. The falling battery prices as well as the low running costs associated with electric vehicles as compared to conventional internal combustion engines is expected to result in faster adoption of electric vehicles in near future.

With increasing penetration levels of e-vehicles, it is expected that the charging infrastructure along with other e-Mobility solutions provide huge business potential. As a part of new business initiative and supporting GoI's e-mobility mission, NTPC intends to play an active role in the e-Mobility domain by creating the charging infrastructure, providing e-vehicles as well as other associated services.

In addition to the above lot of new initiatives are being tried to create value added products from fly ash, gypsum, sea water desalination using newer technologies, conversion of waste to energy etc. These new business areas not only have potential to address reject disposal problems but also have good revenue potential.

Presently, the objects clause these businesses are covered under "allied/ancillary industries i.e. there is no specific provision regarding e-Mobility, waste-to-energy, manufacturing of value added products from fly ash, gypsum etc. and sea water desalination.

As NTPC is venturing into these areas in a big way, it is proposed to include specific enabling provision, regarding e-Mobility, waste-to-energy, manufacturing of value added products from fly ash, gypsum etc. and sea water desalination in the objects clause of the Company.

In addition to above, as per the requirement of Section 4 of the Companies Act 2013, the object clause of the Company need to provide for the objects for which the company is proposed to be incorporated i.e. Main Objects; and any matter considered necessary in furtherance thereof i.e. Ancillary Objects. Presently the objects clause of the Company has been divided into three sections i.e. Main Objects, Ancillary Objects and Other Objects. Thus, the existing objects clause is required to be amended in line with the requirement of the Companies Act, 2013. Draft Memorandum of Association, after incorporating proposed amendments is hosted on the web-site for perusal of members.

The Board of Directors of the Company in its 471st Meeting had approved the above proposal and recommended the proposal for approval of shareholders.

The Directors or Key Managerial Personnel or their relatives do not have any concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

Item No.11: To alter Articles of Association of the Company

The existing Articles of Association (AOA) of the Company are based on the provisions of the Companies Act, 1956. The Companies Act, 1956 has been replaced by the Companies Act, 2013. In order to bring existing Articles of Association of the Company in line with the provisions of the Companies Act, 2013 , it is proposed that wherever the reference of the Sections of the Companies Act, 1956 is given, the same shall be deleted / replaced with the reference to provisions of the Companies Act, 2013. Further, wherever required existing Article has been substituted with the new Article or new Article has been added with a view to align it with the provisions of the Companies Act, 2013.

Further, amendments are also required consequent upon substitution of erstwhile Listing Agreement with SEBI (Listing Obligation and Disclosure Requirements) Regulation 2015.

Changes proposed to be made in the Articles of Association by the resolution contained in the Notice of Annual General Meeting are self-explanatory. Draft Articles of Association, after incorporating proposed amendments is also hosted on the web-site for perusal of members.

The Board of Directors of the Company in its 471st Meeting had approved the above proposal and recommended the proposal for approval of shareholders.

The Directors or Key Managerial Personnel or their relatives do not have any concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

Item No. 12: Ratification of Remuneration payable to Cost Auditors

Based on recommendation of Audit Committee, appointment of Cost Auditors for the Financial year 2020-21 was decided by the Board of Directors on the outcomes of Expression of Interest (EOI). Total fee of Rs. 41,08,000/- (Rupees forty-one lacs and eight thousand only) is payable for cost audit for the Financial year 2020-21 as approved by the Board of Directors in its meeting held on 14th August,2020. The fee structure for cost audit is broadly based on station capacity and number of stations. The reimbursement of applicable statutory taxes/ levies shall be in addition to fees.

As per Rule 14 of Companies (Audit and Auditors) Rules, 2014 read with section 148(3) of the Companies Act, 2013, the remuneration recommended by the Audit Committee shall be considered and approved by the Board of Directors and ratified subsequently by the shareholders.

Accordingly, members are requested to ratify the remuneration payable to the Cost Auditors for the financial year 2020-21.

The Board of Directors of the Company in its meeting held on 14th August, 2020 has approved the above proposal and recommended the passing of the proposed Resolution by members of the Company.

The Directors or Key Managerial Personnel or their relatives do not have any concern or interest, financial or otherwise, in passing of the said Resolution, except to the extent of their shareholding in the Company.

Item No. 13: To raise funds up to Rs. 15,000 Crore through issue of Bonds/Debentures on Private Placement basis

The Company is the largest power producer in India. The projects of the Company (except Renewable Energy Projects) are to be financed by debt & equity in the ratio of 70:30. Renewable Energy Projects are to be financed by debt & equity in the ratio of 80:20. As the Company is under a rapid capacity expansion mode, major portion of capital expenditure requirement of the Company has to be funded by debt. The Company borrows in the form of non-convertible bonds/debentures, rupee term loans from banks and financial institutions, foreign currency borrowings, foreign currency bonds etc. The non-convertible bonds/debentures are raised by the Company under public issue route or through private placement basis.

In addition to capital expenditure requirement as explained above, Company also needs to borrow for meeting its working capital requirement and other general corporate purpose which is partly proposed to be met through issuance of non-convertible bonds.

The provisions of Section 42 of Companies Act, 2013 read with Rule 14(1) of the Companies (Prospectus and Allotment of Securities) Rules, 2014 require the Company to seek a Special Resolution from its shareholders for raising the NCDs on private placement basis. However, in case of offer or invitation for “non-convertible debentures”, it shall be sufficient, if the Company passes a prior Special Resolution only once in a year for all the offers or invitations for such debentures during the year.

In view of the above, approval of the Shareholders of the Company is being sought to authorize the Board of Directors to make offer(s) or invitation(s) to subscribe to the secured/unsecured, redeemable, taxable/tax-free, cumulative/non-cumulative, non-convertible debentures (“Bonds”) up to Rs.15,000 Crore in one or more tranches/series not exceeding 30 (thirty), through private placement, in domestic market for capex, working capital and general corporate purposes during the period commencing from the date of passing of Special Resolution till completion of one year thereof or the date of next Annual General Meeting in the financial year 2021-22 whichever is earlier, subject to ceiling approved by the shareholders under Section 180 (1) (c) of Companies Act, 2013.

The Board of Directors of the Company in its Meeting held on 14th August 2020 has approved the proposal and recommends the passing of the proposed Special Resolution.

The Directors or key managerial personnel or their relatives do not have concern or interest, financial or otherwise, in passing of the said Special Resolution, except to the extent of their shareholding in the Company.

By order of the Board of Directors

Nandini Sarkar

(Nandini Sarkar)
Company Secretary

Place: New Delhi
Date: 28th August, 2020

Brief resume of Director seeking appointment/reappointment:

Name	Shri Anil Kumar Gautam	Shri Ashish Upadhyaya	Shri Dillip Kumar Patel	Shri Ramesh Babu V	Shri Chandan Kumar Mondol	Shri Ujjwal Kanti Bhattacharya
Date of Birth & Age	25/05/1962 58 Years	24/9/1964 55 Years	30/4/1964 56 Years	7/1/1964 56 Years	17/01/1963 57 Years	1/12/1963 56 Years
Date of Appointment	18/10/2019	22/1/2020	1/4/2020	1/5/2020	1/8/2020	28/8/2020
Qualifications	Graduate in Commerce, fellow member of the Institute of Cost Accountants of India and LL.B	Post -graduation in History, Post-graduation in Economics , LL.B., Master's degree in Public Administration from Maxwell School of Citizenship, Syracuse University in U.S.A	Graduated in Mechanical Engineering from NIT, Rourkela and Post Graduate Diploma in Business Management (HR & Finance) from MDI, Gurgaon	Mechanical Engineering graduate from NIT Srinagar and Masters in Thermal engineering from IIT, Delhi	BE in Production Engineering from Jadavpur University	BE in Electrical Engineering from Jadavpur University, PG Diploma in Management from MDI, Gurgaon
Expertise in specific functional area	He has over 36 years of rich experience in various aspects of Finance & Accounts in Power Sector including resource mobilization from domestic and international markets, long-term financial planning, taxation, budgeting, investment appraisals, investors services and regulatory affairs.	He is an IAS Officer of 1989 batch belonging to Madhya Pradesh Cadre. He served for more than 31 years in various capacities in the State Government M.P including tenure in coal bearing areas of Anuppur, Shahdol and Umaria as the Addi. District Collector. Shri Upadhyaya has served the State level as Secretary and Principal Secretary of various departments including Home, Higher Education and Finance for many years. He also served as Joint Secretary, Coal in Ministry of Coal, Govt. of India.	He has an illustrious career spanning over more than three decades entailing both line and HR functions. After initial exposure of working in O&M (Mechanical Maintenance & CHP Operation) and EDC at Korba, he took a leap in his career and switched to core HR function in 1997. He looked after various facets of HR and subsequently moved on to become the Head of HR of Koldam, the first hydro project of NTPC. He had been Head of HR at various projects of NTPC such as NSPCL-Bhilai, Sipat, and Tanda for about 13 years.	He joined NTPC as 12th batch Executive Trainee in 1981. He has over 32 years of vast experience with outstanding contribution in management of large size plants in the area of power plant operation & maintenance, Renovation & modernization of old units and in area of efficiency and systems improvement of thermal plants. He, as a Professional Manager and Strategic Planner has led several initiatives for improving reliability and efficiency of Plants.	He has been with NTPC for over 35 years and held several key leadership position across mutiple business units. He joined NTPC as 9th Batch Executive Trainee (ET) in 1984. He has vast experience and comprehensive knowledge of the power sector and has worked in both power plant and corporate functions. He has worked towards developing commercial & marketing strategies, execution of domestic and international Power Purchase Agreements (PPAs), formulation of Tariff Regulations with CERC, participation in Ultra Mega Power Plant (UMPP) bidding, etc.	He joined NTPC as 9th Batch of Executive Trainees (ET) in 1984. He started his career in Project Construction, followed by Operation & Maintenance at 1600 MW Farakka STPP. He has also been a member of NTPC Team credited for turnaround of 460 MW Talcher TPS during 1996-98. He has contributed NTPC Business Development in Domestic as well as International Arena with special focus on NTPCs diversification into hydroelectricity with acquisition of Koldam and setting up of subsidiary company NESCL for electricity distribution business. He has been at the forefront of JV formulation & Project conceptualization for 1320 MW Maitree Power Project at Bangladesh.

Name	Shri Anil Kumar Gautam	Shri Ashish Upadhyaya	Shri Dillip Kumar Patel	Shri Ramesh Babu V	Shri Chandan Kumar Mondol	Shri Ujjwal Kanti Bhattacharya
Directorship held in other companies	1. NTPC Vidyut Vyapar Nigam Limited 2. Meja Urja Nigam Private Limited 3. THDC (India) Limited 4. North Eastern Electric Power Corporation Ltd.	NIL	1. Aravali Power Company Private Limited 2. NTPC SAIL Power Company Limited 3. NTPC Electric Supply Company Limited 4. Patratu Vidyut Utpadan Nigam Limited	1. Kanti Bijli Utpadan Nigam Limited. 2. NTPC Tamil Nadu Energy Company Limited 3. Nabinagar Power Generating Company Limited 4. Bhartiya Rail Bijlee Company Limited	1. NTPC BHEL Power Projects Private Limited 2. Ratnagiri Gas & Power Private Limited 3. NTPC Vidyut Vyapar Nigam Limited 4. NTPC Mining Limited 5. PTC India Limited 6. Trincomalee Power Company Limited 7. Bangladesh India Friendship Power Co. (P) Ltd.	1. Hindustan Urvarak & Rasayan Limited
Memberships/ Chairmanship of Committees across all Public Companies*	**Audit Committee:** 1. NTPC Vidyut Vyapar Nigam Limited- Chairman 2. North Eastern Electric Power Corporation Ltd. - Member **Stakeholders' Relationship Committee:** NTPC Limited - Member	**Audit Committee:** NTPC Limited - Member **Stakeholders' Relationship Committee:** NIL	**Audit Committee:** NIL **Stakeholders' Relationship Committee:** NIL	**Audit Committee:** NTPC Tamil Nadu Energy Company Limited- Member **Stakeholders' Relationship Committee:** NIL	**Audit Committee:** NTPC Vidyut Vyapar Nigam Limited **Stakeholders' Relationship Committee:** NIL	**Audit Committee:** NIL **Stakeholders' Relationship Committee:** NIL
No. of Shares held in NTPC Limited as on 21/8/2020	12370	NIL	NIL	3240	NIL	6508
Attendance in Board Meetings held from date of Appointment by the Board	No. of meetings held: 11 No. of meetings attended: 11	No. of meetings held: 9 No. of meetings attended: 8	No. of meetings held: 6 No. of meetings attended: 6	No. of meetings held: 6 No. of meetings attended: 6	No. of meetings held: 1 No. of meetings attended: 1	No. of meetings held: NA No. of meetings attended: NA

*In line with Regulation 26 of SEBI (Listing Obligations and Disclosure Requirements) Regulations 2015, membership of the Audit Committee and Stakeholders' Relationship Committee have only been taken into consideration.

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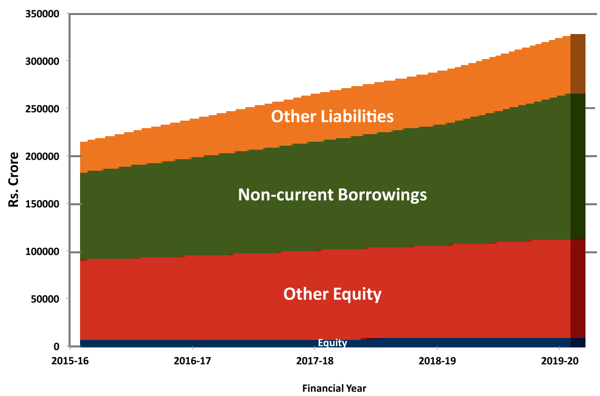
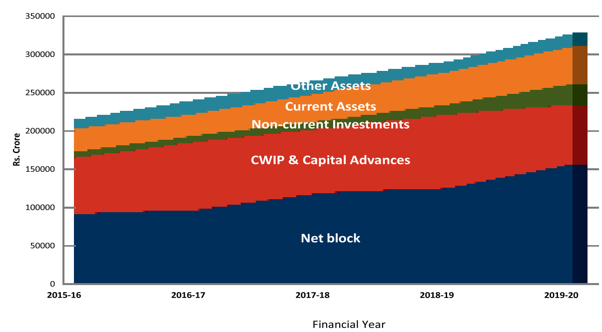
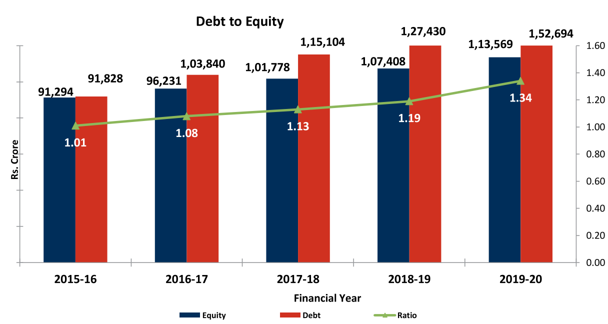
Source of Funds



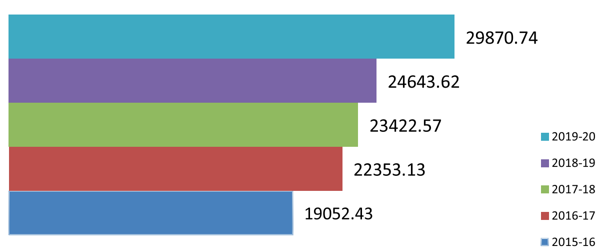
Application of Funds



Debt to Equity

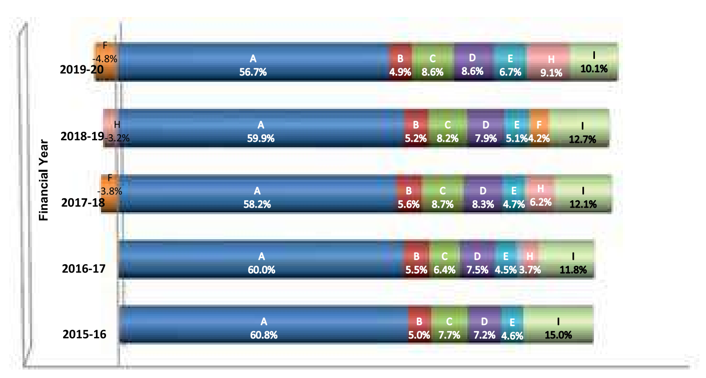


EBITDA* (Rs. in Crore)



** Excluding Movements in regulatory deferral account balances*

Distribution of Revenue



A B C D E F G H I

A:Fuel (including Energy purchased for trading)
B:Employee Benefits Expense
C:Other Expenses
D:Depreciation,Amortization & Impairment
E:Finance Costs
F: Movements in Regulatory Balances
G:Exceptional Items
H:Tax
I: Profit

STATION & REGION WISE NTPC GROSS GENERATION 2019-2020

NTPC STATIONS	Gross Capacity (MW)	Gross Generation (MU)
NR (Coal)	**12410**	**86915**
Singrauli	2000	15333
Rihand	3000	23359
Unchahar	1550	8527
Tanda	1100	4037
Vindhyachal	4760	35659
AURAIYA GAS	**663**	**445**
NR SOLAR	**33**	**47**
Unchahar	10	14
Singrauli	15	20
Singrauli Hydro	8	13
TOTAL NR (C+G+S+Sh)	**13106**	**87407**
DBF		
Dadri Coal	**1820**	**6547**
GAS	**1262**	**2407**
Dadri	830	1852
Faridabad	432	555
SOLAR	**10**	**13**
Dadri	5	6
Faridabad	5	7
TOTAL DBF(C+G+S)	**3092**	**8967**
WR-1 (Coal)	**3640**	**11221**
Mouda Station	2320	10404
Solapur	1320	817
GAS	**1732**	**2121**
Anta	419	302
Kawas	656	1383
Gandhar	657	436
SOLAR	**260**	**439**
Bhadla	260	439
Wind	**50**	**103**
Rojmal	50	103
WR-1 TOTAL(C+G+S+W)	**5682**	**13884**
WR-2 (Coal)	**8500**	**47373**
Korba	2600	19793

NTPC STATIONS	Gross Capacity (MW)	Gross Generation (MU)
Sipat	2980	22530
Gadarwara	800	1076
Lara	800	2752
Khargone	1320	1222
SOLAR	**300**	**455**
Rajgarh	50	76
Mandsaur	250	379
WR -2 TOTAL(C+S)	**8800**	**47828**
ER-1 (Coal)	**6230**	**38092**
Farakka	2100	13133
Kahalgaon	2340	16504
Barh	1320	8219
Barauni	470	236
ER-1 TOTAL (Coal)	**6230**	**38092**
ER-2 (Coal)	**5010**	**27177**
Talcher Kaniha-II	3000	19261
Talcher Thermal	460	3378
Bongaigaon	750	3930
Darlipali	800	608
SOLAR	**10**	**14**
Talcher Solar	10	14
ER 2 Total (C+S)	**5020**	**27191**
SR (Coal)	**7000**	**32382**
Ramagundam - II	2600	17126
Simhadri stage 3	2000	10650
Kudgi	2400	4606
RGCCPP Liquid	**360**	**0.00**
SOLAR	**265**	**417**
Ramagundam Solar	10	14
Andaman solar	5	5
Ananthpuram solar	250	398
SR TOTAL(C+G+S)	**7625**	**32799**
HYDRO	**800**	**3450**
Koldam	800	3450
NTPC TOTAL	**50355**	**259618**

Share of installed Capacity (as on 31st March 2020)

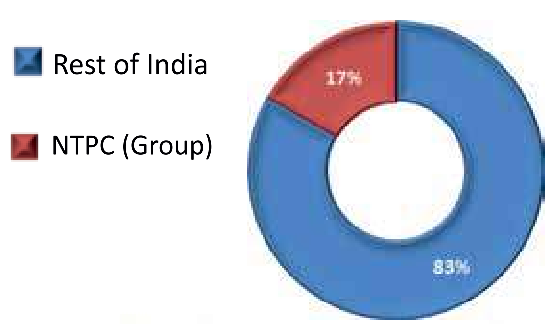
Particulars	Installed Capacity (MW)	% Share
NTPC Group (Including NEEPCO & THDC)	62110	16.8
All India (Incl.RE)	**370106**	**83.2**

Share of electricity generated (FY 2019-20)

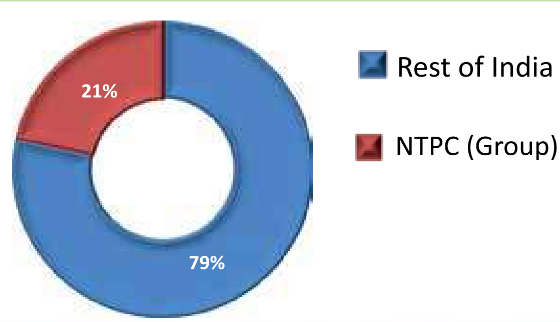
Particulars	Electricity generated(BU)	% Share
NTPC Group(Excluding NEEPCO & THDC)	290	21.0
All India (Incl.RE)**	**1385**	**79.0**

**All India generation is excluding Bhutan Import

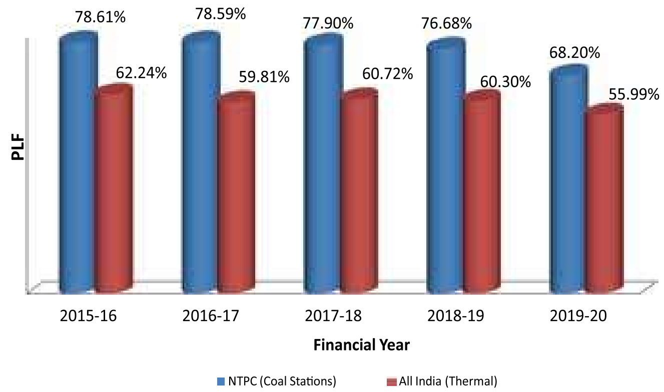
Share of Installed Capacity (as on 31st March 2020)



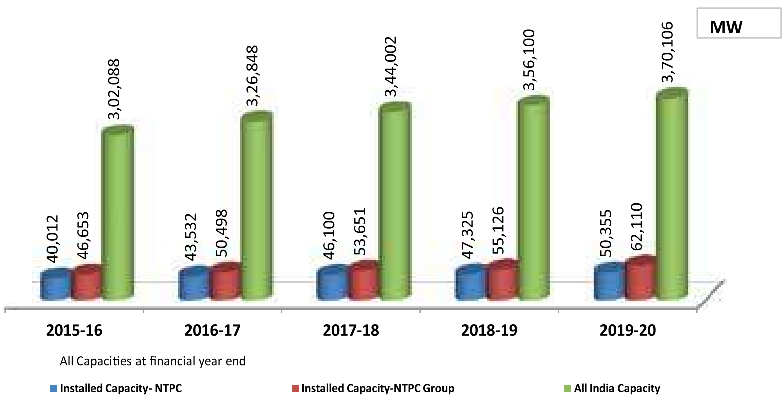
Share of Electricity Generated (FY 2019-20)



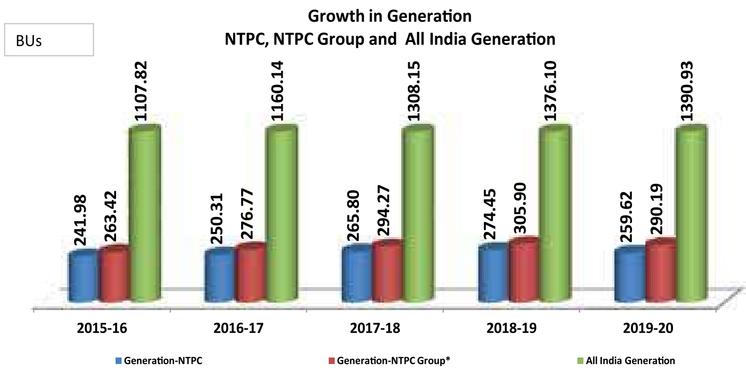
NTPC PLF Vs All India PLF



Growth in Installed Capacity NTPC, NTPC Group and All India



Growth in Generation NTPC, NTPC Group and All India Generation



*includes generation from captive capacity of 314 MW

Source: CEA

SELECTED FINANCIAL INFORMATION*

(₹ Crore)

		2019-20	2018-19	2017-18	2016-17	2015-16
A	**Revenue**					
	Revenue from operations	97,700.39	90,307.43	83,452.70	78,273.44	70,843.81
	Other income	2,778.02	1,872.13	1,755.25	1,068.86	1,165.35
	Total revenue	**1,00,478.41**	**92,179.56**	**85,207.95**	**79,342.30**	**72,009.16**
B	**Expenses**					
	Fuel	54,241.82	52,493.74	48,315.47	47,572.19	43,798.59
	Energy purchased for trading	2,776.44	2,713.68	1,313.51	-	-
	Employee benefits expense	4,925.60	4,779.89	4,734.67	4,324.60	3,581.65
	Other expenses	8,663.81	7,548.63	7,421.73	5,092.38	5,576.49
	Profit before depreciation, finance cost and tax	**29,870.74**	**24,643.62**	**23,422.57**	**22,353.13**	**19,052.43**
	Depreciation, amortization and impairment expense	8,622.85	7,254.36	7,098.86	5,920.82	5,172.34
	Profit before finance cost and tax	**21,247.89**	**17,389.26**	**16,323.71**	**16,432.31**	**13,880.09**
	Finance costs	6,781.97	4,716.74	3,984.25	3,597.20	3,296.41
	Profit before exceptional items tax and regulatory deferral account balances	**14,465.92**	**12,672.52**	**12,339.46**	**12,835.11**	**10,583.68**
	Exceptional Items (+) income/ (-) loss	-	-	-	(782.95)	-
	Profit before tax	**14,465.92**	**12,672.52**	**12,339.46**	**12,052.16**	**10,583.68**
	Total Tax expense	9,181.95	(2,918.71)	5,257.14	2,930.82	(173.83)
	Profit for the year before regulatory deferral account balances	**5,283.97**	**15,591.23**	**7,082.32**	**9,121.34**	**10,757.51**
	Net movement in regulatory deferral account balances (net of tax)**	4,828.84	(3,841.34)	3,260.85	263.92	12.09
	Profit for the year	**10,112.81**	**11,749.89**	**10,343.17**	**9,385.26**	**10,769.60**
	Other comprehensive income/(expense) for the year (net of income tax)	(327.22)	(201.87)	(14.48)	(203.38)	(58.63)
	Total comprehensive income for the year	**9,785.59**	**11,548.02**	**10,328.69**	**9,181.88**	**10,710.97**
	Dividend	2,968.37	4,922.55	4,040.28	3,595.03	2,762.24
	Dividend tax	607.80	1,000.49	816.40	727.79	562.32
	Retained profit	6,536.64	5,826.85	5,486.49	5,062.44	7,445.04
C	**Assets**					
	Property, plant & equipment	1,56,273.02	1,25,290.68	1,19,427.57	97,443.34	91,499.36
	Capital work-in-progress	73,066.76	90,808.89	78,606.91	81,921.82	66,205.59
	Intangible assets	538.28	329.94	331.60	293.02	273.89
	Intangible assets under development	292.52	397.80	469.36	434.63	217.61
	Total Fixed Assets (Net block)	2,30,170.58	2,16,827.31	1,98,835.44	1,80,092.81	1,58,196.45
	Investments in Subsidiaries, JVs & Others (Non-current)	26,400.89	13,145.94	10,047.48	8,248.11	8,014.32
	Other non-current financial assets	2,025.42	1,968.67	2,288.53	2,440.36	1,534.30
	Other non-current assets	11,122.62	13,269.30	11,547.73	16,852.53	17,636.80
	Current assets	48,825.18	42,133.74	36,731.25	28,420.85	29,756.45
	Regulatory deferral account debit balances	9,122.76	3,406.00	8,381.66	5,450.67	-
	Total Assets	**3,27,667.45**	**2,90,750.96**	**2,67,832.09**	**2,41,505.33**	**2,15,138.32**
D	**Liabilities**					
	Borrowings					
	Non-current borrowings	1,46,538.70	1,19,698.08	1,08,697.60	97,339.28	85,096.95
	Current maturities of non-current borrowings	6,154.92	7,732.40	6,406.69	6,500.37	6,730.79
	Total borrowings	1,52,693.62	1,27,430.48	1,15,104.29	1,03,839.65	91,827.74
	Other Non-current liabilities	9,449.92	6,151.34	12,716.06	9,153.62	4,645.94
	Current liabilities	54,866.85	55,354.00	42,554.76	36,177.32	31,758.74
	Less: Current maturities of non-current borrowings	6,154.92	7,732.40	6,406.69	6,500.37	6,730.79
	Net Current liabilities	48,711.93	47,621.60	36,148.07	29,676.95	25,027.95
	Deferred Revenue	3,242.54	2,139.37	2,085.90	2,121.14	2,047.34
	Regulatory deferral account credit balances	-	-	-	482.74	295.65
E	**Net-worth**					
	Equity	9,894.56	9,894.56	8,245.46	8,245.46	8,245.46
	Other Equity	1,03,674.88	97,513.61	93,532.31	87,985.77	83,048.24
	Networth	1,13,569.44	1,07,408.17	1,01,777.77	96,231.23	91,293.70
	Networth excluding Fly ash utilisation reserve fund & Corporate social responsibility (CSR) reserve	1,12,980.96	1,06,771.54	1,01,146.56	95,674.55	90,815.49
	Total Liabilities	**3,27,667.45**	**2,90,750.96**	**2,67,832.09**	**2,41,505.33**	**2,15,138.32**
F	**Capital employed (other than deployed in under construction projects)**	1,47,014.07	1,31,354.03	1,19,711.03	1,00,757.21	94,930.73
G	**Value added**	37,586.93	33,570.80	31,163.69	29,159.02	27,439.65
H	**Number of shares @**	9,89,45,57,280	9,89,45,57,280	9,89,45,57,280	9,89,45,57,280	9,89,45,57,280
I	**Number of employees**	17,398	18,359	19,739	20,593	21,633
J	**Ratios**					
	Return on capital employed (%)	10.48	12.51	11.52	13.39	14.56
	Return on net worth (%)	14.80	16.72	15.14	17.68	19.56
	Book value per Share (₹)	114.78	108.55	102.86	97.26	92.27
	Earnings per share (₹)	10.22	11.88	10.45	9.49	10.88
	Current ratio	0.89	0.76	0.86	0.79	0.94
	Debt to equity	1.35	1.19	1.14	1.09	1.01
	Value added per employee (₹ crore)	2.16	1.83	1.58	1.42	1.27

* Standalone

** Net movements in regulatory deferral account balances have been shown net of tax for FY 2016-17, 2017-18, 2018-19 & 2019-20.

@ During FY 2018-19 164,90,92,880 bonus shares have been issued. Number of shares for all previous years have been changed accordingly for comparability.

DIRECTORS' PROFILE

Chairman & Managing Director

Shri Gurdeep Singh, (aged 55 years), (DIN: 00307037), took over as Chairman & Managing Director on February 04, 2016. He also holds additional charge of Chairman, Damodar Valley Corporation (DVC) since October 17, 2018.

He is also currently the co-chair on the stewardship Board of the platform for energy and materials with World Economic Forum (WEF) and on the Clean Energy Ministerial Hydrogen initiative advisory group coordinated by IEA.

He has an illustrious career spanning over three decades in the power sector. He started his career in 1987 as an Engineer Trainee with NTPC and has worked his way through various ranks in both public and private sectors. He has worked at CXO/Senior positions in Indian companies as well as in multi-national companies. His wide ranging experience entailing all aspects of power generation business, in different organisations and cross cultural environment, has provided him with the unique ability to deal with intricate and complex issues of power sector.

Prior to joining NTPC, he was Managing Director of Gujarat State Electricity Company Limited (GSECL). His sustained focus on cost reduction resulted in conceptualisation of coal swapping and freight rationalisation much ahead of time. His visionary leadership transformed GSECL and made the company highly cost-competitive and forward looking.

He graduated in mechanical engineering from NIT Kurukshetra and has undergone Management Education Program from IIM-Ahmedabad. He has also received management and leadership training inputs from global institutions like Saïd Business School-Oxford (UK), Harvard-Kennedy School (USA), Darden School of Management - Virginia (USA), Singapore Civil Services College (Singapore) and ISB Hyderabad (India) etc.

He firmly believes that the key to excellence is occupational health and safety, employee empowerment, capability augmentation and process automation and optimization.

He has launched a series of initiatives to sustain NTPC's growth and bring about cultural changes necessary to maintain NTPC's position as a leading global power company. He has opened several new avenues for company's growth including winning of tenders through competitive bidding in renewable projects, participation in bidding process for acquisition of stressed assets, increasing global presence, partnering with ISA, etc. He is steering NTPC in its energy transition into a more sustainable organisation.

He has strong focus on digitalization and IT enablement. Several IT initiatives are launched for faster decision making and bringing transparency. 'PRADIP' (e-office) has been launched in the company and has greatly helped in improving the efficiency. Contract Labour Information Management System (CLIMS) has been launched at all NTPC locations, which also helps in payment of labour wages within 2-3 days of the completion of the month.

As part of his focus on CSR, he pioneered 'Girl Empowerment Mission (GEM)', aimed at overall development of school going children located in the vicinity of NTPC plant premises.

His thrust on minimizing environmental footprint, maximizing sustainability efforts and a focussed approach of 'Low Cost Low Emission' aligns with India's ambitious target of cleaner and affordable power for all.

Director (Finance)

Shri Anil Kumar Gautam, (aged 58 years), (DIN : 08293632), is a Honours Graduate in Commerce and a fellow member of the Institute of Cost Accountants of India. He is also a Law Graduate. He joined NTPC in the year 1984 and has around 36 years of rich experience in various aspects of Finance & Accounts.

He has experience in financial reporting & structuring, strategic planning, long & short term debt financing in domestic and international markets, cost & Internal controls, acquisitions, corporate governance & risk management, budgeting, investors' relations, taxation and regulatory affairs and Enterprise Resource planning.

Prior to joining the Board of NTPC, he was Executive Director (Finance) in the Company.

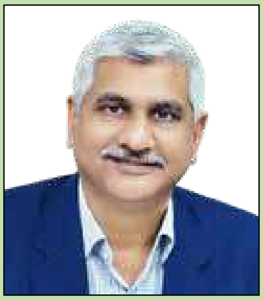
Shri Gautam is also chairman of Meja Urja Nigam Private Limited and NTPC Vidyut Vyapar Nigam Limited. He is also a part time director on the Boards of THDC India Limited and North Eastern Electric Power Corporation Limited (NEEPCO).

Director (HR)

Shri Dillip Kumar Patel, (aged 56 years), (DIN:08695490) has taken charge as Director (HR), NTPC on 1st April 2020. He started his career in NTPC way back in 1986 as an Engineering Executive Trainee (XI batch). Mr. Patel's ascent from his humble beginning as an Executive Trainee to the top echelons of HR function in NTPC signifies his passion, commitment and hard work. He graduated in Mechanical Engineering from NIT, Rourkela and did his Post Graduate Diploma in Business Management (HR & Finance) from MDI, Gurgaon. He has also received management and leadership training inputs from ESCP-EAP (Paris, Berlin & Turin), Harvard Business School (USA), ISB Hyderabad & XLRI Jamshedpur.

He has an illustrious career spanning over more than three decades entailing both line and HR functions. After initial exposure of working in Operation & Maintenance, he took a leap in his career and switched to core HR function in 1997. He looked after various facets of HR and subsequently moved on to become the Head of HR of Koldam, the first hydro project of NTPC. He had been Head of HR at various projects of NTPC such as NSPCL-Bhilai, Sipat, and Tanda for about 13 years. He had a short stint as Regional Head of HR of Easter Region-II before being appointed to the post of Director (HR) in NTPC.

He has undertaken various challenging assignments and has successfully managed HR functions while working at various locations comprising of thermal, hydro, JVs as well as taken-over projects. He firmly believes in the philosophy of "People before PLF". His varied experience and deep understanding of the underlying culture of the organization will help HR to excel and achieve new heights in the days to come in NTPC.



Director (Operations)

Shri Ramesh Babu V, (aged 56 years), (DIN:08736805), a Mechanical Engineering graduate from NIT Srinagar and Masters in Thermal engineering from IIT Delhi , joined NTPC as 12th batch Executive Trainee in 1987. He has over 32 years of vast experience with outstanding contribution in management of large size plants in the area of power plant operation & maintenance, Renovation & modernization of old units and in area of efficiency and systems improvement of thermal plants. He as a Professional Manager and Strategic Planner has led several initiatives for improving reliability and efficiency of Plants.

Shri Ramesh Babu's experience in power sector includes Senior Management level exposure as a "Business Unit Head" of NTPC Talcher Kaniha & NSPCL Durgapur. Prior to elevation to the post of Director (Operations), he was working as ED to CMD & was working on system improvement activities and strategies related to operational excellence of NTPC power plants.

Shri Ramesh Babu is also Part time Chairman on the Board of NTPC Tamil Nadu Energy Company Ltd. (NTECL), Kanti Bijlee Utpadan Nigam Ltd. (KBUNL), Bhartiya Rail Bijli Corporation Limited (BRBCL) and Nabinagar Power Generation Company Limited (NPGCL). He is also holding additional charge of Member (Technical) of Damodar Valley Corporation (DVC) and permanent Invitee on the board of Northern Coalfields Limited.

As Director (Operations), NTPC, he is responsible for overall planning for Safe, Reliable and Efficient operation of all power generating stations of NTPC group Portfolio, while ensuring fuel security & environmental compliance of all Power Stations.

Director (Commercial)

Shri Chandan Kumar Mondol, (aged 57 years), (DIN:08535016) has taken charge as Director (Commercial), NTPC Limited w.e.f. 1st August, 2020. Shri Mondol has been with NTPC for over 35 years and has held several key leadership positions across multiple business units.

Shri Mondol joined NTPC as 9th Batch Executive Trainee (ET) in 1984. He has vast experience and comprehensive knowledge of the power sector and has worked in both power plant and corporate functions. He started off his journey with the project execution and commissioning of (3X500 MW) units at Ramagundam and (4X210 MW) units at Kahalgaon. As a strategic planner, Shri Mondol has led several initiatives at NTPC. In 1998, Shri Mondol joined Corporate Commercial where he worked towards developing commercial & marketing strategies, execution of domestic and international Power Purchase Agreements (PPAs), formulation of Tariff Regulations with CERC, participation in Ultra Mega Power Plant (UMPP) bidding, etc.

He joined Corporate Planning in 2012 as head of Strategic Planning Division and was also responsible for periodic review of Business Plan, Organisational Restructuring, identifying risks of the company and its mitigation through comprehensive Enterprise Risk Management Policies etc. Shri Mondol took charge as Business Unit Head (BUH) of Khargone in March 2015 and was responsible for execution of 1,320 MW Green Field Power Project involving land acquisition, Right of Use, Right of Way, R&R plan, Project Planning & Construction, Boundary Management with the local administration, State Government and other statutory authorities.

Before his appointment as Director (Commercial), he has worked as RED-WR1, RED (DBF & Hydro), ED (PP&M) and ED (Commercial).

Director (Projects)

Sh. Ujjwal Kanti Bhattachrya, (aged 56 years), (DIN:08734219), joined NTPC in Ninth Batch of Executive Trainees recruited in 1984.

He started his career in Project Construction, followed by Operation & Maintenance at 1600 MW Farakka STPP.

He has also been a member of NTPC Team credited for turnaround of 460 MW Talcher TPS during 1996-98.

He has contributed NTPC Business Development in Domestic as well as International Arena with special focus on NTPCs diversification into hydroelectricity with acquisition of Koldam and setting up of subsidiary company NESCL for electricity distribution business. He has been at the forefront of JV formulation & Project conceptualization for 1320 MW MaitreePower Project at Bangladesh.

Before appointment as Director (Projects), NTPC he has worked as MD and CEO (Bangladesh India Friendship Power Company Limited), ED (Business Development) and ED (Projects), NTPC.

Nominee Director

Shri Vivek Kumar Dewangan, (aged 53 year), (DIN:01377212), an Indian Administrative Service Officer of Manipur Cadre [1993 Batch], is B.E. in Electronics from NIT, Bhopal and P.G. in Optoelectronics & Optical Communication from IIT, Delhi. During his illustrious career of 25 years as IAS officer, he has held various administrative positions in the areas of Finance, Power/ Energy, Elections/ Law & Justice, Commerce & Industries, Minister's Office [Corporate Affairs/Agriculture & Food Processing Industries], Education/Human Resource Development, Sericulture/Agriculture & Cooperation, Economic Affairs, Economics & Statistics, Petroleum & Natural Gas, District Administration [Surguja & Raipur District in Chattisgarh and Senapati District in Manipur], Divisional Administration.

Nominee Director

Shri Ashish Upadhyaya, (aged 55 years), (DIN: 06855349) IAS, Additional Secretary & F A, Ministry of Power, Govt. of India joined as a Part-time Official Director on the Board of NTPC on 22.01.2020. Shri Upadhyaya is an IAS Officer of 1989 Batch belonging to Madhya Pradesh cadre. Having done his post-graduation in History from St. John College, Agra, he joined the civil services and has served for more than 31 years in various capacities in the State Government of M.P. including tenure in coal bearing areas of Anuppur, Shahdol and Umaria as the Addl. District Collector. He has been Collector for more than 5 years in 3 districts of M.P. & Chhattisgarh. Shri Upadhyaya has served at the State level as Secretary and Principal Secretary of various departments including Home, Higher Education and Finance for many years. As Joint Secretary, Coal, he has been instrumental in developing systems by application of space technology for curbing the menace of illegal mining. He has academic bent of mind and while being in the service, he continued his pursuit of education and completed post-graduation in Economics and L.L.B. He also did his Master's degree in Public Administration from Maxwell School of Citizenship, Syracuse University in U.S.A. Shri Upadhyaya has been working as Additional Secretary & FA , Ministry of Power since 14th November, 2019.

Independent Director

Shri Pradeep Kumar Deb, (aged 67 years), IAS (DIN:03424714), has a Master Degree in Physics from St. Stephens College, Delhi University. He started his career as a Probationary officer in the State Bank of India before switching to the Indian Administrative Service in 1977. In his 37 years as an IAS officer, he had held a number of posts of crucial importance in the State of Rajasthan and in Government of India in diverse areas like Finance and Taxation, Human Resources, Agriculture and Irrigation, Home Affairs among others, before retiring as Secretary, Department of Sports in the Government of India in 2013. Prior to this posting, he was Additional Chief Secretary, Home Affairs of the Government of Rajasthan. Shri Deb considers Finance and Human Resource Development as his areas of special interest.

Independent Director

Shri Shashi Shekhar, (aged about 64 years), IAS (DIN: 01747358), graduated in geology from Patna University. He held in Tamil Nadu and GoI various positions, important ones were Managing Director of Mineral Development Corporation, Sugar Department, Urban Infrastructure financing before moving to New Delhi to join the Ministry of Power as Joint Secretary when he was associated in preparing the Energy Conservation Bill that became an Act in 2002. He was appointed as the first Director General of the Bureau of Energy Efficiency. He spent more than 10 years in the Power and Renewable Energy sector. He presented a number of papers in international forums on power sector development. He prepared the 12th Plan draft document of the Ministry of New & Renewable Energy wherein for the first time he advocated wind and solar energy to acquire market orientation. He later joined the Ministry of Environment & Forest as Additional Secretary and also Chairman of Central Pollution Control Board. During this period, he dealt with subjects like Environment Clearance, River Pollution abatement, Wetland Development, Coastal Regulatory Zone etc.

He retired in December 2016 as Secretary, Ministry of Water Resources, River Development & Ganga Rejuvenation, Govt. of India. During this period, he initiated far reaching reforms in the water sector. He highlighted the need to understand the riverine ecosystem before undertaking any water resource development projects. He underlined the importance of demand management in Ground Water given that it contributes 64% of the total irrigated area but depleting very rapidly.

Currently, he works for promotion of solar power, IT based solutions for the power sector including RE integration, Electric/hydrogen fuel cell mobility etc. He advises the Principal Scientific Advisor on the water and energy sectors.

Independent Director

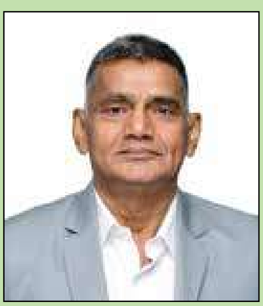
Shri Subhash Joshi, IPS, (aged 66 years), (DIN: 07946219), is B.Sc. (Hons.) in Mathematics and has PG Diploma in Business from Curtin University, Perth Australia.

He joined Indian Police Service in 1976 and retired in 2014. He served as DG, Border Security Force (BSF), DG, National Security Guard (NSG), Special DG, Central Reserve Police Force (CRPF), Director General of Police, Uttarakhand, Additional DG, Intelligence/Security, Uttarakhand and many other posts in UP/Uttarakhand and Government of India. His area of expertise includes General Management, Human Resource Management,Vigilance and anti-corruption, Training and Development, Public Order Management, Border Management, Intelligence and Security, General Administration, Public Grievance Redressal and Law.

After retirement he was re-employed by Uttarakhand state government as Commissioner Right to Service Commission from 2014-19. He is a recipient of President Police Medal and many other awards.

Independent Director

Shri Vinod Kumar, (aged 64 years), IFS (DIN: 00955992), graduated in 1975 with honours in Botany and obtained his Masters Degree in Botany from Banaras Hindu University in 1977. He superannuated from the Indian Forest Service on 30th April 2016 as the Director of Indira Gandhi National Forest Academy(IGNFA) with experience of achievements over 38 years of Administration, Forest Management, Policy Analysis, Planning, Corporate Management, Tribal Development and Community Empowerment, Manpower Planning and Capacity Building with innovative contributions at Odisha State in field of Governance and Capacity Building. He had served both the Odisha Government as well as the Union Government in various capacities. His area of expertise includes Forest Governance, Biodiversity Management, Community Development & Livelihoods, Capacity Building.



Independent Director

Shri M.P. Singh, (aged 65 years), (DIN:07937931), is M.Com and Chartered Accountant. He has wide and varied experience since 1988 in financial and management consultancy services including taxation work. He is a critical analytical reviewer of financial statements and leads plan in reality.

Independent Director

Dr. K.P. Kylasanatha Pillay, (aged 64 years), (DIN:08189583), a Senior Advocate in Supreme Court is a post graduate in English, post graduate in History and LL.M. He did research in the School of Legal Studies, Cochin University of Science and Technology, Kochi and obtained Ph.D.in law. He started practice of law in the District and Subordinate Courts of Thiruvananthapuram in 1987 and later shifted to High Court of Kerala at Ernakulam in 1990. Subsequently he shifted practice to Delhi in 2005. Presently, he appears mainly before the Hon'ble Supreme Court of India. He had worked as Part-time and visiting faculty of the Law Colleges of different Universities in Kerala at different periods of time. He had been a resource person for the training programme of Judicial Officers in National Judicial Academy, Bhopal. Now, he is an approved Guide for Ph. D. in the National University for Advanced Legal Studies in Kochi and two Assistant Professors are doing research under him. He was elected to the Bar Council of Kerala twice and for one term, he was the Vice-Chairman of the Bar Council of Kerala.

He was designated as a Senior Advocate by the Hon'ble High Court of Kerala in 2009. As a lawyer, he had been attending matters relating to Civil, Criminal, Constitutional and Corporate jurisdiction. He had conducted a number of Public Interest Litigations before the Hon'ble High Court of Kerala and Hon'ble Supreme Court of India. In the Supreme Court, he had been on the panel of lawyers of the National Textile Corporation. He had also been in the Senior Panel of Central Government and Maharashtra Government in the Supreme Court. He was also actively involved in socio-political organisations and have held positions of responsibility.

Independent Director

Dr. Bhim Singh, (aged 64 years), (DIN: 08189580), is B.E. (Electrical) from the University of Roorkee, UP, M.Tech. (Power Apparatus & Systems) and Ph.D. from the Indian Institute of Technology Delhi. In 1983, he joined the Department of Electrical Engineering, University of Roorkee (Now IIT Roorkee), as a Lecturer. He became a Reader there in 1988. In December 1990, he joined the Department of Electrical Engineering, IIT Delhi, India, as an Assistant Professor, where he has become an Associate Professor in 1994 and a Professor in 1997. He has been ABB Chair Professor from September 2007 to September 2012. He has also been CEA Chair Professor from October 2012 to September 2017. He has been Head of the Department of Electrical Engineering at IIT Delhi from July 2014 to August 2016. Since, August 2016, he is the Dean, Academics at IIT Delhi. He is JC Bose Fellow of DST, Government of India since December 2015.

Prof. Singh has guided 79 Ph.D. dissertations, and 167 M.E./M.Tech./M.S.(R) theses. He has been filed 43 patents. He has executed more than eighty sponsored and consultancy projects. He has co-authored a text book on power quality: Power Quality Problems and Mitigation Techniques published by John Wiley & Sons Ltd 2015.

His areas of interest include solar PV grid interface systems, microgrids, power quality monitoring and mitigation, solar PV water pumping systems, improved power quality AC-DC converters, power electronics, electrical machines, drives, flexible alternating transmission systems, and high voltage direct current systems.

He has received Khosla Research Prize of University of Roorkee in the year 1991. He is recipient of JC Bose and Bimal K Bose awards of The Institution of Electronics and Telecommunication Engineers (IETE) for his contribution in the field of Power Electronics. He is also a recipient of Maharashtra State National Award of Indian Society for Technical Education (ISTE) in recognition of his outstanding research work in the area of Power Quality. He has received PES Delhi Chapter Outstanding Engineer Award for the year 2006. Professor Singh has received Khosla National Research Award of IIT Roorkee in the year 2013. He is a recipient of Shri Om Prakash Bhasin Award-2014 in the field of Engineering including Energy & Aerospace. Professor Singh has received IEEE PES Nari Hingorani Custom Power Award-2017. He is also a recipient of "Faculty Research Award as a Most Outstanding Researcher" in the field of Engineering-2018 of Careers-360, India.

SENIOR MANAGEMENT TEAM
(As on 01.08.2020)

S. No.	Executive Directors S/Shri	Position Held
1	K.K. Singh	RED, NR
2	A K Juneja	ED (CC&M)
3	Rajnish Bhagat	ED (Comml.)
4	C V Anand	RED (SR)
5	Sanjeev Kishore	RED (ER-2)
6	A N Verma	ED (HR)
7	Vinod Choudhary	RED (WR-2)
8	M S D Bhattamishra	ED (Safety & R&R)
9	A K Mukherjee	RED (ER-1)
10	Sanjay Madan	ED (Lara)
11	Richard Samuel Vittal Muthumani	ED (Finance & ERP)
12	Raj Kumar	ED (RAMAGUNDAM)
13	D. Sarkar	ED (OS)
14	N C Gurung	ED (Consultancy)
15	Chandan Chakraborty	ED (KAHALGAON)
16	A K Jha	ED (HR)
17	Prashant Kashyap	ED (Pakri Barwadih)
18	Padmakumar Rajasekharan	ED (Sipat)
19	S M Chowdhury	ED (Safety)
20	Balaji Iyengar	ED (Rihand)
21	Awadhesh Kumar	ED (OS)
22	Subajit Ghosh	ED (OS)
23	D S Rao	ED (HR)
24	S K Satya	ED (Darlipalli)
25	A K Pandey	RED (WR-I)

S. No.	Executive Directors S/Shri	Position Held
26	Debashis Sen	RED (NR)
27	Munish Jauhari	ED (Vindhyachal)
28	Vinay Kumar	ED (Engg.)
29	Ashim Kumar Goswami	ED (North Karanpura)
30	A K Tripathy	ED (Korba)
31	Sital Kumar	ED (BD)
32	Partha Mazumder	ED (Coal Mining)
33	Praveen Saxena	ED (Barh)
34	Manish Kumar Srivastava	ED (IT)
35	Mohit Bhargava	ED (RE) & CEO NVVN
36	DSGSS Babji	ED (Farakka)
37	Velivala Sudharshanbabu	ED (Simhadri)
38	Prem Parkash	ED (PP&M)
39	Harekrushna Dash	ED (CMD Sectt.)
40	Prasanna Kumar Motupalli	ED (FM)
41	R P Thakur	ED (FT)

Posted in Subsidiary / Joint Venture Companies and others

S. No.	Executive Directors S/Shri	Position Held
1	Sudarsan Chakrabarti	CEO-PVUNL
2	P K Bondriya	CEO-NSPCL
3	Vijai Singh	CEO,NPGCL
4	A K Samanta	CEO, Meja
5	Naresh Anand	ED, BIFPC
6	Rakesh Prasad	CEO-UPL


Young Engineer of NTPC

DIRECTORS' REPORT

Dear Members,

Your Directors are pleased to present the 44th Annual Report on the business and operations of the Company along with the Audited Standalone and Consolidated Financial Statements for the year ended March 31, 2020 and Auditors' Report thereon on behalf of the Board of Directors

Financial Year 2019-20 had been yet another year of achievements for your Company.

Major highlights of your Company for the year 2019-20 are:

- Highest ever Commercial capacity of 8,260 MW (including subsidiaries and acquisitions during the year) added during the year.
- Plant Load Factor (PLF) of 68.20% as against all India PLF of 55.99% with Rihand Thermal station of your Company recording 88.64% PLF. 8 Stations (including JVs) were in the top 25 in the country in terms of PLF. 5 coal based stations out of 24 commercial Stations achieved more than 85% PLF.
- Your Company raised a syndicated term loan in JPY, equivalent to US $750 million-highest foreign currency loan raised by any Indian Company.
- Group Capital Expenditure (CAPEX) including CAPEX of JV/ subsidiaries of your Company for the year 2019-20 was ₹ 47,122.93 crore and on stand-alone basis was ₹ 35,539.37 crore on cash basis.
- Revenue from operations was ₹ 97,700.39 crore and total revenue was ₹ 1,00,478.41 crore. Net Profit after Tax (PAT) was ₹ 10,112.81 crore.
- Dividend of ₹ 3.15 per share comprising interim dividend of ₹ 0.50 per equity share paid in March 2020 and recommended final dividend of ₹ 2.65 per equity share for the year 2019-20, subject to your approval in the upcoming Annual General Meeting.
- Cash contribution of ₹ 5,500.89 crore to Government of India's exchequer through dividend, dividend distribution tax and income tax in the financial year 2019-20.
- Planted approx. 10 lakh trees during 2019-20 to mitigate the GHG emissions arising out of plant operations, thereby bringing total to about 35.10 million planted trees till end of 31.03.2020.
- Coal mine at Talaipalli coal block become operational. With this, production has started at three mines of your Company. Further in 2019 achieved 11.15 MMT of coal production from captive mines, registering an increase of 52.50% over the previous year.
- Your Company is one of the Best Workplaces and has been adjudged 14th in 2019 'Great Place to Work' by the Great Place to Work Institute, further your Company also named as ' Best PSU' in 2019.
- Your Company declared as winner in "Corporate Excellence" category of CII-ITC Sustainability Award 2019, which is the most coveted awards in India in sustainability front.
- Your Company awarded as a Best Performing Power Generation Company in 2019 at the Dun & Bradstreet Infra 2019 Award function.
- Power Management Institute (PMI) has won internationally most coveted ATD BEST award for the 4th time in a row.

You will appreciate the fact that the Company recorded growth and excellent performance despite numerous challenges before the sector like coal shortage, strict emission norms, etc.

Further, in the last month of FY 2019-20, the COVID-19 pandemic developed rapidly into a global crisis, forcing governments to resort to lock-down of all economic activity etc. As a responsible corporate citizen, it is our duty to follow the directives issued by Government of India(GoI). Despite challenges of lock-down, Team NTPC worked tirelessly at its Power Plants to keep up the generation and meet the demand of the nation.

1. FINANCIAL RESULTS (STAND ALONE)

Particulars	2019-20		2018-19	
	₹ Crore	US $ Mn*	₹ Crore	US $ Mn*
Revenue				
Revenue from operations (including energy sales, sale of energy through trading, consultancy fee etc.)	97,700.39	12,845.17	90,307.43	11,873.18
Other income	2,778.02	365.24	1872.13	246.14
Total Revenue	**1,00,478.41**	**13,210.41**	**92,179.56**	**12,119.32**
Expenses				
Fuel cost	54,241.82	7,131.45	52,493.74	6,901.62
Electricity purchased for trading	2,776.44	365.03	2,713.68	356.78
Employee benefits expense	4,925.60	647.59	4,779.89	628.44
Finance costs	6,781.97	891.66	4,716.74	620.13
Depreciation, amortization and impairment expense	8,622.85	1,133.69	7,254.36	953.77
Other expenses	8,663.81	1,139.08	7,548.63	992.46
Total expenses	**86,012.49**	**11,308.50**	**79,507.04**	**10,453.20**
Profit before tax and regulatory deferral account balances	**14,465.92**	**1,901.91**	**12,672.52**	**1,666.12**
Tax expense	9,181.95	1,207.20	(2,918.71)	(383.74)
Profit for the year before regulatory deferral account balances	5,283.97	694.71	15,591.23	2,049.86
Net movement in regulatory deferral account balances (net of tax)	4,828.84	634.87	(3841.34)	(505.04)
Profit for the year	**10,112.81**	**1,329.58**	**11,749.89**	**1,544.82**

Appropriations	2019-20		2018-19	
	₹ Crore	US $ Mn*	₹ Crore	US $ Mn*
Transfer to bonds/ debentures redemption reserve	-	-	1,732.37	227.76
Transfer to general reserve	6,500	854.59	4,500.00	591.64
Dividend paid	2,968.37	390.27	4,922.55	647.19
Tax on dividend paid	607.80	79.91	1,000.49	131.54

*1US $= ₹ 76.06 as on March 31, 2020

2. ACQUISITION OF THDC & NEEPCO

Your Company based on the in-principle approval of Cabinet Committee on Economic Affairs (GoI) for strategic sale of entire GoI stake in THDC & NEEPCO, entered into share purchase agreement and acquired 74.496% equity stake of GoI in THDC India Limited (THDC) and 100 % equity stake of GoI in North-Eastern Electric Power Corporation Limited (NEEPCO) during the FY 2019-20.

After acquisition, THDC & NEEPCO have become subsidiaries of NTPC w.e.f. 27th March 2020.

This acquisition, gives your Company a large portfolio of Hydro capacity.

3. DIVESTMENT OF SHAREHOLDING BY GOVERNMENT OF INDIA

The Government of India has, from time to time, disinvested its stake in your Company. During FY 2019-20, the Government of India divested 5.39% of shares of your Company as under:

Sl. No.	Particulars	No. of Shares Divested during 2019-20	Percentage sold
1.	CPSE ETF during July 2019	18,82,47,114	1.91
2.	Bharat ETF during Oct. 2019	3,60,73,713	0.36
3.	CPSE ETF during Feb. 2020	30,87,48,936	3.12
	Total	**53,30,69,763**	**5.39**

4. DIVIDEND

Interim and Final Dividend:

Your Company paid interim dividend of ₹ 0.50 per equity share in March 2020 and the Board of Director of your Company has recommended a final dividend of ₹ 2.65 per equity share for the Financial year 2019-20.

The dividend payout is 30.82% and the total dividend payout including dividend tax is 31.82% of profit after tax.

The final dividend shall be paid after your approval at the upcoming Annual General Meeting.

The dividend has been recommended in accordance with your Company's Dividend Distribution Policy. Further, as per regulation 43A of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("SEBI Listing Regulations"), the top 500 listed companies shall formulate a dividend distribution policy. Accordingly the policy was adopted to set out the parameters and circumstance that will be taken into account by the Board in determining the distribution of dividend to its shareholders and/ or retained profits earned by the Company. The policy is also available on the Company's website https://www.ntpc.co.in/sites/default/files/downloads/DividendDistributionPolicyofNTPCLimited.pdf.

5. OPERATIONAL PERFORMANCE

During the year, the power stations of your Company generated 259.62 BUs (290.19 BUs including JVs & Subsidiaries but excluding NEEPCO and THDC) of electricity. This was 18.75 % (20.96 % including generation by JVs and Subsidiaries) of the total power generated in India over the Previous years' generation of 274.45 BUs by your Company (305.90 BUs including JVs & Subsidiaries).

The total generation contributed by coal stations is 249.71 BUs during the year against generation of 262.47 BUs last year. Generation from coal-based units could have been still higher but due to less generation schedule there was opportunity loss of 74.54 BUs. The coal based stations operated at an average Plant Load Factor (PLF) of 68.20% (All India PLF was 55.99%) and average Availability Factor of 81.34% on bus bar during the year.

Rihand Super Thermal Power Station with a PLF of 88.64% was ranked 5th in the country and 8 Stations (including JVs) of your Company were in the top 25 in the country in terms of PLF. Five coal based stations out of twenty four commercial Stations achieved PLF more than 85%.

The gas stations having a capacity of 4,017 MW achieved annual generation of 4.97 BUs at a PLF of 14.09 % as against 7.43 BUs last year.

Opportunity loss due to less generation schedule on Gas was still higher at 28.55 BUs.

Generation contributed by Koldam Hydro Power Station was 3.45 BUs against 3.01 BUs achieved in last year, there by achieving a growth of 14.46 % over last year.

Generation contributed by RE Projects/stations (Solar, wind, small hydro) of your Company was 1.49 BUs.

6. COMMERCIAL PERFORMANCE

6.1 Billing and Realisation

Your Company has successfully achieved the targets set by Government of India (GoI) for energy supplied in 2019-20. Many of the beneficiaries were making timely payments and had availed attractive rebates as per Company's Rebate Scheme.

Your Company has in place a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). Apart from the LCs, payment is secured by the Tri-Partite Agreements (TPAs) signed amongst the State Governments, Government of India (GoI) and Reserve Bank of India (RBI). As per the TPAs, any default in payment by the State owned Discoms can be recovered directly from the account of the respective State Governments in association with Reverse Bank of India (RBI).

The original TPAs signed during 2000-01 were valid up to 31.10.2016. As per the decision of the Union Cabinet and as agreed by the various States and RBI, these TPAs have been extended for a further period of 10 to 15 years. As of now, 29 out of total 31 States / UTs have signed the TPAs extension documents. The signing of TPAs extension by balance States is being taken up.

6.2 Rebate Scheme for realization of dues

In order to encourage early and full realization of dues, your Company has issued 'Rebate Scheme' for the year 2019-20. 1.65% rebate shall be allowed for amounts credited to your Company's accounts for any payments against provisional bills and advance payments made on 1st day of the Billing Month and graded gradually to 1.590% till 5th day of the billing month. 1.575% rebate shall be allowed for amounts credited to your Company's accounts for any payments made on 6th day and graded gradually to 1.5% till 11th day of the billing month. For amounts credited to your Company accounts from 12th day of the Billing Month till 18th day of the month next to Billing Month, graded rebate would be offered from 1.485% to 0.020%. An additional rebate of 0.1% (maximum) is proposed for beneficiaries who make payment on time consistently during the year.

6.3 Commercial Capacity

Commercial Capacity totaling to 8,260 MW of your Company including those of subsidiary Companies was added during the year 2019-20. The subsidiaries Companies also include 1,457 MW of NEEPCO and 1,513 MW of THDC which was acquired by your Company on 27th March 2020:

Project/ Unit	Capacity (MW)	COD*
Units- Coal Based (I)		
Gadarwara Unit#1	800	01.06.2019
Lara Unit#1	800	01.10.2019
Tanda-II Unit#1	660	07.11.2019
Khargone Unit#1	660	01.02.2020
Barauni-II Unit#1	250	01.03.2020
Darlipalli Unit#1	800	01.03.2020
Total (I)	**3,970**	
Subsidiaries – Coal Based (II)		
Meja-I Unit#1	660	30.04.2019
NPGCL Unit#1	660	06.09.2019
NEEPCO	1,457	27.03.2020@
THDC	1,513	27.03.2020@
Total (II)	**4,290**	
Total Capacity declared commercial during 2019-20 (I)+(II)	**8,260**	

* COD- Commercial Operation Date

@ - Transferred from GoI with effect from 27.03.2020

As on 31.03.2020, the Commercial Capacity of your Company stood at 49,695 MW (45,725 MW as on 31.03.2019) and your Company Group's Commercial Capacity stood at 61,126 MW (52,866 MW as on 31.03.2019):

Owned by your Company	Capacity MW
Coal based projects	43,950
Gas based projects	4,017
Renewable Energy Projects	928
Hydro Projects	800
Sub-total	**49,695**
Joint Ventures & Subsidiaries	
Coal based projects	6,494
Gas based projects	2,494
Renewable Energy Projects	118
Hydro Projects	2,325
Sub-total	**11,431**
Total	**61,126**

6.4 Tariff Regulations

Central Electricity Regulatory Commission (CERC) has issued the CERC (Terms and Conditions of Tariff) Regulations, 2019 on 07.03.2019, which are applicable for the period 01.04.2019 to 31.03.2024. The tariff of electricity generated from your Company's stations would be determined by CERC based on these Regulations for the above mentioned period. The salient features of CERC Tariff Regulations, 2019 are discussed in the Management Discussion and Analysis Report which is placed at Annexure-I of this Director's Report.

6.5 Security Constrained Economic Dispatch (SCED)

The mechanism of Security Constrained Economic Dispatch (SCED) in your Company is under implementation on Pilot basis starting from 1st April 2019. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the Discoms. Starting from 1st June 2020, this Pilot has been extended till 31st March 2021. During this period the scope of the SCED has been expanded to include the state regulated generating stations and the merchant generators also based on their willingness to participate in the scheme and this is expected to result in increased saving in the cost of power procurement of the Discoms.

6.6 Strengthening Customer Relationship

Customer Focus is one of the core values of your Company (ICOMIT). In line with this, your Company has taken up several initiatives targeted towards the external Customers. Customer Relationship Management (CRM) and Customer Satisfaction Index (CSI) are some of the most important parts of these initiatives.

As part of the CRM, your Company has been implementing several structured activities with the objective of sharing its experiences and best practices with the customers, capturing their feedbacks and expectations and addressing their issues. Some of these activities are described below:

- Your Company provides various support services to the beneficiaries, which involves identifying potential areas of cooperation and sharing of each other's best practices. In the financial year 2019-20, total 48 such programs have been conducted for the customers on the basis of requirement expressed by them.
- Your Company offers training programs to the representatives of beneficiary companies at Power Management Institute (PMI), the apex training institute of your Company on free of cost basis. In 2019-20, 52 participants from various customer organizations attended training in 18 programs.

Your Company has also put in place Customer Satisfaction Index (CSI) survey scheme, to gather customer's feedbacks through a survey and respond to their requirements. This CSI survey has been conducted in 2019-20 and the Score falls under excellent category.

6.7 Power Trading in Power Exchange

In line with CERC (IEGC) (5th Amendment) Regulations 2017, your Company sold more than 568 Million Units of Un-Requisitioned Surplus (URS) power in the Power Exchange through its trading arm NTPC Vidyut Vyapar Nigam Limited (NVVN), a whole owned subsidiary of your Company, based on consents received from most of the beneficiaries. The gains from the sale of URS are being shared with beneficiaries as per applicable provisions.

6.8 Real Time Market (RTM)

RTM has been implemented in the country since 1st June 2020 on voluntary basis. The main objective of RTM is to provide a market mechanisms to the generating stations to sell their surplus power. This also provides an opportunity to the Discoms to buy power from the market to meet their contingent requirements. RTM is being implemented in the form of 48 half-hourly markets operated round the clock and provides options to the generators and the Discoms to participate in the market through price sensitive bidding.

6.9 Renewable Energy:

PPAs for 600 MW solar power projects (under Developer Mode Projects) have been signed with Solar Power Developers, tariff of these projects and 200 MW wind project have been adopted by CERC.

As regard NSM Projects, with commissioning of last 250 MW Kadappa project, entire 3000 MW under NSM Phase-II Batch-II Tranche-I has been successfully completed by your Company.

For your Company owned renewable projects, PPAs signed for 20 MW Floating Solar PV Project at Auraiya and 20 MW solar PV project at Rihand as a successful bidder under UPNEDA Bidding.

Your Company has also signed PPA with SECI to supply 160 MW of solar power to Rajasthan, won through highly competitive tender.

Your Company has also won 769 MW and 923 MW solar projects under CPSU Scheme and entered into 1323 MW Power Usage Agreement with Telangana for end consumption through government entities of Telangana.

Your Company has also signed PPA with Kerala for supply of 92 MW solar power from Floating PV station at Kayamkulam.

Petition for tariff determination of 100 MW Floating Solar PV Station at Ramagundam for use under MOP Scheme for Flexibility in Generation and Scheduling of Thermal Power Stations dated 5th April 2018 Scheme has been filed in CERC.

7. INSTALLED CAPACITY

During the year 2019-20, your Company added 6,984 MW to its installed capacity as per details given below:

Project/ Unit installed	Capacity (MW)
Coal Based Power Projects	
Tanda, Stage -II, Unit#1	660
Khargone, Unit#1	660
Barauni Stage-II, Unit#8	250
Darlipali, Unit#1	800
Khargone, Unit#2	660
Total	**3,030**
Under Subsidiaries and Joint Ventures (Coal Based Power Projects)	
NPGCL Unit#1 (Fully owned subsidiary)	660
NEEPCO (Hydro 1225 MW & Gas 527 MW & Solar 5 MW)	1757*
THDC (Hydro 1424 MW & Wind 113 MW)	1537*
Total by Subsidiaries and JV	**3,954**
Total Addition during FY 2019-20	**6,984**

*Your Company acquired GoI stake in THDC & NEEPCO w.e.f. 27.03.2020.

The total installed capacity of your Company Group as on 31.03.2020 has become 62,110 MW (55,126 MW as on 31.03.2019) as tabulated below:

Owned by your Company	Capacity MW
Coal based projects	44,610
Gas based projects	4,017
Renewable Energy Projects	928
Hydro Projects	800
Sub-total	**50,355**
Joint Ventures & Subsidiaries	
Coal based projects	6,494
Gas based projects (Including NEEPCO-527 MW)	2,494
Hydro Projects of THDC (1,424 MW) & NEEPCO (1,225 MW)	2,649
Renewable Energy Projects of THDC (113 MW) & NEEPCO (5 MW)	118
Sub-total	**11,755**
Total	**62,110**

8 CAPACITY ADDITION PROGRAMME

8.1 Projects under Implementation

In addition to furthering Capacity addition through Coal based power projects, your Company has been pursuing enhancement of its power generation portfolio through Hydro and Renewable Energy projects.

Various projects of your Company having aggregate capacity of 21,333 MW (including 9,354 MW being undertaken by Joint Venture and subsidiary companies) are under implementation in India and abroad. Total Capacity under Construction comprises 16,430 MW of Coal (Including 7,560 MW being undertaken by Joint Venture and subsidiary companies), 2,555 MW of Hydro (including 1,744 MW being undertaken by Joint Venture and subsidiary companies) and 2,348 MW of Renewable projects (Including 50 MW being undertaken by Joint Venture and subsidiary companies). The details of such projects are as under:

Ongoing Projects as on 30.06.2020	Capacity (MW)
I.A. Coal Based Projects	
1. Barh-I, Bihar (3x66 MW)	1,980
2. Lara-I, Chattisgarh (2x800 MW)	800
3. Gadarwara-I, Madhya Pradesh (2x800 MW)	800
4. Darlipalli-I, Odisha (2x800 MW)	800
5. North Karanpura, Jharkhand (3x660 MW)	1,980
6. Tanda-II,UttarPradesh(2x660MW)	660
7. Telangana Phase-I, Telangana (2x800 MW)	1,600
8. Barauni St.-II, Bihar (2x250 MW)	250
Sub Total (A)	**8,870**
I.B. Hydro Electric Power Projects (HEPP)	
9. Tapovan Vishnugad,Uttarakhand(4x130 MW)	520
10. Lata Tapovan, Uttarakhand (3x57 MW)	@171
11. Rammam Hydro, West Bengal (3x40 MW)	120
Sub Total (B)	**811**
I.C Renewable Energy Projects	
12. Auraiya, Solar G, UP	20
13. Bilhaur, Solar G, UP	140
14. Bilhaur, Solar G, UP	85
15. Ramagumdam, Solar F, AP	100
16. Simhadri, Solar F, AP	25
17. Kayamkulam, Solar F, Kerala	22
18. Kayamkulam, Solar F, Kerala	70
19. Jetsar, Solar G, Rajasthan	160
20. Rihand, Solar G, UP	20
21. Auraiya, Solar F, UP	20
22. CPSU-I: Shimbhoo Ka Burj, Solar G	250
23. CPSU-I: Devikot, Solar G, Rajasthan	150
24. CPSU-I: Shimbhoo Ka Burj, Solar G	300
25. CPSU-II: Nokhra, Solar G, Rajasthan	300
26. CPSU-II: Fatehgarh, Solar G, Rajasthan	296
27. CPSU-II: Navalakhapatti, Solar G	230
28. CPSU-II: Devikot, Solar G, Rajasthan	90
29. CPSU-I: Gandhar, Solar G, Rajasthan	20
Sub Total (C)	**2,298**
Total I (A)+(B)+(C)	**11,979**
II Projects under JVs & Subsidiaries	

Ongoing Projects as on 30.06.2020	Capacity (MW)
(A) Coal Based Projects	
30. Nabinagar- JV with Railways (BRBCL), Bihar, (4x250 MW)	250
31. Nabinagar (NPGCL), Bihar (3x660MW)	1,320
32. Meja, JV with UPRVUNL (MUNPL), Uttar Pradesh (2x660 MW)	660
33. Patratu Expansion, JV with JBVNL	2,400
34. Rourkela, JV with SAIL (NSPCL), Odisha	250
35. Durgapur, JV with SAIL (NSPCL), West Bengal (2x20MW)	40
36. Khulna, JV with BPDB (BIFPCL), Bangladesh (2x660MW)	1,320
37. THDC - Khurja (2x660 MW)	1,320
Total II (A)	**7,560**
II (B) Hydro Projects	
38. THDC - Tehri PSP, Uttarakhand	1,000
39. THDC - VishnugadPipalkoti, Uttarakhand	444
40. NEEPCO – Kameng, Arunachal Pradesh	300
Total II (B)	**1,744**
II C Renewable Projects	
41. THDC - Kasargod Solar, Kerala	50
Total II (C)	**50**
Total II (A+B+C)	**9,354**
Total On-Going Projects as on 30.06.2020 (I)+(II)+(III)	**21,333**

@Work of Lata Tapovan HEPP stopped as per orders of the Hon'ble Supreme Court dated 07.05.2014.

8.2 New Technology & Initiatives

Your Company has laid major stress on efficient utilization of resources and use of technological advancements for improving energy efficiency.

With emphasis on efficiency of electricity generation, your Company has adopted ultra-super critical technology by improving the steam parameters for North Karanpura (3X660 MW) to 260 kg/ cm^2, 593°C/ 593°C. For Khargone (2X660 MW) and Telangana (2X800 MW) steam parameter are 270 kg/ cm^2, 600°C/ 600°C. Plant efficiency of Ultra Super Critical (USC) units is expected to be around 41.5% which is higher by 3.5% percentage over a conventional sub-critical 500 MW unit. First ultra-super critical based units of Khargone (2X660MW) Super Thermal Power Project (STPP) have already been commissioned.

For the first time in your Company, Air Cooled Condenser (ACC) System has been adopted at North Karanpura STPP and Patratu STPP which will bring a significant reduction in specific water consumption for the project. It is also being planned to install ACC for Singrauli-III (2X800 MW) & Lara-II (2X800 MW). In order to reduce the water consumption further, hybrid cooling system (combination of dry and wet cooling system) is being adopted for auxiliary cooling.

8.2.1 Development of Advance Ultra Super Critical technology- Ramping up cycle efficiency of coal fired units to reduce the emissions intensity

Cleaner power has been central to your Company since its inception. Over the timeline, we have witnessed focus change from local pollution to global emission concerns. Your Company has been voluntarily working on improving the energy conversion cycle efficiency by adopting more efficient technologies. Efficiency of units has been continuously improved from sub-critical to supercritical and onto ultra-supercritical technology. All new units are being ordered with USC parameters of 600°C/600°C. Adoption of USC parameters shall result in a reduction of CO_2 emission (as also others like NO_x and SO_x) intensity by around 8% when compared to conventional subcritical power plants for every unit of electricity generated.

To achieve even higher efficiency, a program to develop Advanced Ultra Super Critical (AUSC) technology is underway by a consortium of NTPC, BHEL and IGCAR. The programme has been developed under the aegis of office of the PSA (Principal Scientific Adviser) to the Government of India. The project R&D phase was approved by the Government of India in the year 2016 with total outlay of ₹ 1,554 crore. The AUSC Project envisages development of indigenous technology for steam parameters of 310 Kg/cm^2 and 710°C/720°C temperature. Such parameters are way higher than steam parameters used in contemporary plants globally and would result in top of line efficiency of 46%. This is sharp increase from the contemporary efficiency levels of 38% (sub-critical units) and 40% (super-critical units). It will result in reduction of CO_2 emissions to the tune of 20% compared to a sub-critical plant.

The activities of the R&D phase of the Indian AUSC are now in final stages and is likely to be completed in FY 2020-2021. Proactive efforts have been underway for the second phase of the programme which is aimed at setting up of an 800 MW technology demonstration plant. Your Company Sipat plant located in Chhattisgarh has been selected as the site for setting up of the technology demonstration plant (TDP). Incidentally, the site is home to your Company's first Supercritical unit (660 MW). The technology tuning at the TDP shall hold the key for translation of the learning from the demo-plant to design, execution and operation subsequent units comprising of the fleet of AUSC units.

8.2.2 Biomass Co-firing Utilization of Agro residue for Power Generation & reduce pollution

As part of its commitment towards clean environment, your Company has taken a new initiatives to utilise agro residue for power generation. This is intended to cut down carbon emissions and also to discourage crop residue burning by farmers after harvesting by adding economic value to the crop residue and providing extra income to farmers and employment in rural sector.

Biomass co-firing is a unique method to utilize coal based power plant infrastructure to produce renewable energy by simply replacing some of the coal with biomass based fuel. Being carbon neutral fuel, biomass co-firing is a technology recognized by UNFCCC as a measure of reducing greenhouse gas emission.

After successfully demonstrating biomass co-firing at your Company Dadri plant, your Company has started commercial scale biomass co-firing at Dadri. Your Company has already fired over 6,000 tonnes of biomass pellets at your Company Dadri plant. Purchase orders of 280 TPD for four years (approx. 4 lakh tonnes) have also been placed for your Company Dadri plant.

Further, in line with advisory of Central Electricity Authority (CEA), your Company had invited expression of interest from entrepreneurs and start-ups for production and supply of agro residue based pellets/ torrefied pellets to majority of NTPC power plants and more than hundred parties have participated in Expresion of Interest (EOI). Bids from the interested parties are being invited.

8.2.3 Waste to energy (WtE) and disposing municipal solid waste (MSW)

Keeping commitment towards clean & green environment and Swachh Bharat Mission (SBM), your Company has taken several initiatives to support & leverage Government of India's effort towards realising SBM thereby ensuring pollution free environment to people's health and welfare.

Your Company has successfully revamped and made it functional the "Waste to Compost" plant at Karsara, Varanasi and now managing Operation & Maintenance (O&M) of this entire 600 Tons per Day (TPD) capacity plant. The plant is processing about 600 TPD of MSW and generating about 60-80 TPD of compost. Sanitary land fill facility and Leachate treatment facility have also been created at Varanasi to ensure scientific disposal of municipal solid & liquid waste.

In addition, your Company has commissioned 24 TPD thermal gasification based demonstration scale WtE plant at Varanasi to support technology development in India. The Municipal Solid Waste (MSW) is first converted to produce gas, which is then used to generate approximately 200 kW of electric power. Further, to promote Make in India concept, this Project has been awarded to Micro, Small & Medium Enterprises (MSME) vendor.

Further, your Company has also signed in-principle MoU with Surat and East Delhi Municipal Corporations, Varanasi Municipal Corporation and Indore Municipal Corporation for setting up state of the art WtE plant. Process for bid invitation for Surat and East Delhi plants is under progress.

8.2.4 Renewable energy

Renewable energy is one central focus for your Company. To be in step with ambitious targets, your Company is attempting all avenues for renewable capacity addition to look beyond conventional large scale solar and wind parks. Your Company is utilizing roofs of power plant buildings for solar power generation and integrating to the existing plant infrastructure. Your Company is also going ahead with floating solar at reservoirs of its projects which is a step towards saving of land and water conservation by reducing water surface evaporation.

8.2.5 Welding

Welding as a joining process, is the most critical activity involved during manufacturing, erection and maintenance / overhauling of units. The advance metallurgy of components exposed to high temperatures in new coal based Super critical / Ultra Super Critical 660 MW & 800 MW thermal units of your Company, imposes greater challenges especially in terms of developing desired competencies & skill sets to achieve sound welds & also to develop desired competencies in latest, advanced NDT techniques for quick results.

To meet all those challenges, several New Initiatives in Welding & NDT were taken especially in Skill development & Competency Building, Welding Failure Analysis, challenges of Welding & NDT in even higher & complex metallurgy involved in AUSC components.

An innovative vision to develop your Company's own state of the art Welding Training Centers at selected projects to train & produce highly skilled welders, Welding & NDT Engineers, and a World Class Welding Research Center has been formalized, extensive studies were carried out to develop suitable blue prints. A Welding Research Institute is envisioned at your Company – Sipat project. These actions are now being carried forward and should impact the complete sector.

8.2.6 Smart Township

In Central Public Sector Enterprises (CPSE) conclave 2018, idea to convert some of CPSE townships to "Mini Smart Cities" was mooted, your Company has awarded the work of two of its townships i.e. "Solapur" and "Khargone" to be converted into "Smart Townships". The work is under execution. Planning and development of further eight (8) Townships have also been completed.

The work in these townships involve application of smart solutions like Pan-Township security and surveillance system, smart water metering, leakage identification and water quality monitoring, smart energy metering and use of renewable energy sources, robust IT infrastructure and FTTH connectivity, rainwater harvesting, waste management, use of smart bicycles, electric vehicle (golf carts), EV Chargers, open gym and citizen services etc.

Application of these smart solutions will provide enhanced quality of life to the residents in an environment friendly and sustainable manner.

8.2.7 Initiative for Use of Treated Sewage Water from Municipal Sewage Treatment Plants (STP)

Your Company has already taken initiative to use treated sewage water from municipal STPs nearby for bulk water requirement in its power plants, replacing precious fresh water from rivers/lakes/reservoirs/dams meant for other priority uses like agriculture, drinking, pisiculture, water body preservation, etc. Treated sewage water will be used for Condenser Cooling Water system make-up for the power stations wherever Municipal STPs are within 50 km distance from Power station complying Tariff Notification of GoI dated 28.01.2016. The Company has already identified some of its projects viz. Dadri, Patratu, Solapur, Meja, Mouda, Korba, Sipat and Ramagundam where there is feasibility of using the STP treated water as STPs already exist/are going to be constructed within 50 km radius of the power plants with substantial availability of STP water. Further after intense discussion with Ministry of Power (MOP), clarity regarding scope of work of power utility was provided by Ministry vide order issued in March 2020.Based on this, agreements with Nagpur Municipal Corporation for Mouda Thermal Power Station of NTPC, Ramagundam Municipal Corporation for Ramagundam Power Station, Korba Municipal Corporataion for Korba Super Thermal Power Station, Bilaspur Municipal Corporation for Sipat Super Thermal power station,Solapur Municipal Corporation for Solapur STPP,Ranchi Municipal Corporation for Patratu STPP, Prayagraj Municipal Corporation for Meja TPP are under discussions.

8.2.8 Advanced digital and control technology use

Your Company is on the Digital path and implementing its Digital Strategy Roadmap. The initiatives of Advance Process Control (Operation optimization suite) and Advanced Monitoring of Stockyard have been commissioned as a pilot project. Implementation in subsequent units are in progress. Your Company has also taken initiatives of APM (Maintenance optimization suite), AIG (IIOT to enhance process visibility), AIM (digital twin with lifecycle documentation). The initiatives are being piloted at Simhadri power plant and subsequently shall be rolled-out across your Company Fleet. Pilot for ART (Augmented reality / Virtual Reality based training) has been completed and the full-fledged ART based Complete Turbine Training module is under procurement process.

For capacity building of operating personnel on unit operation of different size and make, your Company is building full fledged replica Simulators for all available varieties of supercritical units.

Technology intensive security system is being envisaged in place of manpower intensive security currently in place. It has centralized control and multiple layers of security to enhance security with optimized manpower. Pilot of the same has been completed in your Company, Dadri Plant. In first phase it is being implemented for five (5) your Company projects. Further, your Company has taken the initiative for further secured Control systems, augmenting the present defense in depth Cyber Security Posture for Operational Technology (OT).

Your Company has taken initiative for setting up of Integrated command and control centre (ICCC) having functionalities such as weather forecast, market intelligence, demand forecasting, generation forecasting, integrated planning, scheduling and operation optimization covering hydro, thermal and RE portfolio.

8.2.9 Dry Bottom Ash Handling System

Your Company has taken initiative in recent times to minimize water consumption by adopting Dry Bottom Ash Handling System instead of conventional Wet Bottom Ash Handling System for upcoming Coal Based Thermal Power Plants at Patratu, Singrauli-III and Lara-II and for R&M project at Rihand STPP. Dry Bottom Ash Handling System facilitates extraction of bottom ash in dry form and practically, water requirement will be eliminated for handling Bottom Ash with meager quantity of water which would be required for conditioning and dust suppression. The system not only reduces water consumption which is required for disposal of bottom ash in wet form but also results in reduction in power consumption for Bottom Ash disposal and facilitates separation of bottom ash and fly ash which will result in better utilization of ash.

8.2.10 Change-over to safer Chlorine-di-oxide system from conventional gas Chlorination system for disinfection of plant water system

Keeping commitment towards green environment and safety, your Company has embarked upon to the more advanced, safer and compact in-situ Chlorine-di-oxide generation system from earlier practice of Gas chlorination system through a comprehensive policy change for its entire fleet of existing power stations as well as all upcoming power stations which is under implementation in various projects and stations of your Company.

8.2.11 Zero Liquid Discharge (ZLD) from Thermal Power Plants

Your Company has already taken initiative to become a Zero Liquid Discharge company for all closed cycle operating station by identifying and implementing water management initiative, adopting innovation in water use in its Thermal Power Plant. Some of your Company stations have already become zero liquid discharge compliant and implementation is under progress in balance stations. Under the scheme, plant effluent water is segregated from storm water and is reused after treatment to a large extent in the area of Ash handling plant, Coal Handling Plant, FGD make up, Service Water etc.

8.2.12 Energy Conservation, Technology Absorption and Foreign Exchange Earnings and outgo

Details of conservation of energy, technology absorption and foreign exchange earnings and outgo in accordance with Section 134(3) (m) of the Companies Act, 2013 read with Companies (Accounts) Rules, 2014 forms part of this Director report is placed at Annex-III.

8.3 Project Management

Your Company has adopted an integrated system for the planning, scheduling, monitoring and control of approved projects under implementation. To co-ordinate and synchronize all the support functions of project management, the issuer relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centers. The IPMCS addresses all stages of project implementation, from concept to commissioning.

Your Company has established state-of-the-art IT enabled Project Monitoring Centre (PMC) for facilitating fast track project implementation. PMC has advanced features like Web-based Milestone Monitoring System (Webmiles), Project Review and Internal Monitoring System (PRIMS), etc. PMC facilitates monitoring of key project milestones and also acts as decision support system for the management.

PMC is an integrated enterprise-wide collaborative system to facilitate consolidation of project related issues and their resolution. Features like SMS based information delivery, real time video capture, storage and retrieval facility and video conference facility are extensively utilized for project tracking, issues resolutions and management interventions. PMC has helped in providing effective coordination between the agencies and has provided enhanced/ efficient monitoring of the projects leading to better and faster project implementation.

8.4 Capacity addition through Subsidiaries and Joint Ventures (JVs) of your Company

Besides adding capacities on its own, your Company develops power projects through its subsidiaries and joint ventures, both in India and abroad.

The information of Indian Subsidiaries and JV Companies along with details of partners of joint ventures engaged in power generation is given below:

Name of Company	JV Partner(s)	Details
KBUNL (Kanti Bijlee Utpadan Nigam Ltd.), A wholly-owned subsidiary of NTPC	-	Both the units of Stage-I of KBUNL have been declared on commercial operation. This Company has also taken up expansion of the project by installation of (2X195 MW) units. Unit#3 of Stage-II was declared commercial on 18.03.2017 and Unit#4 of Stage-II was declared commercial on 01.07.2017. Generation in FY 2019-20 was 2905.00 MUs at 54.21% PLF and DC was 92.26%.
BRBCL (Bhartiya Rail Bijlee Company Limited)	Ministry of Railways	A subsidiary of your Company in joint venture with Ministry of Railways with equity contribution in the ratio of 74:26 respectively for setting up power project of 1000 MW (4X250 MW) capacity at Nabinagar in Bihar. Unit#1, 2 & 3 was declared commercial on 15.01.2017, 10.09.2017 and 26.02.2019 respectively. Construction activities of last unit is in progress. Generation in FY 2019-20 was 4887.10 MUs at PLF 74.18% and DC was 86.28%.

Name of Company	JV Partner(s)	Details
NSPCL (NTPC-SAIL Power Co. Ltd.) (now converted into a Public Limited Company from NTPC-SAIL Power Company Private Limited)	Steel Authority of India Ltd. (SAIL)	A 50:50 Joint Venture Company between your Company and SAIL, owns and operate Captive Power Plants of SAIL at Durgapur (2 x 60 MW), Rourkela (2 x 60 MW) and Bhilai (2x30+1x14 MW). NSPCL has also implemented (2x250 MW) Bhilai Expansion Power Plant. Total installed capacity of NSPCL is 814 MW. NSPCL generated 5,165.40 MUs at 72.24% PLF and DC was 92.19% in FY 2019-20. NSPCL has paid dividend of ₹ 50.00 Cr during FY 2019-20 to your Company. Under Implementation - New Coal based Capacity at Rourkela PP-II Expansion (1x250 MW) & Durgapur PP-III (2x20 MW) is under construction.
NTECL (NTPC Tamil Nadu Energy Co. Ltd.)	Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO) (erstwhile TNEB)	A 50:50 JVC has commissioned (3x500 MW) coal based power project at Vallur, Tamil Nadu. All the units have been declared on commercial operation. Generation of NTECL during FY 2019-20 was 5,675.00 MUs at 43.07% PLF and DC was 87.85 %
APCPL (Aravali Power Company Pvt. Ltd.)	Indraprastha Power Generation Company Ltd. (IPGCL) and Haryana Power Generation Corporation Ltd. (HPGCL).	This JVC is operating (3X500 MW) coal based Indira Gandhi Super Thermal Power Project. Your Company, IPGCL and HPGCL have contributed equity in the ratio of 50:25:25. Generation of APCPL during FY 2019-20 was 3,842.79 MU at 29.17% PLF & DC was 91.97%. APCPL has paid dividend of ₹ 146.83 crore to your Companyduring FY 2019-20.
MUNPL (Meja Urja Nigam Pvt. Ltd.)	Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL)	A 50:50 JVC is implementing (2X660 MW) coal based power project in the state of Uttar Pradesh. Construction activities are in progress. Unit-1 of 660 MW capacity has been declared commercial on 30 April 2019. Unit-2 is under construction. Generation of MUNPL during FY 2019-20 was 1,051 MUs at 17.93% PLF and DC was 26.62%.

Name of Company	JV Partner(s)	Details
NPGCL (Nabinagar Power Generating Company Ltd.)		NPGCL is setting up a (3x660 MW) Coal based plant at Nabinagar. Construction activities are in progress. Unit#1 declared commercial on 06.09.2019 and Unit#2 was synchronized on 12.02.2020. Generation of NPGCL during FY 2019-20 was 2784.00 MUs at 77.85% PLF and DC was 88.11%.
RGPPL (Ratnagiri Gas and Power Pvt. Ltd.)	GAIL,ICICI Bank,SBI, IDBI, Canara Bank and MSEB Holding Co. Ltd.	Your Company has a stake of 25.51% in RGPPL. PPAs have been signed by RGPPL with Indian Railways for supply of 500 MW for 5 years w.e.f. 01.04.2017 and Gas Supply Agreements were signed with GAIL for supply of 1.75 MMSCMD of RLNG w.e.f. 01.04.2017 for 5 years. Demerger scheme was approved by NCLAT on 28.02.2018 thereby separating the R-LNG business from RGPPL to the new entity Konkan LNG Private Limited (KLPL). With this, the LNG business and all its associated assets and liabilities have been merged in to a separate company, namely Konkan LNG Limited (KLL) (erstwhile KLPL). Generation of RGPPL during FY 2019-20 was 4263.67 MUs at 24.68% PLF and DC was 33.64%.
ASHVINI (Anushakti Vidhyut Nigam Ltd.)	Nuclear Power Corporation of India Ltd. (NPCIL)	Your Company is having a stake of 49%. The company was formed to set up Nuclear Power Project with two reactor units of mutually agreed capacity and at a mutually agreed location, which may be extended to setting up additional NPPs at the same location or elsewhere, as may be mutually discussed and agreed between the parties, subject to establishment of techno-commercial viability. JVC may also explore the possibilities of entering into business activities related with the Nuclear Power generation and front-end fuel cycle such as uranium mining, setting up of ancillary facilities, etc. at an appropriate stage. Currently, no activities are being taken up by the Company.

Name of Company	JV Partner(s)	Details
PVUNL (Patratu Vidyut Utpadan Nigam Limited)	Jharkhand Bijli Vitran Nigam Limited (JBVNL)	PVUNL has been incorporated on 15.10.2015 as a subsidiary of your Company with 74% stake in the Company and 26% of stake held by JBVNL to acquire, establish, operate, maintain, revive, refurbish, renovate and modernize the performing existing units and tie-lines, sub-stations and main power transmission lines connected therewith and setting up of the new units. Supplementary Joint Venture Agreement was signed on 01.03.2018 for expansion units (Phase-I 3X800 MW).EPC package was awarded to BHEL and Construction work is in progress at full swing.

8.5 Hydro Power Projects

Your Company, as you are already aware, has been in renewable energy and now has solid footprints in green energy by developing hydro projects as detailed below:

A. **Koldam HEPP (4x200 MW)** is on the river Satluj, in District Bilaspur (Himachal Pradesh). All the four units of 200 MW were declared commercially operational in 2015. Since then the project is running exceedingly well. The generation for the financial year 2019-20 has been 3,449.60 MUs against design energy of 3055 MUs. Station has achieved best ever yearly DC of 108.97% in FY 2019-20, which is highest amongst all the Hydro Power Stations in the country for the last 4 years in a row. Station has taken initiatives for environment friendly disposal of plastic waste by signing MoU with nearby Cement Factory. For water conservation, backwash water from the Water treatment plant and effluent from the Sewerage treatment plant is being used for Horticulture purposes in Township area. Koldam was bestowed with HP Environment Leadership award by Hon'ble Chief Minister on the occasion of World Environment day at Shimla.

B. **Tapovan Vishnugad HEPP (4x130 MW)** is on the river Dhauliganga, District Chamoli (Uttarakhand). Project is under advanced stage of construction. Generator Transformer (GT) and Switchyard Package has been completed in FY 2019-20. Powerhouse works are completed except finishing works, which are in progress. Further other important construction activities of Projects are at full swing. Head Race Tunnel (HRT), which is 12 Kms long, the construction of approximately 8 Kms has been completed. This year a significant break through was achieved by making Tunnel Boring Machine (TBM) operational which had been stuck inside tunnel since 2012 due to adverse geological conditions. The construction activities on all balance fronts are in progress.

C. **Lata Tapovan HEPP (3x57 MW)** is in upstream of Tapovan-Vishnugad HEPP, in District Chamoli (Uttarakhand). All Construction activities at LTHPP have been stopped since 08.05.2014 in line with Hon'ble Supreme Court order dated 07.05.2014 for 24 Hydro Projects in the State of Uttarakhand including Lata-Tapovan. MOEF&CC had constituted an expert body which, in Oct 2015, recommended for implementation of Lata Tapovan with compliance of certain additional conditions. Your Company submitted in Court on 19.11.2015 that the conditions recommended by expert body shall be strictly complied. On the hearing held on 26.04.2016 also, Additional Solicitor General of India had informed the Court that Lata – Tapovan Project must be implemented. Last hearing was held on 28.02.2020. The Court asked GoI to submit a combined affidavit of all three concerned ministries. The said affidavit is yet to be submitted. The matter is still pending with Hon'ble Supreme Court.

D. **Rammam-III HEPP (3x40 MW)** is situated on river Rammam in Teesta Basin, Darjeeling (West Bengal) in south and Sikkim in north. Construction activities are in progress at site.

E. **Seli HEP (4x100 MW) & Miyar HEP (3x40 MW)** are the two new projects allotted to your Company in Chenab Valley by Govt of Himachal Pradesh. MoU was signed with GoHP on 25.09.2019. Finalization of terms and conditions with Govt of Himachal Pradesh (GoHP) is in progress as one of the earlier awardee company has approached the High Court of Shimla for redressal of its grievances with GoHP.

8.6 Capacity Addition through Renewable Energy (RE Sources)

Your Company is adding capacity through renewable sources of energy, to broad base its generation mix to ensure long-term competitiveness, mitigation of fuel risks and promotion of sustainable power development. Renewable energy is the central focus for the company. To be in step with ambitious targets of the Government of India (GoI), your Company is attempting all avenues for renewable capacity addition to look beyond conventional large scale solar and wind projects.

Your Company is also going ahead with floating solar projects at reservoirs of its projects which is a step towards saving of land and water conservation by reducing water surface evaporation.

Your Company's Corporate Plan envisages a target of 32 GW capacity of RE power comprising around 25% of the overall installed capacity of 130 GW by 2032. Your Company contributes to RE capacity addition in the following two pronged approach namely own capacity addition mode and Developer Mode. In own capacity addition mode, your Company sets up Renewable Energy projects on its own investment. In Developer Mode, your company acts as an intermediary procurer where it procures power from the Developers and sells to DISCOMs with a trading margin:

(a) **Projects under Own Capacity Mode:** These projects are Company's own projects with its own investment. These projects are setup in surplus land/ reservoirs in the Company's stations. The off take is tied up through direct Power Purchase Agreement (PPA) with state utilities.

Your Company has already commissioned as on date 1070 MW of RE projects including 142 MW owned by the subsidiaries of your Company.

Further, 2,348 MW of RE projects are under implementation comprising of Ground Mounted Solar Projects and Floating Solar projects.

The Ground Mounted Solar projects of 2,111 MW are spread across UP, Rajasthan, TN and Kerala. Further 1,636 MW out of 2,111 MW are being implemented under CPSU scheme. Under this scheme it is envisaged to set up solar projects using domestically manufactured cells and modules with VGF support from Ministry of New and Renewable Energy (MNRE). The power is sold in WTO compliant manner only to Govt entities under a Power usage agreement (PUA).

Floating Solar projects of 237 MW are spread across Telengana, AP and Kerala. Your Company is first mover/leader in setting up large scale Floating Solar projects. Ramagundam 100 MW Floating Solar being set up under non PPA mode is the largest in the country.

(b) **Developer Mode:** Under this mode, your Company acts as an intermediary procurer and calls for tenders from developers under tariff based bidding mode in accordance with the targets set by MNRE from time to time. There is no investment from the Company. Your Company act as a designated agency for issue of tenders for setting up of renewable power projects including wind and solar power projects.

Your Company has commissioned 3,983 MW RE projects under Developer mode and 1,600 MW of RE projects are under implementation.

Some of the New Initiatives and major Highlights of your Company has taken in RE Projects are :

Winning in Competitive bidding of SECI/States

- 300 MW Solar projects won under Tariff Based Bidding
- 1,692 MW Solar projects won under CPSU scheme under Viability Gap Funding (VGF)

Signing of Implementation Support Agreement (ISA)

- Implementation Support Agreement (ISA) signed with Rajasthan Renewable Energy Corporation Limited (RRECL) for setting up 735 MW solar projects in own capacity addition mode and also for setting up 190 MW solar project under developer mode in Nokh Solar Park in Rajasthan.

UMREPP (Ultra Mega Renewable Energy Power Park)

- MNRE has undertaken a scheme to develop UMREPPs. The objective of the UMREPP is to provide land upfront to the project developer and facilitate transmission infrastructure for developing Renewable Energy (RE) based Ultra Mega Power Projects (UMPPs) with solar/wind/hybrid and also with storage system, if required. The scheme is under finalization by MNRE.
- MOU has been signed with Maharashtra for setting up 2.5GW UMREPP. Discussions in progress with other States.

Floating of tenders with Land in scope of Bidder

- To surmount land availability issues, tenders floated with land included in scope of bidder.

Hydrogen Energy

- Your Company is in the process of exploring opportunities for production of Green Hydrogen using power produced from RE sources and using the Green Hydrogen for various applications namely Mobility Application, Production of Synthetic fuel (Methanol) etc. As a part of technological tie up MoU has been signed with Siemens.

8.7 Capacity addition through acquisition

THDC India Limited (THDC) : Your Company has acquired 74.496% equity stake held by Government of India (GoI) in THDC on 27.03.2020 for a total consideration of ₹ 7,500 crore. Balance 25.504% equity stake is with Govt. of Uttar Pradesh. With this acquisition, THDC is now a subsidiary of your Company. THDC has an Operating portfolio of 1,513 MW and an under-construction portfolio of 2,838 MW.

North Eastern Electric Power Corporation Limited (NEEPCO): Your Company has acquired 100% equity stake held by Government of India (GoI) in NEEPCO on 27.03.2020 for a total consideration of Rs. 4,000 crore. With this acquisition, NEEPCO is now a wholly-owned subsidiary of your Company. NEEPCO has an operating portfolio of 1,457 MW and another 600 MW is under advance stage of Commissioning.

9. STRATEGIC DIVERSIFICATION- INCREASING SELF-RELIANCE

9.1 In order to strengthen its competitive advantage in power generation business, your Company has diversified its portfolio to emerge as an integrated power major, with presence across entire power value chain through backward and forward integration into areas such as coal mining, power equipment manufacturing, power trading and distribution.

Your Company continuously explores business opportunities through market scanning and adopts new business plans accordingly.

9.2 The details of subsidiary companies engaged in business other than in power generation are as under:

9.2.1 **NTPC Electric Supply Company Limited (NESCL),** a wholly-owned subsidiary, transferred and vested all its operations, with effect from April 1, 2015, to your Company.

NESCL was incorporated for the distribution business and later started deposit and consultancy works. The transfer and vesting of existing operations would enable a focused business approach in the area of distribution, the objective for which NESCL was incorporated. Although currently NESCL does not have any business operations in retail distribution, the same will be taken up at an appropriate time when the opportunity becomes visible.

9.2.2 **NTPC Vidyut Vyapar Nigam Limited (NVVN),** a wholly-owned subsidiary, is engaged in the business of Power trading. NVVN has a trading License under Category I (highest category). It undertakes sale and purchase of electric power, to effectively utilize installed capacity and thus enable reduction in the cost of power.

The Company has been nominated as Settlement Nodal

Agency (SNA) for settlement of Grid operation related charges with neighboring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar. The Company is also implementing a 50 MW gas power project in Andaman & Nicobar.

In the FY 2019-20, NVVN traded 14.53 approx. billion units (BUs).

9.2.3 **NTPC Mining Limited (NML),** In order to ensure focused management of mining business, your Company has incorporated a wholly owned subsidiary, NTPC Mining Limited (NML), on 29th August 2019 for handling its mining business. It is expected that undertaking of mining business by this subsidiary would result in timely development of mines with efficient handling of contracts by dedicated team. This will ultimately achieve substantial efficiency and increased competitiveness.

9.3 The details of joint venture companies incorporated in India which are taking up activities in other business related areas are given below:

Name of Company	JV Partner	Activities Undertaken
UPL (Utility Powertech Ltd.)	Reliance Infrastructure Limited, Space Trade Enterprises Private Limited, Skyline Global Trade Private Limited and Species Commerce and Trade Private Limited	A50:50 JV Company, takes up assignments of construction, erection and supervision of business in power sector and other sectors like O&M services, Residual Life Assessment Studies, non-conventional projects etc. UPL has paid dividend of ₹ 4 Cr. during to your Company for FY 2019-20.
NGPSL (NTPC GE Power Services Private Limited)	GE Power Systems GmbH	A 50:50 JV, provide R&M services for coal based power plants in India. To renovate, modernise, refurbish, rehabilitate, upgrade, reverse engineering and component damage assessment. Also for undertaking residual life assessment, reengineering in India and on a project by project basis elsewhere abroad, utilising state-of-the-art technology. R&M including RLA work orders are under execution. NGSL is diversifying to take up new business assignments in area of FGD, Ash Utilization, O&M and RE. NGSL has paid dividend of ₹ 0.30 Crore during FY 19-20.
EESL (Energy Efficiency Services Ltd.)	PFC, PGCIL and REC	Your Company is having stake of 47.15%. Your Company was formed for implementation of Energy Efficiency projects and to promote energy conservation and climate change. EESL is working on Energy Audit of Buildings, Perform Achieve Trade (PAT) scheme work and standard & leveling work of BEE, Consultancy work, implementing Bachat Lamp Yogana and Agricultural & Municipal Pump replacement for various State Govts. Your Company is taking up different energy efficiency improvement related works like replacement of bulbs, Street Light National Programme (SLNP), & other new business areas like Electric Vehicle (EV), Electric Charging Infrastructure etc. EESL gave ₹ 4.47 Crore during FY 19-20 as Dividend.
NHPTL (National High Power Test Laboratory Pvt. Ltd.)	NHPC, PGCIL, DVC and CPRI	Your Company is having a stake of 20.0% in JVC. The Company was formed to establish a research and test facility for the power sector such as an "Online High Power Test Laboratory" for short circuit testing facility and other facilities as may be required for the same in the country. HVTR test Laboratory set up at Bina, M.P. was declared Commercial w.e.f 01.07.17, MVTR test lab is expected to be commissioned by July'2020.
NBPPL (NTPC-BHEL Power Projects Pvt. Limited)	Bharat Heavy Electricals Limited	The Company was incorporated for taking up activities of engineering, procurement and construction (EPC) of power plants and manufacturing of equipment. The promoters have decided to wind-up the Company. As Company was formed by a directive from the GOI, approval of exit from GOI is required. MoP has advised your Company to consider buying out the stake of BHEL and thereafter decide either to continue it as an in-house arm or close it after completion of the EPC work at Unchahar project. Your Company communicated to MoP the decision regarding buying out the stake of BHEL may be taken after completion of the balance works of Unchahar project.

Name of Company	JV Partner	Activities Undertaken
(BF-NTPC) BF-NTPC Energy Systems Limited	Bharat Forge Limited	Your Company is having a stake of 49.00% in JVC. This Company was incorporated to manufacture castings, forgings, fittings and high pressure piping required for power projects and other industries. However, since the project could not take off, it has been decided to wind up BF-NTPC. Liquidator has been appointed and voluntary liquidation of the Company is in progress.
TELK (Transformers and Electricals Kerala Limited)	Acquisition of 44.6% stake in TELK from Government of Kerala on June 19, 2009	Your Company is having a stake of 44.6% in JVC. The Company deals in manufacturing and repair of Power Transformers. Your Company has accorded in-principle approval for withdrawal of your Company from TELK on 28.04.2016. Further, discussion is in progress.
ICVL (International Coal Ventures Private Limited)	CIL, SAIL, RINL, NMDC	Your Company is having a stake of 0.11% in JVC. ICVL was formed for acquisition of stake in coal mines/ blocks/ companies overseas for securing coking and thermal coal supplies. In view of lack of suitable commercially viable opportunities for thermal coal, your Company has decided to exit from ICVL. As the Company was formed by a directive from the Government of India, approval of the Government is awaited for exit.
HURL (Hindustan Urvarak & Rasayan Limited)	Coal India Limited, Indian Oil Corp. Limited, Fertilizer Corp.of India Limited (FCIL), Hindustan Fertilizer Corp. Limited (HFCL)	Your Company is having a stake of 33.33 % in JVC. HURL was incorporated on 15.06.2016 to establish and operate new fertilizer and chemicals complexes (urea- ammonia and associated chemical plants) at Gorakhpur, Sindri and Barauni and market its products. Lumpsum Turnkey contract was awarded for Gorakhpur, Baruani and Sindri with a completion schedule of 36 months. Construction work in all the three projects are in progress.
KLL (Konkan LNG Limited)	GAIL, ICICI Bank, SBI, IDBI, Canara Bank and MSEB Holding Co. Ltd.	Your Company is having a stake of 14.82% in JVC. The Demerger scheme filed by RGPPL was approved by NCLAT on 28.02.2018 thereby separating the R-LNG business from RGPPL to the new entity Konkan LNG Private Limited (KLPL). Post de-merger, the LNG facility/ undertaking of RGPPL had been transferred in KLPL with minor shareholding of RGPPL. KLPL has been converted to Public Limited Company and has been renamed as Konkan LNG Limited (KLL) on 18.02.2020.

Name of Company	JV Partner	Activities Undertaken
CNUPL (CIL NTPC Urja Private Limited	Coal India Ltd. (CIL)	A 50:50 JVC was incorporated on 27 April 2010 between NTPC Ltd. and Coal India Ltd to undertake the Development of Brahmini and Chichro-Patsimal coal mine blocks in Jharkhand and subsequently their operation and maintenance and integrated coal-based power plants. In June'2011, Ministry of Coal, GoI has de-allocated Brahmini and Chichro-Patsimal coal blocks which were earlier allotted to the JV Company. CNUPL is exploring new business area for implementation of solar projects.

9.4 Diversification in Electric Vehicle (EV) Segment

Your Company is envisaging providing hydrogen and pure electric powertrain based green mobility solutions for public transport which includes providing hydrogen fuel cell based electric vehicles as well as pure battery operated electric buses. It is also playing an important role of e-Mobility 'enabler' by creation of public charging infrastructure. Following initiatives are under various stages of implementation:

a. **Hydrogen Mobility:** The pilot projects are planned to be carried out in Leh and Delhi with 5 nos. of Fuel cell electric bus and 5 nos. of fuel cell cars at each location. The pilot project is being designed with complete value chain of Hydrogen including Hydrogen generation from renewable energy, Hydrogen storage and dispensation. An EoI has been invited in this regard from Global fuel cell electric vehicle (FCEV) manufacturers.

b. **E-bus Solution:** Your Company is also offering complete e-bus solutions to STUs through its subsidiary, NVVN. An agreement has already been signed with Department of Transport, A&N Islands for deploying electric bus solution. Similar solutions with other STUs are also under discussion.

c. **Battery Charging & Swapping solution:** Your Company has already commissioned a pilot project on the concept of battery charging and swapping at Faridabad. The station is under operation and is catering to electric 3 wheeler's energy service requirement.

d. **Charging Station:** Your Company plans to set-up 400 Nos. of chargers in locations across the cities. So far 90 Nos of Chargers have been installed.

e. **Charging Infrastructure under FAME-II:** Your Company had participated in the Expression of Interest (EOI) floated by Department of Heavy Industries, Government of India under Faster Adoption and Manufacturing of Hybrid and Electric Vehicles (FAME-II) scheme. A total of 282 nos. of charging stations will be set-up in Jabalpur, Bhopal, Hyderabad, Vijayawada, Visakhapatnam, Kakinada and Bengaluru under this project.

9.5 Foray in Packaged Drinking Water Business

Your Company's research arm, i.e NETRA, has developed technology for sea water desalination/waste water treatment using waste heat from flue gas from the power plant. The cost effective technology is now being utilized for packaged drinking water. An MoU in this regard has been signed with IRCTC for setting up a packaged drinking water facility at your Company Simhadri Station. Commercial arrangements are being finalized with IRCTC. Award of contract by IRCTC for setting up packaged drinking water project is in progress.

9.6 Foray into cement business

Your Company is collaborating with CCI for reviving the cement plants of CCI supplementing both your Company's & CCI's resource requirement and increasing ash utilization.

An MoU was signed with CCI for establishing a cement blending unit at Solapur Station of your Company by utilizing the fly ash and the proposal is being assessed. Land identification & feasibility report for the proposed plant is in progress.

9.7 New Business Areas

Your Company has entered into Joint Venture Agreement with East Delhi Municipal Corporation (EDMC) for setting up Integrated Waste to Energy (WtE) project in EDMC control area. The JV Company named NTPC EDMC Waste Solutions Pvt. Ltd. was incorporated as a subsidiary of your Company with 74% equity participation by your Company and balance 26% equity participation by EDMC on 1st June 2020. The Integrated WtE Project shall consist of Pre-Processing Facilities for Municipal Solid Waste (MSW), Bio-Methanation Plant, Power Plant (12 MW), Construction and Demolition (C & D) Waste Processing Plant.

MoU was signed on 16.07.2019 with Indian Oil Corporation Limited to explore possible business opportunities in the areas of mutual interest like Power Supply to Refineries, Setting up of new Power Plants/Acquisition of Power Plants under NCLT, Fuels & Lubricants, Biogas & ethanol plants, Waste to Energy, Technical Consultancy, O&M and R&M services, Knowledge sharing etc.

MoU was signed on 24.07.2019 with BHEL for forming a joint venture Company to set up 800 MW Technology Demonstration Plant (TDP) based on Advanced Ultra Supercritical Technology at Sipat, Chhattisgarh

Your Company has evinced its interest to develop Seli HEP (400 MW) and Miyar HEP (120 MW) in Chenab Valley, Himachal Pradesh subject to establishment of techno-economic viability. An MoU with Govt. of Himachal Pradesh (GoHP) has been signed on September 25, 2019.

10. GLOBALISATION INITIATIVES

10.1 Trincomalee Power Company Limited (TPCL), a 50:50 joint venture between your Company and Ceylon Electricity Board was formed to undertake the development, construction, establishment, operation and maintenance of a electricity generating station Trincomalee at Sri Lanka.

Existing JV Company i.e. TPCL shall develop 50 MW solar power project at Sampur and a new JV Company to be incorporated to develop the LNG based Power Project.

The Joint Venture & Shareholders' Agreement (JVSHA) for incorporating a new JV Company in Sri Lanka to develop the LNG Power Project at Kerawalapitiya has been signed between your Company and CEB on 25.10.2019.

The Capacity of first phase was decided as 300 MW±15%. The project shall be developed on BOOT basis.

10.2 Bangladesh-India Friendship Power Company Private Limited, a 50:50 joint venture Company between your Company and Bangladesh Power Development Board (BPDB) was formed for developing a (2X660 MW) Coal based power project (Maitree Super Thermal Power Plant) at Khulna Division, Rampal, Bangladesh. Engineering, Procurement, Construction(EPC) contract of the project except township was awarded to BHEL. Construction activities are going on in full swing.

10.3 Other Opportunities Abroad: Business opportunities in Bangladesh, Nepal, Bhutan, Myanmar, Indonesia, Vietnam Oman, UAE, Egypt, Saudi Arabia, Qatar, Uzbekistan, Maldives, Malawi, Togo, Morocco, Botswana, Zimbabwe, Kenya and other countries are being explored in the areas of power generation, PMC, O&M contracting, R&M of power plants, capability building and cross border power trading etc.

Your Company has been awarded three consultancy jobs abroad (i) Togo: Appointed as PMC consultant for (250+35) MW solar PV Project, (ii) UAE: Energy Audit of Factories in Ras Al Khaimah and (iii) Myanmar: Appointed as PMC for solar+DG based village electrification in Rakhine.

Your Company has been registered as an overseas corporation in Myanmar and new business opportunities are being tapped by your Company branch office in Myanmar and has been registered as an overseas Company in Keyna.

Further your Company is associated as a corporate partner with International Solar Alliance (ISA) and has now been selected as Project Management Consultant / Solar Project Developer to implement solar projects in ISA member countries. In line with this endorsement, your Company has been appointed by Govt. of Togo, Africa as PMC for implementation of a 35 MW solar project and a 250 MW solar park in Togo.

11. CONSULTANCY SERVICES

Your Company offers Consultancy services "From Concept to Commissioning and beyond...." in areas of Engineering, O&M, Project Management, Contracts & Procurement, Renovation & Modernization, Quality & Inspection, Training & Development, Human Resource, IT, Solar & renewable power projects, compliance to Environmental norms for power stations etc. These services are being provided in India and abroad viz. Gulf countries, Bangladesh, Nepal, Sri Lanka and Bhutan.

Presently, the Consultancy Wing is associated with a capacity of around 29,100 MW:

- Owner's Engineers Services & Project Management Services- 19,000 MW.
- O&M Services / O&M studies (Performance Improvement Plan (PIP) & Gap Analysis) – 9,800 MW.
- Solar PMC: 300 MW

On international front, Consultancy Wing is providing PMC services for Solar Power Project in Dalwak in Dapaong (33 MWp) and in Mango (250 MW) in Savanes Region, Govt. of Togo. There has been an all-round improvement in terms of plant parameters and capacity building due to implementation of best practices and systems in this power plant with involvement of your Company's experts.

On the domestic front, Consultancy Wing is providing Project Management Consultancy (PMC) for implementation of (2X660MW) Khurja STPP of THDC and (2X660MW) Buxar TPP of SJVN.

Consultancy Wing is executing assignments for various clients like UPRVUNL, APGENCO, CSPGCL, HPGCL, DVC, PSPCL, GSPGCL, SCCL, OCPL, MPPGCL , RVUNL and your Company JVs for FGD Systems, Project Management, FR/ DPR Preparation, Procurement & Inspections, HR, IT , Performance Improvement services and other advisory services.

Highlights of FY 19-20

- Consultancy wing received orders of ₹ 285.79 Crore during the year
- About 24 nos. assignments pertaining to FGD & ESP augmentation works amounting to around ₹ 92 crore for 25,000 MW capacity are under various stages of execution
- Post Award Review Engg. & Project Monitoring services at (1X660MW) Panki Extn.TPP, (2X660MW) Obra Extn. TPS & (2X660MW)Jawaharpur TPS of UPRVUNL
- Commissioning support to UPRVUNL Harduaganj Extn -II (1x 660 MW)
- Engineering review of (2x20 MW) AFBC Unit of NSPCL Durgapur
- PMC of Multi-function Simulators for NPTI at six locations covering coal based TPP; Gas based CCPP, Hydro Power, Smart Grid.
- Consultancy Wing is looking ahead for future business opportunities in areas such as Complete O&M of your Company JV / Govt. body, Solar & Renewable power projects , Owner's Engineer for major power projects, PMC for implementation of new environmental norms e.g FGD, ZLD, DNOx & ESP R&M, IT services e.g. ERP implementation, PRADIP, Dreams 2.0, PI systems, etc.

Consultancy Wing is also looking ahead for future business opportunities in areas such as Solar & Renewable power projects and O&M for power plants of other utilities in addition to new assignments as Owner's Engineer for major power projects, FGD & ESP R&M business for meeting new environmental norms etc.

12. FINANCING OF NEW PROJECTS

The capacity addition programs shall be financed with a debt to equity ratio of 70:30, in case of thermal and hydro projects of your Company and that of 80:20 in case of solar/ wind projects. Your directors believe that internal accruals of the Company would be sufficient to finance the equity component for the new projects. Given its low-geared capital structure and strong credit ratings, your Company is well positioned to raise the required borrowings.

Your Company is exploring domestic as well as international borrowing options including overseas development assistance provided by bilateral agencies to mobilize the debt required for the planned capacity expansion program.

Further, your Company is consistently doing debt swapping in case of domestic loan and cheaper loans are being utilised to repay the older loans with higher rate of interest without paying any repayment penalty to bank.

The details of funding are discussed in the Management and Discussion Analysis Report at Annexure-I, which forms part of this Report.

13. FIXED DEPOSITS

Your Company has discontinued the acceptance of fresh deposits and renewals of deposits under Public Deposit Scheme with effect from 11.05.2013. As such, there were no deposits which were not in compliance with the requirements of Chapter-V of the Companies Act, 2013.

The details relating to deposits, as per the Companies Act, 2013 are as under:

(a)	Accepted during the year	Nil
(b)	Remained unpaid or unclaimed as at the end of the year	6 Deposits amounting to ₹ 15.91 lakh*
(c)	Whether there has been any default in repayment of deposits or payment of interest thereon during the year and if so, number of such cases and the total amount involved:	
	i. At the beginning of the year	NIL
	ii. Maximum during the year	NIL
	iii. At the end of the year	NIL

* Pending for completion of legal formalities/ restraint orders/ non-receipt of claims.

14. FUEL SECURITY

During the year 2019-20, the supply position of coal and gas is given as under:

14.1.1 Coal Supplies

Long Term Coal Supply Agreements

- In line with the Model Coal Supply Agreements signed between your Company and Coal India Limited (CIL) in 2009, 2012 and under SHAKTI Policy, Long-term Coal Supply Agreements (CSAs) are in place with the subsidiary coal companies of CIL for an Annual Contracted Quantity (ACQ) of 163.63 Million Metric Tonnes (MMT) for the existing thermal stations. In addition, CSA is in place with Singareni Colliery Company Ltd. for Ramagundam for an Annual Contracted Quantity(ACQ) of 11.20 MMT. Fuel Supply Agreement (FSAs) are valid for a period of 20 years with a provision of review after every 5 years.

- In FY 19-20, your Company signed new Long Term Fuel Supply Agreements (FSA) for 1.19 Million Tonnes Per Annum(MTPA) with CCL for Unchahar St-IV Unit-6, 0.44 MMTPA with WCL and 1.63 MTPA with SECL for Gadarwara (2X 800 MW) and 0.85 MTPA with ECL for Bongaigaon Unit-3. However, 2.805 MTPA from NCL for Gadarwara and quantity of 1.851 MTPA with NCL for Vindhyachal Unit-13 stage -V is also expected to be signed in FY 20-21. Further, Linkage under SHAKTI policy for upcoming units of your Company i.e Talcher –III and Singrauli-III has been allocated from MCL and NCL respectively and Letter of award for all above expected to be issued in FY 20-21.

Short Term Coal Supply Agreements Signed and coal supply agreement modified during the financial year 2019-20

Agreement with SCCL

- A bilateral coal supply agreement was signed with SCCL for financial year 2019-20 with the validity of one year for a quantity of 8.00 MMT, which can be further increased to 10 MMT, on best effort basis. MOU with SCCL has been signed for non-bridge linkage station on additional price of 20% of the notified price for non-power consumers and for bridge linkage station on additional price of 20% of notified price for power consumers.

Bridge Linkages

- Ministry of Coal issued policy guidelines on 8 February 2016 for grant of 'Bridge Linkage' to specified end-use plants of Central and State Public Sector Undertakings (Both in Power as well as Non-Power sector) which have been allotted Schedule-III coal mines under the Coal Mines (Special Provisions) Act, 2015 [CM(SP) Act] and coal blocks allotted under the Mines and Minerals (Development and Regulation Act), 1957 (MMDR Act) for a period of 3 years from the date of allotment of coal mine/block. Your Company's stations having capacity of 12,200 MW were covered under this policy.
- Your Company had been allocated bridge linkages for five stations, viz. (i) Barh-II (2X660 MW), (ii) Darlipalli-I (2X800 MW), (iii) Tanda-II (2X660 MW), (iv) Lara-I (2X800 MW), (v) Kudgi-I (3X800 MW) for a period of three years from the date of allocation of captive block. Subsequently, based on Company's requests, SLC (LT), GoI in its meeting dated 10 April 2018 has accorded extension of bridge linkages for Barh-II (2X660 MW), Lara-I (2X800 MW), Darlipalli (2X800 MW), Tanda (2X660 MW) and Kudgi (3X800 MW) on tapering basis as per approved mining plan of respective linked mine. The extension is valid up to 2022 for all the above stations except Barh-II, for which it is valid up to 2023.
- Bridge linkage MoUs were signed for (i) Barh Stage-II with CCL & ECL, (ii) Lara with SECL and MCL, (iii) Darlipalli with MCL and SECL (iv) Tanda Unit 5 & 6 with ECL and CCL for financial year 2019-22 and up to 2023 for Barh -II.
- SLC (LT), in its meeting held on 18.11.2019, recommended for grant of Bridge Linkage for Barauni Extn. – Unit 8 and Unit 9 (2×250 MW) for 03 years from the date of transfer /allotment of linked Badam coal block. The linked Badam coal block was allotted by MoC on 02.09.2019. As such, the Bridge Linkage is valid up to 01.09.2022.

Agreements for supply of imported Coal

- To mitigate the shortage of coal from domestic sources and for the blending purpose to improve the quality of coal, your Company has awarded imported coal contracts for procurement of 1.5 MMT in October 2019 and restored the contract of 2.25 MMT in Dec 2019 for supply of Imported coal to Mouda and Dadri. Your Company received 2.84 MMT of imported coal during the financial year 2019-20.

E-auction of coal

- To supplement deficiencies in FSA coal quantity, your Company participated in e-auction of 0.06 MMT of coal and the same was allotted. Your Company received 0.45 MMT of coal under E-auction during FY 2019-20 from current year allocation and carry forward quantity from earlier year contracts.
- To leverage potential of rationalization of coal linkages, your Company had signed a Supplementary Agreement with CIL and CIL subsidiaries for all owned and JV/ Subsidiary stations on 12.04.2017 for implementation of Govt. policy on "Flexibility in utilization of domestic coal for reducing cost of power generation". Under the Supplementary Agreement, your Company can allocate coal to any station of its own or any JV/ Subsidiary for optimising the Energy Charges. During the year 2019-20, your Company has used 7.9 MMT of coal under Flexibility Utilization to address AFC under recovery and generation loss.
- As per directives of Govt., Central Institute of Mining and Fuel Research(CIMFR) started coal sampling in Jan'16. During the year 2019-20, sampling at all loading end sidings except Shivpur Tori, Bukru, Phulbasia, Rajdhar, and Bhalumath of CCL and sampling at unloading end of all your Company stations has been started. Sampling at unloading end at Barauni and NPGCL (JV Company) is expected to start in FY 20-21.

14.1.2 Domestic Coal and Imported Coal

During 2019-20, your Company received 174.84 MMT of coal as against 176.80 MMT in 2018-19. Out of 174.84 MMT of coal, 155.21 MMT was from Annual Contracted Quantity of coal, 6.42 MMT through Bridge linkage/ SCCL Bi-lateral MoU, 9.92 MMT from Captive Mines, 0.45 MMT from e-auction and 2.84 MMT from Import Coal.

14.1.3 Gas & RLNG supplies

- Your Company has long-term Gas Supply Agreements (GSAs) with GAIL for supply of Administered Price Mechanism (APM) gas and Non-APM gas, which are valid upto 6th July 2021. Your Company also had Panna Mukta Tapti (PMT) gas agreements with GAIL, which was valid till 21 December 2019. Post 21 December 2019, MoP&NG, GoI has assigned PMT field to ONGC on nomination basis and gas from this field is allocated as Non-APM gas. Your Company also has a long-term agreement with GAIL for supply of 1.1 MMSCMD RLNG on firm basis, valid upto December 2023.
- To meet the shortfall in supply of long-term domestic gas/RLNG, your Company procures Spot RLNG on limited tender basis from domestic suppliers and on 'Single Offer' basis from Public Sector gas marketing companies. These RLNG supplies are contracted on 'Reasonable Endeavour' basis with no penalty on either party for short supply/short off take. Further, your Company has started procuring Spot RLNG on commitment basis from domestic suppliers, subject to consent of the beneficiary Discoms. Further, adequate stock of liquid fuel is maintained for meeting Grid's requirement.
- Further, in line with MoP&NG guidelines for 'Clubbing/ diversion of gas between two or more power plants' and with the approval of MoP, your Company entered into arrangement with GAIL for flexibility of diversion of APM and Non-APM gases between its gas stations in NR and WR region on daily basis. With the diversion of unutilized gas from your Company's WR stations to NR stations, additional 1923 MUs (approx.) of electricity has been generated at NR gas stations during financial year 2019-20.
- During 2019-20, your Company received annual average 2.53 MMSCMD of Domestic gas as against 3.66 MMSCMD of Domestic gas received during 2018-19. Long Term RLNG & Spot RLNG off-takes during 2019-20 were 0.49 & 0.14 MMSCMD as against 0.13 & 0.86 MMSCMD during 2018-19 respectively.
- There has been no loss of station availability on account of lack of availability of Domestic gas / RLNG / Liquid fuel during the year.

14.2 Development of Coal Mining projects

Your Company has been allocated ten coal blocks namely: Pakri-Barwadih, Chatti-Bariatu & Chatti-Bariatu (South), Kerandari, Dulanga, Talaipalli, Banai, Bhalumuda, Mandakini-B, Badam and Banhardih by Government of India. Banhardih coal block has been allocated to Patratu Vidyut Utapadan Nigam Ltd. (PVUNL), a JV Company incorporated between your Company & Government of Jharkhand. Your Company plans to produce about 103 Million Tonnes of coal per annum from these mines, when all the mines shall reach the peak-rated capacity (in the year 2028-29).

Out of ten mines, three mines, Pakri-Barwadih, Dulanga & Talaipalli are in operation. During FY 2019-20,coal production from captive mines of your Company was 11.15 MMT against GOI MOU target of 10.4 MMT. Cumulative about 21.37 MMT of coal produced from these mines till the end of FY 2019-20. Further, two mines i.e Chatti-Bariatu & Kerandari are in advanced stage of development and remaining five are in various stages of approval/clearances.

Coal production commenced from Pakri-Barwadih coal block in Dec'16. During FY 2019-20 about 9.42 MMT coal has been extracted and cumulative coal production from this mine since inception is 19.14 MMT.

In Dulanga block, coal extraction started in Mar'18. During FY 2019-20 about 1.54 MMT coal has been extracted and cumulative coal production from this mine since inception is 2.04 MMT.

In Talaipalli (South pit) Coal extraction commenced in Nov'19 and during FY 2019-20 about 0.19 MMT coal has been extracted. For Talaipalli (Main), earlier MDO was appointed on 13.11.17. However, because of contractual issues, the contract was terminated on 04.07.19. Fresh NIT for appointment of MDO was issued on 19.08.19, Reverse e-auction for price discovery was completed on 12.02.2020 and award is under process.

In Chatti-Bariatu coal block all major statutory clearances and priority land to start mining activities are in place. MDO was appointed on 13.11.17. However, because of contractual issues, the contract was terminated on 04.07.19. Fresh tendering has been done and MDO is in advanced stage.

For Kerandari coal block also all major statutory clearances and priority land to start mining activities are in place. In this block mining operation would be carried out departmentally with limited outsourcing.

In the above five coal blocks i.e. Pakri-Barwadih, Dulanga, Talaipalli, Chatti-Bariatu & Kerandari, your Company has incurred an expenditure about ₹ 9.72 crore on community development in FY 2019-20 (Cumulative expenditure of more than ₹ 135.87 crore), which has helped in improving the socio-economic conditions of the local community.

For Mandakini-B coal block, detailed Exploration was completed and Integrated Geological report has been prepared. Mining Plan (Part-I) has also been approved by MOC. Feasibility Report prepared, financial appraisal is in progress. Mine infrastructure development activities are in progress. Section-7 notification (CBA Act) issued by Ministry of Coal (MOC). Start of mining operation is expected by Oct'23. Your Company is following up with State Government of Odisha for early finalization of land rates for speedy processing of block development activities.

At the time of allotment the Banai & Bhalumuda coal blocks were unexplored. The exploration has been completed and Geological Report(s) are available. These two coal blocks are surrounded by coal bearing areas. Because of high stripping ratio (>7.5 Cu.M./Tonne), and due to non-availability of non-coal bearing areas for OB dump, your Company, in consultation with CMPDIL, prepared the scheme for optimum utilization of coal from these two blocks by merging it. Accordingly, your Company requested MOC in Mar'18 for merger of these 2 coal blocks. Numerous meetings and discussions held with Ministry of Coal (MOC). Based on the advice from MOC your Company has now again approached Central Mine Planning & Design Institute Limited (CMPDIL) to re-work & prepare separate Mining Plans of these two blocks.

MOC allotted Badam coal block to your Company on 02.09.19 after acquisition of Barauni Power plants from Bihar Govt. Stage-I FC transferred to your Company from BSPGCL on 14.01.20.Transfer of EC in favor of your Company is done on 21.5.2020. Mining lease, land transfer/acquisition and other block development activities are in progress.

14.3 Initiatives through Joint Ventures and Subsidiaries:

In Banhardih coal block, to be developed by PVUNL, the JV between your Company & Government of Jharkhand, Geological Report was received by PVUNL on 27.07.19, Mining plan was submitted to MOC on 30.03.20. For land acquisition, Section 7(CBA act) was notified by MOC on 10.10.19. NOC under Section 8 was obtained from Coal Controllers Organization on 31.12.19.

NTPC Mining Limited (NML),a wholly-owned subsidiary of your Company, has been incorporated on 29.08.19 to meet various business/strategic objectives viz. fuel security, focused management, readiness for future, de-linking business risks and enhancement of shareholder value and to take care of entire mining business of your Company. Further, M/s. E&Y has been appointed as transaction adviser for transfer of Coal Mining business to NML. For transfer of all the mines to this Company, your Company has approached Ministry of Coal. For transfer of mining area land and the mining rights for the first mine, Pakri-Barwadih, your Company has requested Ministry of Coal. Similarly, for transfer of land for infrastructure, R&R Colony, etc. pertaining to Pakri-Barwadih, your Company has requested Revenue Department of Government of Jharkhand.

15. BUSINESS EXCELLENCE: GLOBAL BENCHMARKING

Your Company has developed and adopted a customized business excellence Model called 'NTPC Business Excellence Model' in line with globally accepted Performance Excellence frameworks such as the Malcolm Baldrige Model USA and EFQM Model of Europe.

The assessment process is aimed at identifying the area for enhancing stakeholders' engagement, improving critical processes and developing leadership potential.

The outcome of this model is identification of organizational strength, opportunities for improvement, issues of concern and best practices.

In the financial year 2019-20, 22 generating stations were assessed by a team of certified assessors. Business Excellence Award for holistic excellence was given to your Company's sipat Project.

In its pursuit to embrace digital and paperless working environment, your Company has implemented an IT enabled initiative- Corporate Performance Management and Business Intelligence system for robust strategy execution, communication, analytics and query response. The system enables reporting and automating few business processes that provides effective decision support for the management across different tiers.

Other contemporary TQM concepts and techniques like ISO, Quality Circles, Professional Circles, 5S etc. have been deployed across the organization. Two Quality Circle teams Lakshya from Barh station and Lakshaya from Jhanor-Gandhar station of your Company had participated in International QC Convention held at Tokyo,Japan during 23rd-26th September 2019. Barh QC team "Lakshya" was awarded Silver Medal.

16. RENOVATION & MODERNISATION

Renovation and Modernization (R&M) of various units of your Company and in particular the units which have completed 25 years of operations from commercial operation date is considered essential to achieve the objectives such as safe operation of the units, compliance of latest statutory norms/revised Environmental norms / IEGC Code, Recovery/improvement of Efficiency of the Units, Reliability Improvement, flexible operations to enable large scale integration of renewable, Sustenance of operations considering equipment health assessment observed during last 2-3 years, overcoming constraints on account of current operating conditions (changes in coal quality, water supply arrangements, change in law, etc.). Further, Renovation and Modernization (R&M) of power plants is considered to be a cost-effective option and is considered as a key thrust area.

Investment approval has been accorded till date for R&M in 20 stations (Coal & Gas based) is ₹ 14,603.60 Crores. As against this, cumulative expenditure till 31.03.2020 is ₹ 8,033.44 Crores which includes R&M capital expenditure of ₹ 514.88 Crores during FY 2019-20.

As a responsible Corporate citizen, it has always been your Company's endeavor to ensure low levels of emission from its power stations. With a view to maintaining a clean atmosphere by reduction of particulate emission levels from generating stations, Renovation and Retrofitting of Electrostatic Precipitator (ESP) packages have been awarded for 60 units in 20 stations totaling 16.70GW and is under implementation.

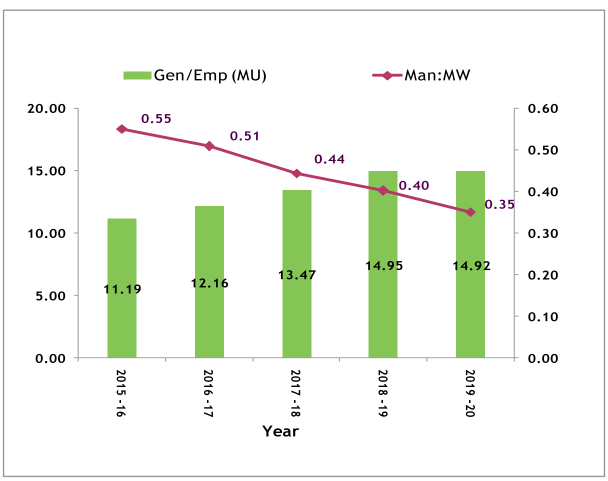
With a view to removing technological obsolescence, renovation of Control & Instrumentation (C&I) has been taken up in 9 coal based stations namely Singrauli-I (5X200MW) & Singrauli – II (2X500 MW), Korba –I (3X200MW) & Korba – II (3X500 MW), Ramagundam -I (3X200MW) & Ramagundam – II (3X500MW), Farakka-I (3X 200 MW) & Farakka-II (2X500 MW), Dadri Thermal-I (4X210MW), Unchahar- I (2X210MW), Talcher STPS-I (2X500MW), Kahalgaon-I (4X210 MW) and Rihand – (2X500 MW) comprising a total of 38 units. The total no. of units in which C&I R&M completed till date is 34. Renovation of Control & Instrumentation (C&I) has also been taken up in 05 gas based stations namely Anta

(419.33 MW, 3 GT + 1 ST), Auraiya (663.36 MW, 4 GT + 2 ST), Kawas (656.20 MW, 4 GT + 2 ST), Dadri Gas (829.78MW, 4 GT + 2 ST) and Faridabad (432 MW, 2 GT + 1 ST) prior to FY: 2019-20. The total no. of units in which C&I R&M has been completed in Gas Stations till Mar'20 is 15 GT/WHRB and 7 STG. On completion of these schemes, C&I systems in these units have now been brought nearly on par with the new builds.

R&M of Gas Turbines was completed in 14 Gas Turbines in 4 stations namely (4x106 MW) in Kawas, (4x111.19 MW) in Auraiya, (3x88.71 MW) in Anta and (3x144.30 MW) in Gandhar.

17. HUMAN RESOURCE MANAGEMENT

17.1 Your Company takes pride in its highly motivated and competent Human Resource that has contributed its best to bring your Company to its present heights. The productivity of employees is demonstrated by increase in generation per employee and consistent reduction of Man-MW ratio year after year. The overall Man-MW ratio for the year 2019-20 excluding JV/subsidiary capacity is 0.35 and 0.31 including capacity of JV/ Subsidiaries (excluding manpower of NEEPCO and THDC which is recently acquired on 27th March 2020). Generation per employee was 14.92 MUs during the year based on generation of your Company's stations.



The total employee strength of your Company (including JV/ subsidiaries) stood at 19,165 as on 31.3.2020 against 20,244 as on 31.3.2019.

Particular	FY 2019-20	FY 2018-19
Your Company		
Number of employees	**17,398**	18,359
Subsidiaries & Joint Ventures		
Employees of your Company in Subsidiaries & Joint Ventures	**1,767**	1,885
Total employees	**19,165**	20,244

The attrition rate of your Company executives during the year was 0.82% in comparison to last year at 0.78%.

17.2 Employee Relations

Employees are the driving force behind the sustained stellar performance of your Company over all these years of Company's ascendancy. As a commitment towards your Company's core values, employees' participation in Management was made effective based on mutual respect, trust and a feeling of being a progressive partner in growth and success. Communication meetings with unions and associations, workshop on production and productivity, etc. were conducted at projects, regions and corporate level during the year.

Both employees and management complemented each others' efforts in furthering the interest of your Company as well as its stakeholders, signifying and highlighting overall harmony and cordial employee relations prevalent in your Company.

17.3 Safety and Security

Occupational health and safety at workplace is one of the prime concerns of your Company Management. Utmost importance is given to provide safe working environment and to inculcate safety awareness among the employees. Your Company has a 3-tier structure for Occupational Health and Safety Management, namely at Stations/ Projects, at Regional Head Quarters and at Corporate Centre. Safety issues are discussed in the highest forum of Management like Risk Management Committee (RMC), Management Committee Meeting (MCM), Regional Operation Performance Review (ROPR), Operation Reviews (ORTs), Project Reviews (PRTs) etc. Consultants are also engaged to strengthen the systems and processes of safety in your organization.. On the occasion of "National Safety Day" CMD along with the Board of your Company addressed all project / Stations.

All of your Company's stations are certified with OHSAS-18001/IS-18001. Six of our stations are going for international level NOSA accreditation in Safety and Environment. Regular plant inspection and review with Head of Project/Station is being done. Internal Safety Audits by Safety Officers every year and External Safety Audits by reputed organizations as per statutory requirement are carried out for each Project/ Station. Recommendations of auditors are regularly reviewed and complied with. Company level documents like Operation Directives (OD), Operation Guidance Note (OGN), Hazard Identification and Risk Assessment (HIRA) etc. have been prepared and shared with all stations.

Height permit and height check-list are implemented to ensure safety of workers while working at height. Adequate numbers of qualified safety officers are posted at all units as per statutory rules/ provisions to look after safety of men & materials. Mock drills were conducted with NDRF to prepare for any extreme on-site emergency. Sites are engaging the safety consultant of international repute to uplift safety standards.

For strict compliance & enforcement of safety norms and practices by the contractors, safety clauses are included in General Conditions of Contract/ Erection Conditions of Contract. Non-negotiable safety terms and conditions are a part of the corporate awarded packages during tendering.

Detailed emergency plans have been developed and responsibilities are assigned to each concerned to handle the emergency situations. Mock drills are conducted regularly to check the healthiness of the system.

Most of your Company's plants have been awarded with prestigious safety awards conferred by various Institutions/ Bodies like Ministry of Labour & Employment-Govt. of India, National Safety Council, Institute of Directors, Institution of Engineers (India), in recognition of implementing innovative safety procedures and practices.

The standard operating procedures are being followed for maintaining utmost safety in operations and processes in your Company to avert accidents.

Security: Your Company recognizes and accepts its responsibility for establishing and maintaining a secured working environment for all its installations, employees and associates. This is being taken care of by deploying CISF at all units/ RO Office/ Projects of your Company as per norms of Ministry of Home Affairs. Concrete steps are being taken for upgrading surveillance systems at all projects/ stations by installing state-of-the-art security systems.

17.4 Learning and Development

Your Company is successfully attracting, nurturing and engaging people talent. We believe in motivating and managing the talent that leads to sustainable competitive advantage. Your Company have very pervasive three tier Learning and Development (L&D) system starting from Employee Development Centre (EDC) at every station, six Regional Learning Institutes (RLI) one at each region.

Power Management Institute (PMI), the apex L&D centre of your Company, is actively engaged in making our people ready to lead in VUCA world. PMI take people through courses that make them ready for agile technology adoption, process innovation, strategic business alignment and demonstrating leadership. All the L&D initiatives are derived from business needs and designed to achieve Company's strategic objectives, actualize business plan and create value for stakeholders.

PMI has a campus full of greenery and the state-of-the-art physical and digital infrastructure that creates globally comparable L&D ecosystem. Its classrooms are equipped with modern facilities including smart boards, video conferencing and session recording, which supports contemporary pedagogy.

Your Company takes pride in being people friendly organization and strives to ensure safe work place with zero incident reported. PMI in its role espousing the safety as core value in L&D by establishing NTPC Safety Academy (NSA) at Unchahar, UP. The academy is conducting safety related certificate courses across the organization. It has successfully conducted 20 IOSH (Institute of Occupational Safety and Health) and one NEBOSH (National Examination Board for Occupation Safety and Health) program in 2019-20.

Our training delivery methods include a blend of classroom learning through simulation and case studies, theater workshop, community service module (for first hand CSR feel to young ETs), e-learning platform, video and web platforms etc. PMI has covered 6,000 executives in management learning through HMM (Harvard Manage Mentor) and 2,000 executives in the power plant technical skills domain by licenses from General Physics (GPiLearn).

Various in-house e-platforms that provide access to diverse e-Learning resources to complement the learning to meet the unique learning needs across demographic spectrum of generations engaged at work place have been provided. An e-library of 25,000 e-books, 10,00,000 articles, reports and journals supports employees' knowledge up-gradation.

The L&D interventions are designed after a multidimensional 'Training Need Analysis' (TNA) for enhancing technical, functional, strategic and leadership skills with focus on business objectives of the Company. PMI conducted 300+ training programs during FY19-20, covering nearly 9,000+ professionals, resulting in a total of approximately 50,000 learning man-days.

Your Company is aware of pivotal role of effective leadership and to ensure continuity in leadership pipeline, 138 middle level executives were given rigorous inputs under 2 weeks strategic leadership development program (10X). The program is designed to equip the participants with ten strategic competencies to enable them to take leadership roles and strategic positions in the days to come.

Besides creating capabilities by providing training to the employees across Indian power sector, PMI is extending its support towards building capability among SAARC & Middle East countries. In the year 2019-20 PMI has trained multiple teams from Bangladesh and Saudi Arabia.

In recognition to its pioneering efforts, Your Company was awarded the globally acknowledged ATD Best Awards (in continuous succession of four years i.e 2017, 2018, 2019 & 2020), nationally acclaimed ISTD award for 2017-18 and 2018-19 and the BML Munjal Award 2018 (Sustained Excellence Category).

Further, your Company was awarded HCM Excellence Award (Silver Medal) in 2019 by Brandon Hall group in the best use of blended learning category. These awards recognize organizations that demonstrate enterprise-wide success as a result of L&D and talent development practices.

17.5 Employee Welfare Trusts

Your Company has established following Trusts for welfare of employees:-

- NTPC Limited Employees Provident Fund Trust manages Provident Fund of employees of your Company.
- NTPC Post Retirement Employees Medical Benefit Trust manages post retirement medical benefit fund of the employee including separated employee of your Company.

- NTPC Employee Gratuity Fund manages the gratuity fund of the employees for payment of gratuity as per the "The Payment of Gratuity Act" of your Company.
- NTPC Limited Defined Contribution Pension Trust manages the defined Contribution Pension fund of the Employee of your Company.

17.6 Women Empowerment

Women employees constituted nearly Seven percent (as on 31.03.2020) of your Company's work force. During the year, programmes on women empowerment and development, including programmes on gender sensitization were organized. Your Company actively supported and nominated its women employees for programmes organized by reputed agencies. To maintain work life balance and to manage career aspiration, paid child care leave is provided to women employees.

17.7 Other Welfare Measures

In your Company, an entire gamut of benefits, from paid Childcare leave, telemedicine, medical smart card for hospitalization cases to Post-retirement Medical benefits (PRMS) to Family Economic Rehabilitation named Sneh Kiran Scheme are extended to employees to meet any exigency that may arise in a person's life.

17.8 Employee Welfare & Quality of Work-Life

Your Company is committed to provide quality work life for its employees. Far removed from the buzz of cities, our townships are the epitome of serenity, natural beauty and close community living. A range of welfare and recreation facilities including schools, hospitals, shopping centres, recreation centres, club, gym, pool etc. are provided at the townships to enhance the quality of life & the well-being of employees and their families. In addition, cultural programmes involving employees and their families are also conducted.

18. SUSTAINABLE DEVELOPMENT

Sustainability at your Company is being driven by two motives:

a. To make fundamental changes in the way we operate our businesses to transform ourselves as the most sustainable power producer

b. To become more transparent in the timely disclosure of our social, environmental and economic performances.

To achieve the first objective, your Company has identified Decarbonization, Water, Biodiversity, Circular Economy, Safety, Supply chain and Business Ethics as priority sustainability areas and strategizing on them to ensure the Company's business sustainability. Your Company is developing short-term and long-term measurable goals and objectives pertaining to these areas which is also aligned to the Company's Corporate Plan 2032. To start with, for reducing water footprint, a cross-functional water committee has been formed to do benchmarking of the Company's systems and practices with peers and identify best practices across industries. Your Company has adopted the triple bottom line approach for focusing on people, planet and profit treating them as primary pillars for business sustainability. We believe that development should not endanger the environment & natural eco-systems.

Your Company is preparing the sustainability report adhering with the global reporting initiative standard and as per IIRC pattern. We accord due importance for report assurance process and thereby sustainability report of 2018-19 assurance was got done using GRI standard and as per ISAE 3000 assurance standard. Sustainability report is assured with reasonable level of assurance in comprehensive option by M/s EY India Limited. EY has used an important management tool helping your Company to relook into the systems, processes and procedures. Further, your Company has developed and deployed CSR & SD policy proactively meeting requirements of schedule VII of Company act 2013. Sustainable Development Plan for FY 2019-20 was prepared and approved by CSR & SD Board Sub Committee of your Company.

Your Company is focusing on waste management, water management, promotion of renewable energy and biodiversity / afforestation activities. Action plan based activities have been implemented at various stations of your Company during the year. To further strengthen sustainable development activities, following new initiatives were taken during 2019-20.

- Capacity building programs on stakeholders engagement and materiality analysis were organized at all the major stations of your Company for widespread Sustainable Development initiatives.
- Development of Supply Chain Policy for evolving environmental, social and governance aspects of sustainable development at the supplier end business activities and their compliance for progressively making supply chain system greener in your Company. Policy with strategy is in advance stage of finalization.
- Your Company was declared winner of CII-ITC Sustainability Award 2019. It is the most coveted sustainability award in the country. Winning the Award has placed your Company among the top performers and further enhanced brand image of your Company.
- Now your Company is focusing on improvement in ESG – ESH rating, being carried out by International Analysts i.e. MSCI Sustainable ratings, Sustainalytics and DJSI who benchmark your Company with International Power Utilities involving compliance of International statutory laws and norms.
- Your Company is working on increasing RE Capacity content further and targeting 10,000 MW by 2022.

18.1 Inclusive Growth–Initiativesfor Social Growth

18.1.1 Corporate Social Responsibility:

CSR has been synonymous with your Company's core business of power generation. Your Company's spirit of caring and sharing is embedded in its mission statement. Your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and there after-extensive community / peripheral development activities are taken up along with the project development. CSR Policy was formulated in July 2004 and revised in 2010, 2016 and 2019 as "NTPC Policy for CSR & Sustainability" in line with Companies Act 2013 and Department of Public Enterprises (DPE) Guidelines for CSR. It covers a wide range of activities including implementation of a few key programmes through NTPC Foundation.

Focus areas of your Company's CSR & Sustainability activities are Health, Sanitation, Safe Drinking Water and Education. However, Capacity Building, Women Empowerment, Social Infrastructure livelihood creation and support through innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability have also been taken up. Your Company commits itself to contribute to the society, discharging its corporate social responsibilities through initiatives that have positive impact on society, especially the community in the neighborhood of its operations by improving the quality of life of the people, promoting inclusive growth and environmental sustainability.

Preference for CSR & Sustainability activities is being given to local areas around your Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. During the year, about 500 villages and more than 450 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched, in one way or the other, the lives of around 18 lakhs people, residing at remote locations.

Apart from the CSR activities undertaken in and around stations to improve the living conditions of the local communities, other CSR initiatives undertaken pan- India are mentioned in the Annual Report on CSR activities annexed with this Director Report.

Your Company spent ₹ 304.92 Crore during the financial year 2019-20 towards CSR initiatives, which surpassed the prescribed two percent amount of ₹ 252.68 Crore, thus achieving a CSR spend of 2.41%.

18.1.2 NTPC Foundation

NTPC Foundation, funded by your Company, is engaged in serving and empowering the differently abled and economically weaker sections of the society.

Details of expenditure incurred and initiatives undertaken by your Company under CSR are covered in the Annual Report on CSR annexed as Annex-VII to this Director Report.

18.1.3 Rehabilitation & Resettlement (R&R)

Your Company is committed to help the population displaced on account of land required for execution of the projects and has been making efforts to improve the Socio-economic status of Project Affected Families (PAFs). In line with its social objectives, your Company has focused on effective Rehabilitation and Resettlement (R&R) of PAFs and carrying out Community Development (CD) works in Project Affected Villages (PAVs) and vicinity.

R&R activities are initiated at your Company's projects by undertaking need based community development activities in the area of health, education, drinking water, capacity building, infrastructure, etc. by formulating 'Initial Community Development (ICD) Plan' in consultation with concerned Panchayats, District Administration and opinion makers of the locality. Your Company addresses R&R issues in line with extant R&R Policy of your Company/Central Govt. / State Govt. Policy/ Guidelines with an objective that after a reasonable transition period, the conditions of affected families improve or at least they regain their previous standard of living, earning capacity and production levels. Your Company revised its R&R Policy 2010 in the year 2017 to incorporate R&R entitlements as per 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' (RFCT LARR Act, 2013). As per the your Company R&R Policy-2017 aligned in line with the RFCTLARR Act 2013, a Social Impact Assessment (SIA)/Census Survey will be conducted by the State Govt. during the process of land acquisition for the project so as to collect detailed demographic data of the area which shall form the basis for the preparation of 'Rehabilitation and Resettlement (R&R) Scheme by the appropriate Govt. The R&R Scheme consists of measures for Rehabilitation & Resettlement and infrastructure in Resettlement Colony (RC).

In addition, in the R&R Policy-2017 of your Company a provision has been kept for need based community development (CD) activities to be taken up in project affected villages where Project Affected Families (PAFs) continue to reside even after land acquisition as also in vicinity of the project so as to ensure that the displaced families in the RC or the affected families settling in neighboring villages may secure for themselves a reasonable standard of community life.

R&R Plan expenditure is a part of Capital cost of the project and the Plan is implemented in a time bound manner so as to complete its implementation by the time the project is commissioned. On completion of the R&R Plan implementation, a Social Impact Evaluation (SIE) is conducted by a professional agency to know the efficacy of R&R Plan implementation for future learning.

R&R activities were implemented at the Greenfield / Brownfield Thermal Power projects -Barh, North-Karanpura, Darlipali, Gadarwara, Khargone, Lara, Kudgi, Telangana, Mouda, Solapur, Tanda-II, Meja, NPGC, Kanti, Patratu, Hydro projects - Tapovan Vishnugad & Rammam-III and Coal Mining Projects at Pakri-Barwadih, Chhatti-Bariatu, Kerendari, Dulanga and Talaipalli where R&R / CD Plans were finalized in consultation and participation of the stakeholders and approved earlier.

Re-appropriations in R&R / CD Plans as required on case-to-case basis for specific projects were also approved to take care of the local requirements and requests from district administration/ stakeholders. during implementation.

Focus areas for Community Development activities were:

- **Drinking water** – Planning and implementation for access to drinking water for 100% coverage of all project affected villages of your Company projects under construction is being undertaken.
- **Capacity building / Skill upgradation** – Training programs are conducted by various projects towards skill enhancement. The support to dependents of PAFs for ITI training was also extended by various projects.
- **Education** – Construction activities are almost complete for Medical College cum Hospital at Sundargarh (Odisha) while a portion of the same for 200-bed facility has already been handed over to Govt. of Odisha which has started functioning as Covid-19 Care Centre cum Isolation ward for Corona virus infected patients. Construction of an Engineering College at Shivpuri (MP) has been completed which is ready for handover to State Govt. of MP. Support has been extended for construction of Hydro Engineering College, Bilaspur (Himachal Pradesh). Your Company is providing financial assistance to the Govt. of Chhattisgarh towards upgradation of infrastructure and other basic amenities including setting-up of latest equipment in the Govt. Medical College at Raigarh.
- **Health** - For the benefit of PAFs and neighboring population, Mobile Health Clinic, Medical camps and dispensaries are being operated for comprehensive health coverage of PAFs at various projects. Support is being extended to District Administration, Peddapalli (Telangana) for augmentation of another floor and equipment at Govt. Hospital.

18.2 Environment Management –

Environment Policy of your Company:

"To provide cleaner energy by committing to highest possible levels of performance in environmental compliance, practices and stewardship."

Your Company has always envisaged environment protection and management along with optimized usage of natural resource as inherent feature at the time of inception of all project and focuses its efforts to minimize the impact of its plant operations on surrounding environment and concerned ecosystem.

Your Company undertakes comprehensive environment management plan right from conception of project, selection of site, resource selection (Land, Coal & Water source) and technology for power generation and pollution control. In case of old stations, your Company undertakes massive renovation & modernization to upgrade pollution control equipment wherever necessary. Your Company has also taken initiative for installation of Flue gas desulfurization (FGD) system for SO_x emission control and optimization & implementation of appropriate technology for NO_x emission control to comply with revised emission norms as per stipulated timeline for respective station/ unit.

In new projects, around 13-15% of the project cost is spent on main environment pollution control systems for air, water and soil such as Electrostatic Precipitators (ESPs), Liquid Waste Treatment Plants (LWTP), Ash Water Recirculation System (AWRS), Coal Settling and Separation Pit (CSSP), Dry ash extraction system (DAES), dust extraction & suppression system, sewage treatment plant and desulfurization and $DeNO_x$ systems. Continuous emission monitoring system (CEMS), Effluent quality monitoring system (EQMS), Continuous ambient air quality monitoring system (CAAQMS) are operational at the operating stations and included in EPC packages for the upcoming units/ projects. Your Company has adopted advanced and high efficiency technologies such as super critical boilers at new stations, $DeNO_x$ and FGD in all upcoming green field projects.

Your Company is augmenting its capacity with green power by installing hydel power, wind power, solar power systems in a big way, hybrid power plant in combinations e.g. Wind & Solar, Solar & Thermal and small hydel power systems attached to its thermal power stations to encourage garnering of renewable energy resources. These measures are aimed not only to achieve reduction in pollution along withoptimized consumption of precious natural resources but also to lead to reduction in specific water and Carbon footprints of your Company. All stations of your Company are ISO 14001 certified for their sound environment management systems and practices.

Your Company has signed Memorandum of Understanding (MoU) with Central Pollution Control Board (CPCB) for participation with financial support for installation & commissioning of 25 number of Continuous Ambient Air Quality Monitoring System (CAAQMS). The MOU enables total sponsorship of ₹ 80.0 Crore for procurement, installation, commissioning and O&M of these stations in 13 cities of six states and three Union Territories for a period of 7 seven years. Data from these CAAQMS will be inputs for Air Quality Index evaluation of these cities.

Towards its commitment to recycle, recover energy/ material from entire plastic waste in eco-friendly manner your Company has released "Integrated Plastic Management Policy-2019" to ensure Zero contribution of single-use plastic waste to environment from Company's establishment & operations.

18.2.1 Control of Air Emissions:

High efficiency Electro-static Precipitators (ESPs) with efficiency of the order of 99.97% and above with advanced control systems have been provided in all coal based stations to maintain Particulate Matter (PM) emissions well below the applicable permissible limits. All upcoming units have been planned & designed with state of art Air Pollution Control systems (ESPs, $DeNO_x$ and FGD system) with high efficiency to meet new emission norms. Performance enhancement of ESPs operating over the years is being enhanced to achieve the desired emission level to meet revised emission levels by augmentation of ESPs size (increased height, additional fields, charging of dummy fields, retrofitting of advanced ESP controllers, new technology i. e. MEEP

(Moving electrode Electrostatic Precipitators) and adoption of sound O&M practices.

For control of SO_x, first wet FGD has been commissioned and operational at Vindhyachal Station. Erection of wet FGD at Dadri Stage-II is in advanced stage. FGD based of dry sorbent injection (DSI) system erection work completed at Dadri (St-I) and in advanced stage of erection in two units of Tanda (St-I) to meet the emission norms for SO_x. Your Company has awarded FGD packages for 56GW+ capacity and execution is in progress to comply the new norms for SO_x emission as per the timeline stipulated by the regulator.

NO_x control in coal-fired plants is presently achieved by controlling its production by adopting best combustion practices (primarily through excess air and combustion temperatures optimization). To lower down the NO_x emission to the extent possible levels, combustion modification has been awarded for 20GW+ capacity and completed at majority of units and rest is in advanced stage of execution. To comply with new norms for NO_x emission, pilot study based on SCR/SNCR technology at 11 locations conducted and report submitted to concerned authorities for consideration and to find out the optimal solution and suitable technology for $DeNO_x$ system suitable for Indian Coal.

Change of secondary fuel from HFO to alternative fuel (LDO or LSHS having low sulfur content) scheme implemented in all stations in NCR and state of UP and Haryana to minimize the SO_x emission during the startup of coal based units.

18.2.2 Control of water pollution:

Your Company as a responsible corporate entity for environment has proactively initiated steps towards water stewardship in power generation sector. Company released its Water Policy-2017 followed by Rain Water harvesting Policy-2018 to set own benchmark in water consumption in power generation by setting its aim & objectives for various water conservation and management measures by using 3Rs (Reduce, Recycle & Reuse) as guiding principle. Water bodies rehabilitation, rejuvenation & restoration, water withdrawal optimization depending on the sustainable water withdrawal capacity and rejection of water bodies as probable water source, which are recognized as environmentally sensitive due to their relative size and habitat for ecologically sensitive species.

All stations of your Company are equipped with advanced waste water treatment facilities such as state of art technology based sewage Treatment Plant (STP), Liquid Waste Treatment Plants (LWTP), Coal Slurry Settlement Pit (CSSP), Ash Water Recirculation System (AWRS) for treatment and reuse of treated effluents. For optimum use of water in all stations of your Company are having closed cycle condenser cooling water systems with higher Cycle of Concentration (COC), adoption of high concentration slurry disposal (HCSD) system, rain water harvesting system, reuse of treated effluent in ash slurry disposal and reuse of treated sewage effluent for horticulture purposes are few measures implemented in all stations. For effective monitoring of water use, flow meters with integrators installed at all designated locations in all stations.

18.2.3 New Environmental Norms Implementation Plan and Challenges:

- **Online Coal Ash Analyser**

  New environmental norms have mandated use of coal with ash content not exceeding 34% on quarterly average basis for coal based Thermal Power Plants located far away from coal mines/sources. To ensure compliance to that your Company has taken initiative and Online Coal Analyser is being installed in all non-pithead power plants and all upcoming coal based thermal power plants. Further the type of analyser selected not only represents the ash content but also the various elements of coal which will be useful for enhancing the process efficiency and ease of operation & maintenance. “Approval to operate” has already been accorded by AERB, for operation of coal analysers installed at Dadri, Kahalgaon and Unchahar STPPs.

- **Fly Ash Classification & Bagging System**

  With the changing environmental norms and land acquisition issues, ash disposal is a serious challenge. To mitigate the issue, increased ash utilization is a potential solution. Your Company in its endeavour to promote ash utilization, is considering implementation of fly ash classification system and Bagging Plant for its upcoming coal based thermal power projects at Singrauli III and Lara II. Further feasibility report has been prepared for implementation of Classification & Bagging system at your Company Simhadri Project.

- **SO_x, NO_x & SPM reduction**

  In order to comply with the applicable new environmental norms notified by MOEF & CC vide gazette notification dated 07.12.2015 pertaining to SO_2, FGD system will be required to be installed in the existing as well as under construction coal fired power plants. Your Company along with its JV Companies is having around 155 units of 65 GW capacity i.e. all operating as well as under construction units. Your Company is taking a lead role in the implementation of FGD. Till date your Company has issued tenders for 139 units of around 63 GW capacity that covers all units operating as well as under construction except some smaller units. Further, FGD in Vindhyachal stage-V is already in operation and Dry Sorbent Injection (DSI) system for reduction of SO_2 commissioned in 2 units of 210 MW at Dadri. FGD installation Work in 57,260 MW is underway. This has also set up an example in Industry for NTPC’s commitment towards the greener environment.

For controlling the NO_x, various De-NO_x technique shall be implemented based on the limit prescribed in the norms. Your Company has started working on this. Combustion Modification in five units consisting of 2 units of Dadri, 2 units of Jhajjar and 1 unit of VSTPP have already been completed.

The SO_2 & NO_x emission levels in the country will plummet to 30% of what it is presently after installation of FGD technology even after adding capacity of another 70 GW from the present year.

18.2.4 Real Time Environment Monitoring System

Your Company remains a benchmark setter in Environment monitoring & protection. As pioneer in environment monitoring we have already installed Ambient Air Quality Monitoring Stations (AAQMS) consisting of SO_2, NO_x, CO, PM 2.5, PM10 analysers and Continuous emission monitoring systems (CEMS) consisting of SO_2, NO_x, CO, CO_2, Particulate matter analysers for Stack emission and Effluent Quality Monitoring System (EQMS) consisting pH, Conductivity, BOD, COD, TSS, oil in water analysers for Effluent monitoring in all our Stations/ Units.

Mercury analysers for emission and air monitoring are installed in all 800 MW units. All required environmental monitoring data is made available to CPCB & SPCB as per their requirement.

Your Company is already installing additional air and water pollution control systems at various projects to comply with the applicable new environmental norms notified by MOEF & CC vide gazette notification dated 07.12.2015.

Your Company has brought out Bio-Diversity Policy on 31.07.2018 and developed strategy for its implementation in and around its business units for conservation and enrichment of bio-diversity.

18.2.5 Tree Plantation:

Your Company has been undertaken tree plantation covering vast areas of land in and around its projects and till date more than 35 million trees have been planted throughout the country including 10 lakh trees planted during 2019-20 under accelerated afforestation programme.

Your Company has taken initiative on pilot project of Miyawaki plantation technology and planted more than 3000 saplings at Ramagundam station whose biomass production per unit area is 16 times higher than the conventional plantation. Replication of this technology in plantation will create more efficient carbon sink for Company.

The afforestation has not only contributed to the 'aesthetics' but also helped in carbon sequestration by serving as a 'sink' for pollutants and there by protecting the quality of ecology and environment. Further, your Company has embarked upon long-term Memorandums with State authorities to assist National Commitment of NDC in COP 21, by planting 6.0 million saplings during 2020-26 @ 1 million per year.

Your Company has also planned to take up project of forestry in Khargone, and Indore Districts of Madhya Pardesh, located on right bank and left bank of Narmada River respectively for managing selected watershed, forests and riparian landscapes along Narmada River and submitted a joint proposal along with Global initiative (GGGI), India and Indian Institute of Forest Management (IIFM), Bhopal to USAID.

18.2.6 ISO 14001 & OHSAS 18001 Certification:

Amongst all commercially operational stations of your Company, 19 stations have ISO-14001 and OHSAS 18001 certifications and for four stations, certifications are under renewal by reputed National and International certifying agencies in recognition of its sound environmental management systems and practices. Certification is in process for newly commercial stations of your Company.

18.3 Quality Assurance and Inspection (QA&I)

Your Company lays great emphasis on the quality of plant and machinery that are sourced for power plant construction and also on the spares and consumables that are required to support the day to day operations of the plant.

The model followed for Quality Assurance seeks to ensure that the Plant Reliability is realized through thoughtful planning and building, Quality Attributes starting from raw materials, manufacturing, inspection and testing up to erection and commissioning up to erection and commissioning. Each item secured for construction is subject to rigorous tests and inspection at the appropriate stages to ensure conformity to specified requirements.

Your Company has committed adequate resources for maintaining effective Quality Management System. This includes Corporate level Quality Assurance team, Inspection Engineers at various demanding locations and projects.

Your Company's robust performance on all operational parameters, is a testimony to the soundness of the quality system which is in operation. Your Company is represented in various technical committees of ISO, BIS and IEC and is actively contributing to upgrade of power sector related standards and technology to promote alignment with best practices followed internationally. Quality assurance and inspection related business processes are being made digital in line with organization emphasis of going digital.

18.4 Clean Development Mechanism (CDM)

Your Company is pioneer in undertaking climate change issues proactively. Your Company has taken several initiatives in CDM Projects in Power Sector.

Five of its renewable energy projects viz. 5 MW Solar PV Power Project at Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at Faridabad and 8 MW small hydro power project at Singrauli and 50 MW Solar PV Plant at Rajgarh (MP) have already been registered with United Nations Frame Work Convention on Climate Change (UNFCCC) CDM Executive Board.

15 MW Solar PV Power project at Singrauli, 10 MW Solar PV project at Talcher and 10 MW Solar PV Power Project at Unchahar is registered in UNFCCC CDM Programme of Activities (PoA).

61,73 nos. of Certified Emission Reductions (CERs) for 5 MW Solar PV Power Project at Port Blair (A&N) have been issued by UNFCCC CDM Executive Board. Further, another 5842 nos of CERs have also been issued by UNFCCC CDM Executive Board for 5 MW Solar PV Power Project at Dadri and 21011 nos. of Certified Emission Reductions (CERs) has been issued for 5 MW Solar PV Power Project at Faridabad.

Further Registration of 50 MW Solar PV power project at Anantpur, 260 MW Solar PV power project at Bhadla, 250 MW Solar PV power project at Mandsaur and 50 MW Wind power project at Rojmal has been done in Verified Carbon Standard (VCS) program.

Total of 1085005 Voluntary Emission Reduction (VERs) has been issued for these projects registered with VCS Board.

For the remaining capacity of Anantpur Solar project, prior consideration form has been sent to UNFCCC and MOEF. Also, prior consideration forms have been sent to UNFCCC and MOEF for our upcoming following Solar Projects: 140 MW and 85 MW at Bilhaur, 20 MW at Auraiya,100 MW floating solar at Ramagundam, 25 MW floating solar at Simhadri, 70 MW & 22 MW floating solar at Kayamkulam, 160 MW at Jetsar, 20 MW floating solar at Auraiya, 20 MW at Rihand and 400 MW CPSU Scheme Tranche-I projects.

Further, Prior consideration form for our upcoming Solar Projects under CPSU scheme Tranche-II totaling 1292 MW is in the process to be sent to UNFCCC and MOEF .

18.5 Ash Utilisation

During the year 2019-20, 604.76 lakh tonnes of ash was generated and 73.31 % viz. 443.33 lakh tonnes of ash had been utilized for various productive purposes by your Company.

Important areas of ash utilization are – cement & asbestos industry, ready mix concrete plants (RMC), road embankment, brick making, mine filling & land development. Your Company are also pursuing new initiatives for fly ash utilization like fly ash based geo-polymer road, transportation of fly ash from pithead power stations to fly ash consumption centers, setting up ash based light weight aggregate plant.

Pond ash from all stations of your Company is being issued free of cost to all users. Fly ash is also being issued free of cost to fly ash/ clay-fly ash bricks, blocks and tiles manufacturers on priority basis over the other users from all coal based thermal power stations. The funds collected from sale of ash is being maintained in the separate account and this fund is being utilized for development of infrastructure facilities, promotion and facilitation activities to enhance ash utilization.

Your Company has an Ash Utilization Policy, which is a vision document dealing with the ash utilization issue in an integral way from generation to end product. This policy aims at maximizing utilization of ash for productive usage along with fulfilling social and environmental obligations as a green initiative in protecting the nature and giving a better environment to future generations.

The quantity of ash produced, ash utilized and percentage of such utilization during 2019-20 from your Company's Stations is at Annex- VIII of this Director Report.

18.6 CenPEEP – towards enhancing efficiency and protecting Environment

Your Company initiated a unique voluntary program of GHG emission reduction by establishing 'Center for Power Efficiency and Environmental Protection (CenPEEP)' and under this program, it is estimated that cumulative CO_2 avoided is 49.61 million tonnes since 1996, by sustained efficiency improvements.

CenPEEP is instrumental in implementation of Energy Efficiency Management System (EEMS) consisting of periodic assessments, field tests, performance gap analysis deviations and updation of action plans at all stations.

CenPEEP is working for efficiency and reliability improvement in stations through strategic initiatives, development and implementation of systems and introduction of new techniques & practices. Critical efficiency parameter, draft power consumption, efficiency improvement through overhauling are monitored. PI based real time programs and dashboards are in use for real time tracking of plant parameters. These programs also assist operating engineers in tracking the gaps in heat rate and auxiliary power consumption, trending the degradation of equipment performance and taking corrective measures.

CenPEEP is also working towards reduction in specific water consumption and auxiliary power consumption in coal and gas stations. A dedicated group conducts regular energy audits to identify potential improvement areas and improvement actions. Further CenPEEP is also associated in carrying out water audit of stations and taking corrective actions for reduction in water consumption.

Water Withdrawal per year (in lakh KL)

Sl. No.	Type of Water	Quantity Consumed 2019-20
1	Total Water withdrawal	5994.97*
2	Per unit withdrawal	3.15* Litre/kwh
*Water calculated on closed loop systems		

CenPEEP is also involved in structured and statutory energy audits, which helps to identify potential areas of improvement in APC reduction to be addressed within time bound implementation schedule.

CenPEEP is actively involved in training and development of power professionals of your Company and other utilities in the power sector in the areas of Boiler & Auxiliaries, Turbine & Auxiliaries, Cooling Towers, RCM, PdM technologies etc.

Your Company has taken Electric Power Research Institutes' membership (EPRI) in the areas of Boiler life & Availability improvement, Steam Turbine-Generators & Aux. system and Combustion & Coal Quality impacts to increase the knowledge, expertise of the Company and undertake collaborative research projects for improving efficiency and reliability of units.

CenPEEP coordinated implementation of Perform, Achieve & Trade (PAT) scheme under Prime Minister's National Mission on Enhanced Energy Efficiency (NMEEE) in your Company's coal & gas plants. As per notification, your Company's coal and gas stations exceeded the Net Heat Rate improvement targets and earned net 170653 EScerts (Energy saving certificates) in PAT-1 cycle. Your Company participated in EScerts trading & purchased required EScerts. Subsequent to the trading, your Company is having 161759 EScerts that will be used for PAT – II cycle. After completion of PAT cycle II in March 2019; M&V audits have been carried out in all stations. Notification of EScerts earned in PAT cycle II is awaited.

Performance & Guarantee tests are being coordinated by CenPEEP which includes approval of procedure, conducting test & its evaluation.

Your Company has taken an initiative for complete replacement of existing lighting with LED light fittings at its all stations including townships. Till March 2020, 10.1 lakh LED fittings (83.2 % of the population) have been replaced on pan- NTPC basis.

19. NETRA

Your Company understands the importance of R&D in the ever-changing dynamics of the energy sector. It also firmly believes that assimilation of knowledge and its conversion into technologies shall be the key differentiator in coming times. Technological progress thus achieved, in aggregation, improves the country's energy security, economic growth and environmental sustainability. Concurrently, it plays a crucial role in determining the competitiveness of companies in the marketplace - both nationally and internationally.

Your Company has assigned 1% of PAT for R&D activities focused to address the major concerns of the sector as well as the future technology requirements of the sector. In this effort, your Company has established NTPC Energy Technology Research Alliance (NETRA) as state-of-the-art center for research, technology development and scientific services in the domain of electric power to enable seamless work flow right from concept to commissioning.

Through our R&D center, NETRA, we are constantly making efforts to address the major concerns of the power sector - as well as exploring and tapping the potential opportunities available.

The focus areas of NETRA are - Efficiency Improvement & Cost Reduction; New & Renewable Energy; Climate Change & Environmental protection, which includes water conservation, Ash utilization & Waste Management. NETRA also provides Advanced Scientific Services to its stations and other utilities in the area Non-Destructive Examination (NDE), Metallurgy & failure analysis, oil/water chemistry, environment, electrical, Computational Fluid Dynamics (CFD), etc. for efficient and reliable performances. NETRA laboratories are ISO 17025 accredited.

Research Advisory Council (RAC) of NETRA comprising eminent scientists and experts from India and abroad is in place to steer research direction. Padma Bhushan Dr. V.K. Saraswat, former Secretary, DRDO, and member of NITI Aayog is the Chairman of RAC.

Scientific Advisory Council (SAC) chaired by Functional Director, Director (Operations) and other senior NTPC's Officials as its member, provides directions for undertaking specific applied research projects aimed to develop techniques in power plant for efficient, reliable and environment friendly operation with emphasis on reducing cost of generation.

NETRA focused on both in-house technology development as well as collaborative research. Your Company networked with various prestigious national and international institutions to harness the specialized knowledge and expertise lying with those institutes. By collaborating with various institutes, your Company has been successful in promoting research in the field of Ash Utilization, Hydrogen, Carbon Capture, Sensors CFD, Robotics, Drones, Renewables, Environment, NDE and Water chemistry, etc.

NETRA has collaborations with National Institutes such as IIT-Delhi, IIT–Bombay, IIT-Madras, IIT–Kanpur, IIT–Kharagpur, IIT-Dhanbad, IISc-Bangalore, RGIPT-Amethi, CSIR lab's such as IIP- Dehradun, CMERI- Durgapur, CGCRI- Kolkata, CBRI-Roorkee, etc.

NETRA also has collaborations with international institutions such as NETL-USA, Curtin University-Australia; Newcastle University-Australia, VGB-Germany, DLR / ISE-Germany, Tokyo University etc.

NETRA efforts are constantly directed towards Institutional Capacity Building. Various activities such as workshops on applied robotics in Power plant, ESP Efficiency Improvement using CFD modeling, Capacity Building Training on NDE practices and Concentrated Solar Thermal (CST) were carried out by NETRA. Further, NETRA Meet was also conducted for the very first time to promote synergy between R&D Centre and various your Company's stations. Further, 'NTPC Innovation Scheme' was also launched to foster R&D activities within your Company.

Five (5) books were also published in addition to various research papers.

Further to boost your Company R&D activities, Phase-II of NETRA infrastructure is under construction with approx. 21000 sq. m floor area.

The details of activities undertaken by NETRA are given in Annex-III of this Director Report.

20. IMPLEMENTATION OF OFFICIAL LANGUAGE

Your Company took several initiatives for the progressive use of Hindi in the day to day official work and implementation of Official Language policy of the Union of India in your Company. The compliance of Official Language policy in our projects and regional headquarters was inspected and need based suggestions were given to the respective Heads of offices in this regard.

Quarterly meetings of Official Language Implementation Committee were held in which extensive discussions took place on progressive use of Hindi and the ways and means to bring about further improvements.

Hindi Divas was celebrated on 14th September 2019 and Hindi Fortnight was organized from 01-15 September 2019 at the Corporate Centre as well as regional headquarters and projects/stations to create awareness among the employees, associates and their family members. Our biannual Hindi magazine "Vidyut Swar" was published (in digitized form) to promote creative writing in Hindi. A mega Kavi Sammelan was organized during November 2019. Your Company had awarded the 2nd prize in the best magazine category by TOLIC (NARAKAS) Delhi in February 2020.

Employees were motivated to use Hindi in official work by organizing Hindi workshops, Unicode Hindi Computer Training along with Hindi e-tools and popularization of Hindi incentive schemes. Hindi webpage was updated with important information of Rajbhasha for employees.

The second sub-committee of Parliament on official Language had inspected our units reviewed the progress of Rajbhasha implementation and appreciated our efforts.

Your Company's website also has a facility of operating in a bilingual form, in Hindi as well as in English.

21. VIGILANCE

21.1 Vigilance Mechanism:

Your Company ensures transparency, objectivity and quality of decision making in its operations, and to monitor the same, your Company has a Vigilance Department headed by Chief Vigilance Officer, a nominee of Central Vigilance Commission. The Vigilance set up in your Company consists of Vigilance Executives in Corporate Centre and Projects. In Projects, the Vigilance Executives report to the Project Head in administrative matters but in functional matters, they report to Chief Vigilance Officer.

Your Company's Corporate Vigilance Department consists of four Cells as under:

- Vigilance Investigation and Processing cell;
- Departmental Proceedings cell;
- Technical Examination cell; &
- MIS cell

These cells deal with various facets of vigilance mechanism. The vigilance works have been assigned region wise Vigilance Officers at Corporate Centre (Regional Vigilance Executive) for speedier disposal. Senior officials of Vigilance Department comprising GM (Vigilance), Regional Vigilance Executives and Head of DPC/MIS Cell meet regularly to discuss common issues having in order to ensure efficient and uniform working in all Regions. This facilitates transparency, efficiency and effectiveness of Vigilance functionaries by making use of collective knowledge, experience and wisdom of Vigilance Executives as well as breaking of compartmentalization and abridging of strengths & weaknesses.

During 2019-20, Vigilance department of your Company investigated 84 complaints, out of which 68 complaints were finalized while the remaining 16 complaints were under various stages of investigation as on 31.03.2020. Appropriate disciplinary action was initiated against the involved employees alongwith system improvements, wherever found necessary. 187 surprise checks were conducted during the period and recovery of ₹ 0.87 crore was affected against various discrepancies detected during investigation. During the last year, a total of 54 Preventive Vigilance Workshops were conducted at various projects/ places in which 1252 employees participated.

21.2 Implementation of Integrity Pact

The Integrity pact has been implemented in your Company since 2009. Presently, tenders having estimated value of ₹ 10 crore (excluding taxes and duties) and above are covered under the Integrity Pact.

21.3 Implementation of various policies

Fraud Prevention Policy has been implemented in your Company and suspected fraud cases, referred by the Nodal Officers to Vigilance Department are investigated immediately to avoid/ stop fraudulent behaviors as defined in "Fraud Prevention Policy". Whistle Blower Policy has also been in place in your Company as per SEBI guideline to strengthen a culture of transparency and trust in the organization, providing employees with a framework/ procedure for responsible and secure reporting of improper activities (whistle blowing) within the Company and to protect employees wishing to raise a concern about improper activity/serious irregularities within the Company. A complaint handling policy is also in place, which is designed to provide guidance on the manner in which your Company receives and handles complaints against its employees, suppliers / contractors etc.

21.4 Vigilance Awareness Week and Workshops

Vigilance Awareness Week-2019 (VAW) was observed in your Company, its Subsidiaries & Joint Venture Companies from 28th October to 2nd November 2019. The observance of the Vigilance Awareness Week commenced with the Integrity Pledge taken by employees across the country on 28th October 2019 steered by the respective heads of Projects/Stations/ Regions/Offices & Corporate Centre. CMD of your Company, Sh. Gurdeep Singh led the pledge at the Corporate Center, Delhi.

The events & activities across in your Company were organised focusing on the theme of VAW-2019 "Integrity-A Way of Life". To ensure wider participation of students & citizens, events & activities were organised at Schools and Colleges and Gram Sabhas in rural areas' & seminars in the urban areas were organised in the vicinity of our Stations / Projects / Offices / Corporate Centre. Special focus was given to the cities assigned to your Company for outreach activities namely New Delhi, Varanasi, Farakka, Korba & Talcher. For general awareness, FM Radio / Prasar Bharati medium was also used to air the CVC message on "Integrity-A Way of Life" at New Delhi, Patna, Hyderabad, Visakhapatnam & Raipur.

Vigilance Quiz-2019 was organized for the first for wards of employees of your Company with questions ranging from varied areas of vigilance and general studies. Shri Rajit Punhani, Ex-Chief Vigilance Officer, your Company Senior Executives Shri Rakesh Prasad, ED (HR), Shri A.K. Das, CGM, Dadri, Ms. Vijaya Lakshmi Muralidharan, Head of HR, Dadri presented the awards to the winning teams.

E-magazine special issues were released at many projects & regional offices. Your Company Corporate

Vigilance compendium of E-flyer VIGDOM on vigilance awareness was released by CMD of your Company on 28.10.2019 and your Company Vigilance Mobile App was launched by CVO on 29.10.2019.

The Vigilance Awareness Week at Corporate Center concluded with a befitting Kavi Sammelan of Padma Shri Ashok Chakradhar who enthralled the audience with his satiric poetry on corruption and its ill effects. Further, activities during VAW-2019 were organized across India covering 20 states involving more than 40,000 students & 40,000 citizens besides employees of your Company, its Subsidiaries & Joint Ventures.

21.5 System improvement measures undertaken during 2019-20

a) Modification in Guidelines w.r.t Sampling & Weighment of Imported coal

- The earlier Guidelines for Sampling and Weighment of Imported Coal at NTPC Station have been modified w.r.t current Scenario/Contractual provisions, wherein methodology for collection and testing of Coal Samples, maintenance of Weigh Bridges for Weighment of Coal, up-keepment of Chemical Labs for testing of Coal Samples, installation of Cameras at Labs & Weigh bridges for surveillance , surprise checks by Vigilance etc. has been deliberated.

b) Minor Penalty Proceedings to continue even after retirement

- As per NTPC's CDA Rule, only Major Penalty Proceedings could be continued after Superannuation. In line with advice of CVC & MOP, CDA Rules have been modified w.e.f 28.05.19, incorporating provision of continuation of Minor Penalty Proceedings also after Retirement.

c) Online submission of property return by executives

- Hard copy submission of Property Return by the Executives of your Company had been discontinued. System circular in this regard was issued to all Project Heads at Site, Regional & Corp HR, REDs stating that –

  ✓ Up to E8 (excluding BUH/CEO/HOP), Hard Copy submission is not required. Only online submission of Annual Property Return (APR).

  ✓ Hard Copy of APR will be kept for all HOP/BUH, ED & RED only.

d) Vigilance Clearance through PRADIP Portal

- A Module has been developed in Paperless office system (PRADIP) for introducing online Vigilance clearance of the Employees of your Company for speedy disposal with least possible human intervention. This Module was rolled out w.e.f 01.10.2019.

22. REDRESSAL OF PUBLIC GRIEVANCES

Your Company is committed for resolution of public grievance in efficient and time bound manner. Executive Director (HR-USS) has been designated as Director (Grievance) to facilitate earliest resolution of public grievances received from President Secretariat, Prime Minister's Office, Ministry of Power etc.

In order to facilitate resolution of grievances in transparent and time bound manner, Department of Administrative Reforms & Public Grievances, Department of Personnel & Training, Government of India has initiated web-based monitoring system at www.pgportal.gov.in.

As per directions of Government of India (GoI), public grievances are to be resolved within two months time. If it is not possible to resolve the same within two months period, an interim reply is to be given. Your Company is making all efforts to resolve grievances in above time frame.

23. RIGHT TO INFORMATION (RTI)

Your Company has implemented Right to Information Act, 2005 in order to provide information to citizens and to maintain accountability and transparency. Your Company has put RTI manual on its website, i.e www.ntpc.co.in for access to all citizens of India and has designated a Central Public Information Officer (CPIO), an Appellate Authority and APIOs at all sites and offices of your Company.

During 2019-20, there were 1,732 applications (including 102 pending applications from FY 2018-19), out of which 1,553 were replied and 179 are pending to be replied/resolved, under the RTI Act, 2005.

24. USING INFORMATION AND COMMUNICATION TECHNOLOGY FOR PRODUCTIVITY ENHANCEMENT

The Information Technology Department in your Company is not only a service provider but also being used as a key business driver. Since 2008, your Company has implemented Enterprise Resource Planning (ERP) application to integrate all its business functions. PI data system has been implemented to capture, display and analyze the plant performance parameters on real time basis which is helping the operation and maintenance of our power plants. Non-ERP web based applications have been developed in balance areas such as Engineering Drawings approval, Quality Control Management, Hospital Management, Labour Management, Transit Camp Management, RTI, Security Control etc.

As a commitment towards environment, your Company has re-engineered and re-designed the business processes to paperless mode. The digitization initiative "Project PRADIP" resulted in implementation e-Office, digitization of documents and paperless processes for different functions. This has not only saved tons of paper but also resulted in faster decision making, transparency and improved efficiency for your Company. Further, during COVID-19 period all the file movement are digitally moved and approved.

Your Company plants and Offices across India, are connected to Corporate Office and main Data-Centre (DC) through 2x34 mbps MPLS links at each site to facilitate seamless communication. The DC and DR (Disaster Recovery) site is connected with 2x291 mbps MPLS links for data replication. Both the Data centers at Noida & Hyderabad have been certified with ISO 27001 certification during this period. The progress of ongoing projects and issues of the running power stations are discussed regularly over high definition Video Conferencing system at Project Monitoring Centre of Corporate Office. Desktop to desktop VC facility also has been provided to senior executives to conduct review meeting from their respective seat.

To further leverage IT in your Company, an IT Strategy has been finalized. The IT Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IIOT, AI, Machine learning etc. over next 2 years.

Some of the highlights of the progress in IT/ERP area during the year 2019-20 were as follows:

- **Digitization** - E-Office was implemented. Processes were redesigned for working in paperless mode.
- **ERP** – A number of new modules were introduced in ERP. An all new PMS system with many new features was launched. A new process for procurement budget and automatic PR creation put in place. New CERC tariff norms for 2019-24 implemented.
- **HCI**- New server technology has been adopted by installing and commissioning the state of art Hyper Converged Infrastructure server (HCI) system. The HCI system is hosting all the critical business Non-ERP applications. The HCI system is acting as on premises private CLOUD service by delivering Virtual Machines (VMs) of various configuration to host various applications as and when they are required by users, centralized backup and management etc.
- **Mail and Messaging Services** – The mail and messaging services were upgraded. All users were provided with min. 20 GB of mail box size. DR set up for mailing system was commissioned.
- **Security** – No major security breach was observed during the year 2019-20. A (24x7) Security Operation Centre(SOC) is in operation where round the clock monitoring of all external and internal data traffic is being done with latest tools through SOC and latest threat management tools are being applied to prevent any cyber-attack or data theft. Timely communication being sent to all users based on threat perception. Your Company's data centers at Noida and Hyderabad are ISO 27001 certified for security compliance.
- A number of new web applications and mobile apps such as Coal Monitoring Portal, Ash Management Portal, CPSE Conclave action points monitoring portal etc. have been launched to take care of requirements of various internal departments and Ministry of Power.
- **ERP** - CERC Tariff regulation 2019-24 configured and implemented in ERP system. Management Reports related to Operations have been modified to reflect new KPIs for CERC Tariff norms. Activity Based Budgeting and Automatic PR generation have been successfully adopted by the power stations for Procurement Budgeting and Action. PAP vendor creation processes automated. Auto creation of PRMS Vendors. Automation of Employee Joining process. SAP-FIORI based PMS Final assessment implemented.
- SAP Integration with other external Systems – The following systems were integrated :
  - GeM portal for procurement,
  - TREDS platform M1Exchange to facilitate MSME payment
  - SBI and GepNIC Portal for enabling on-line payment.
- **E-Tendering** – GePNIC Portal has been implemented in all subsidiaries of NTPC. Online EMD and Tender fee payment on GePNIC platform with automatic entry and accounting in ERP system and auto generation of GST invoice implemented in your Company.
- **New Technology** - A ChatBot was developed for your Company vendor portal and Payment Tracking Portal. A PoC was successfully done with RPA tool in fetching & updating Medical Health records of Employee. Real-time data analytics is being explored with PI-Asset Framework and Event Frames tools of the OSI PI System.
- Corporate Dashboard was enhanced with new Analytic Reports based on BW data and BW system was upgraded to make it HANA compliant.
- IT Consultancy assignments towards power sector improvement – Implemented the following
  - o SAP-PM module in SCCL
  - o PI System in JV companies of your Company
  - o Advising NEEPCO in their ERP implementation
  - o DREAMS 2.0 in PGCIL
- Due to COVID-19, your Company provided Work from Home (WFH) facilities during the lock down by enabling VPN access to critical applications to all the required employees and a Video Conferencing (VC) facility through MS teams to all employees.

25. GROUP COMPANIES: SUBSIDIARIES AND JOINT VENTURES

Your Company has Nine number of subsidiary companies as on 31st March 2020 (including NTPC Mining Limited and take over Company i.e North Eastern Electric Power Corporation Ltd. and THDC India Ltd. acquired on 27th March 2020) and 19 nos. joint venture companies for undertaking specific business activities.

In these 19 nos. joint venture companies, your Company has decided to exit from International Coal Ventures Private Limited, in view of lack of suitable commercially viable opportunities for thermal coal and in BF-NTPC Energy Systems Limited, after getting approval from Ministry of Power is under the Process of Winding Up and Liquidator was appointed for voluntary Liquidation of JV Company.

A statement containing the salient feature of the financial statement of your Company's Subsidiaries, Associate Companies and Joint Ventures as per first proviso of section 129(3) of the Companies Act, 2013 is included in the consolidated financial statements.

26. INFORMATION PURSUANT TO STATUTORY AND OTHER REQUIREMENTS

Information required to be furnished as per your Companies Act, 2013 and as per SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015 and any amendments thereto are as under:

26.1 Statutory Auditors

The Statutory Auditors of your Company are appointed by the Comptroller & Auditor General of India. Joint Statutory Auditors for the financial year 2019-20 were (i) M/s S K Mehta & Co., Chartered Accountants, New Delhi (ii) M/s S.N. Dhawan & Co. LLP, Chartered Accountants, New Delhi, (iii) M/s Varma & Varma, Chartered Accountants, Hyderabad,(iv)M/s Parakh & Co., Chartered Accountants, Jaipur, (v) M/s C K Prusty & Associates, Chartered Accountants, Bhubaneshwar, (vi) M/s B C Jain & Co., Chartered Accountants, Kanpur and (vii) M/s V K Jindal & Co., Chartered Accountants, Ranchi.

The appointment of the Statutory Auditors for the financial year 2020-21 is appointed by the Comptroller & Auditor General of India.

26.2 Management comments on Statutory Auditors' Report

The Statutory Auditors of the Company have given an un-qualified report on the accounts of the Company for the financial year 2019-20. However, they have drawn attention under 'Emphasis of Matter' to the following notes:

(i) Note No.32 (a) regarding billing and accounting of sales on provisional basis.

(ii) Note No.44 in respect of one of the projects of Company consisting of three units of 800 MW each, where the order of National Green Tribunal (NGT) on the matter of environmental clearance for the project has been stayed by the Hon'ble Supreme Court of India, the matter is sub-judice and the units have since been declared commercial.

(iii) Note No.57(iii)(b) with respect to appeal filed by the Company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Company and the related provision made/ disclosure of contingent liability as mentioned in the said note.

(iv) Note No.41, which describe the assessment of the impact of Covid-19 pandemic by the management on the business and its associated financial risks.

The issues have been adequately explained in the respective Notes referred to by the Auditors.

26.3 Review of accounts by Comptroller & Auditor General of India (C&AG)

The Comptroller & Auditor General of India, through letter dated 21.08.2020, has given 'NIL' Comments on the Standalone Financial Statements of your Company for the year ended 31 March 2020 after conducting supplementary audit under Section 143 (6) (a) of the Companies Act, 2013.

The Comptroller & Auditor General of India, through letter dated 21.08.2020, has also given 'NIL' Comments on the Consolidated Financial Statements of your Company for the year ended 31 March 2020 after conducting supplementary audit under Section 143 (6) (a) read with Section 129 (4) of the Companies Act, 2013.

As advised by the Office of the Comptroller & Auditor General of India (C&AG), the comments of C&AG for both the stand-alone and consolidated financial statements of your Company for the year ended 31 March 2020 are being placed with the report of Statutory Auditors of your Company elsewhere in this Annual Report.

26.4 COST AUDIT

As prescribed under the Companies (Cost Records and Audit) Rules, 2014, the Cost Accounting records are being maintained by all stations of your Company.

The firms of Cost Accountants appointed under Section 148 (3) of the Companies Act, 2013 for the financial year 2019-20 were (i) M/s Dhanjay V. Joshi, Cost Accountants, Pune, (ii) M/s K.L Jaisingh & Co., Cost Accountants, UP, (iii) M/s Chandra Wadhwa & Co., Cost Accountants, New Delhi, (iv) M/s DGM & Associates, Cost Accountants, Kolkata, (v) M/s Tanmaya S Pradhan & Co., Cost Accountants, Sambalpur,(vi) M/s A.C Dutta & Co., Cost Accountants, Kolkata,(vii) M/s Niran & Co., Cost Accountants, Bhubaneshwar and (viii) M/s S C Mohanty & Associates, Cost Accountants, Bhubaneswar.

The due date for filing consolidated Cost Audit Report in XBRL format for the financial year ended March 31, 2019 was upto September 27, 2019 and the consolidated Cost Audit Report for your Company was filed with the Central Government on September 25, 2019.

The Cost Audit Report for the financial year ended March 31, 2020 shall be filed within the prescribed time period under the Companies (Cost Records & Audit) Rules, 2014.

26.5 Exchange Risk Management

Your Company is exposed to foreign exchange risk in respect of contracts denominated in foreign currency for purchase of plant and machinery, spares and fuel for its projects/ stations and foreign currency loans.

During financial year 2019-20, your Company has not entered into any derivative contract in respect of foreign currency loans exposure.

26.6 Policy for Selection and appointment of Directors and their remuneration

Your Company being a Government Company, the provisions of Section 134(3)(e) of the Companies Act, 2013 do not apply in view of the Gazette notification dated 05.06.2015 issued by Government of India, Ministry of Corporate Affairs.

26.7 Performance Evaluation of the Directors and the Board

Ministry of Corporate Affairs (MCA), through General Circular dated 5th June, 2015, has exempted Government Companies from the provisions of Section 178 (2) of the Companies Act, 2013 which requires of performance evaluation of every director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted listed Govt. Companies from provisions of Section 134 (3) (p) of the Companies Act, 2013 which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the Company, or, as the case may be, the State Government as per its own evaluation methodology.

Further, MCA, through Notification dated 05.07.2017, has amended Schedule IV to the Companies Act, 2013 with respect to performance evaluation of directors of the Government Companies that in case of matters of performance evaluation are specified by the concerned Ministries or Departments of the Central Government or as the case may be, the State Governments and such requirements are complied with by the Government companies, such provisions of Schedule IV are exempted for the Government Companies.

In this regard, Deptt. of Public Enterprises (DPE) has already laid down a mechanism for performance appraisal of all functional directors. DPE has also initiated evaluation of Independent Directors.

Your Company enters into a Memorandum of Understanding (MOU) with Government of India each year, demarcating key performance parameters for your Company. The performance of the Company are evaluated by the Department of Public Enterprises vis-à-vis MOU entered into with the Government of India.

In terms of Regulation 25 of SEBI LODR, 2015, the performance of the Board as a whole and non-independent directors including Chairman & Managing Director were evaluated by the Independent Directors in a separate Meeting held by them on 14th Feb., 2020.

26.8 Declaration by Independent Directors

During the year, all the Independent Directors have met the requirements specified under Section 149(6) of the Companies Act, 2013 for holding the position of 'Independent Director' and necessary declaration from each Independent Director under Section 149 (7) of the Companies Act, 2013 was received. Also declaration under Regulation 25 of SEBI (LODR) Regulations, 2015 and Rule 6 of the Companies (Appointment and Qualification of Directors) Rules, 2014 are also obtained from all the Independent Director of your Company.

26.9 MANAGEMENT DISCUSSION AND ANALYSIS

In addition to the issues stated in the Directors' Report, some issues have been brought out in report on Management Discussion and Analysis placed at Annexure-I and forms part of this Directors' Report, as per the terms of regulations 34(2)(e) of SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015.

26.10 Corporate Governance

A detailed report on Corporate Governance as stipulated under Regulation 34(3) of SEBI (Listing Obligations and Disclosure Requirements)Regulations, 2015 is placed at Annexure-II and forms part of the Directors' Report.

26.11 BUSINESS RESPONSIBILITY REPORT

The Business Responsibility Report, as stipulated under Regulation 34 (2) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, is given in Annexure-X and forms part of this Directors' Report.

26.12 Investor Education and Protection Fund (IEPF)

Details of transfer of unclaimed dividends and eligible shares to IEPF have been placed in the Corporate Governance Report at Annx-II, which forms part of the Directors' Report.

26.13 Secretarial Audit

The Board had appointed M/s Akhil Rohatgi & Company, Company Secretaries, to conduct Secretarial Audit for the financial year 2019-20. The Secretarial Audit Report for the financial year ended March 31, 2020 is annexed herewith placed at as Annexure XI to this Directors' Report.

The Managements' Comments on Secretarial Audit Report are as under:

Observations	Management's Comments
Compliance of Regulation 17 (1) (a) of Securities and Exchange Board of India (Listing Obligations & Disclosure Requirements) Regulations, 2015 with respect to the appointment of Independent Woman Director on the Board of the Company.	During the financial year 2019-20, w.e.f 16.11.2019, there is no Woman Independent Director as required under SEBI LODR. As per the provisions of the Articles of Association of the Company, the power to appoint Directors vests with the President of India. The Company had requested Ministry of Power, Government of India, being administrative ministry for appointment of Woman Director from time to time for compliance of the above regulations.
Compliance of Regulation 17(10) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the Company has not carried out the performance evaluation of the Directors.	Refer Para 26.6 & 26.7
Compliance of Regulation 19(4) read with Schedule II Part D (A) of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, the required policies/criteria were not formulated	As the Government of India (GoI) is making appointment of Directors evaluation of Directors are done by the GoI.
The Registered office of the Company at Scope Complex, 7, institutional Area, Lodi Road, New Delhi 110003 has not been registered under the Shops and Establishment Act	Application for change of Registered office address was made to the office of the Deputy Labour Commissioner.

26.14 Particulars of contracts or arrangements with related parties

During the period under review, your Company had not entered into any material transaction with any of its related parties.The Company's major related party transactions are generally with its subsidiaries and associates. All related party transactions were in the ordinary course of business and were negotiated on an arm's length basis except with Utility Powertech Limited, which are covered under the disclosure of Related Party Transactions in Form AOC-2 (Annex- IX) as required under Section 134(3) (h) of the Companies Act, 2013. They were intended to further enhance your Company's interests.

Web-links for Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactions have been provided in the Report on Corporate Governance, which also form part of the Annual Report.

26.15 Significant and material orders passed by the regulators or courts or tribunals impacting the going concern status and Company's operations in future: No significant and material orders were passed by any regulator or court or tribunal impacting the going concern status and Company's operations during the FY 2019-20.

26.16 Adequacy of internal financial controls with reference to the financial reporting: Your Company has in place adequate internal financial controls with reference to financial reporting. During the year, such controls were regularly tested and no reportable material weakness in the design, implementation and operation effectiveness was observed.

26.17 Loans and Investments

Details of Investments covered under the provisions of Section 186 of the Companies Act, 2013 forms part of financial statement, attached as a separate section in the Annual Report for FY 2019-20.

The loan granted by your Company to its Joint Venture Company namely National High Power Test Laboratory Private Limited (NHPTL) during 2017-18 for a period of six months of ₹ 6 Crore was extended up to 31st October 2032. Further, a new loan was also granted to NHPTL for ₹ 12.40 crore during the financial year. The loan granted by your Company to its Subsidiary Company namely Kanti Bijlee Utpadan Nigam Limited (KANTI) of ₹ 150 crore for meeting its capital expenditure covered under Section 185 and 186 of the Companies Act, 2013.

Details of Loans granted to subsidiaries and Joint venture companies are disclosed at Note 53 to the stand-alone financial statements for the year 2019-20

26.18 Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace

Your Company has in place a Policy on Prevention, Prohibition and Redressal of Sexual Harassment of Women at Workplace in line with the requirements of the Sexual Harassment of Women at the Workplace (Prevention, Prohibition & Redressal) Act, 2013. Internal Complaints Committees (ICCs) have been constituted at all Projects/ locations to redress complaints received regarding sexual harassment. All female employees (regular, contractual, temporary, trainees) are covered under this policy.Every three years, the constitution of these committees is changed and new members are nominated.

During the year 2019-20, two cases were reported to different ICCs across your Company, four cases were resolved (including two from the last year) and currently no case is pending.

26.19 Procurement from MSEs

The Government of India has notified a Public Procurement Policy for Micro and Small Enterprises (MSEs) Order, 2012. The total procurement made from MSEs (including MSEs owned by SC/ST entrepreneurs) during the year 2019-20 was ₹ 1,667.50* crore, which was 46.22% of total annual procurement of ₹ 3,608.21* crore against the minimum threshold target of 25% as stipulated by the Public Procurement Policy for Micro and Small Enterprises (MSEs) Order.

The total procurement made from MSEs owned by SC/ST and Women entrepreneurs during the year 2019-20 was ₹ 0.42* crore and ₹ 0.18* crore respectively.

*It excludes Primary fuel, Secondary fuel, Steel & Cement, the Project procurement including R&M packages and procurement from Original Equipment Manufacturer (OEM)/ Original Equipment Supplier (OES)/ Proprietary Article Certificate (PAC).

In FY 2019-20, Your Company has recorded highest ever procurement from MSEs in terms of absolute value and procurement percentage. Further, in FY 2019-20, Your Company has also recorded highest procurement percentage from MSEs among all Maharatna CPSUs.

Your Company organized 17 vendor development programmes (VDPs), including 8 Special VDPs for MSEs owned by SC/ST and Women entrepreneurs across the Company in FY 2019-20.

Annual procurement plan for 2019-20 from MSEs is uploaded on www.ntpc.co.in.

26.20 Particulars of Employees

As per provisions of Section 197(12) of the Companies Act, 2013 read with Rule 5 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014, every listed Company is required to disclose the ratio of the remuneration of each director to the median employee's remuneration and details of employees receiving remuneration exceeding limits as prescribed from time to time in the Directors' Report.

However, as per notification dated 5th June, 2015 issued by the Ministry of Corporate Affairs, Government Companies are exempted from complying with provisions of Section 197 of the Companies Act, 2013. Therefore, such particulars have not been included and does not form part of this Directors' Report.

26.21 Extract of Annual Return:

Extract of Annual Return (MGT-9) pursuant to Section 92 (3) of the Companies Act, 2013 and rule 12 (1) of the Company (Management & Administration) Rules, 2014 is annexed herewith as Annexure VI to this Directors' Report. The Extract of Annual Return for the Financial Year ended 31st March 2020 is also available on the Company's website i.e www.ntpc.co.in .

26.22 Information on Number of Meetings of the Board held during the year, composition of committees of the Board and their meetings held during the year, a chart or a matrix setting out the skills/expertise/ competence of the board of directors, Total fees for all services paid by the listed entity and its subsidiaries, on a consolidated basis, to the statutory auditor and all entities in the network firm/network entity of which the statutory auditor is a part, Details of utilization of funds raised through preferential allotment or qualified institutions placement as specified under Regulation 32 (7A), if any ,establishment of vigil mechanism/ whistle blower policy and web-links for familiarization/ training policy of directors, Policy on Materiality of Related Party Transactions and also on Dealing with Related Party Transactionsand Policy for determining 'Material' Subsidiaries have been provided in the Report on Corporate Governance, which forms part of the Director's Report at Annex-II.

26.23 Para on development of risk management policy including therein the elements of risks are given elsewhere in the Annual Report.

26.24 Your Company has complied with all the applicable Secretarial Standards.

26.25 No disclosure or reporting is required in respect of the following items as there were no transactions on these items during the year under review:

1. Issue of equity shares with differential rights as to dividend, voting or otherwise.
2. Issue of shares (including sweat equity shares) to employees of your Company under any scheme.

The particulars of annexure forming part of this report areas under:

Particulars	Annexure
Management Discussion & Analysis	I
Report on Corporate Governance	II
Information on conservation of energy, technology absorption and foreign exchange earnings and outgo	III
Statistical information on persons belonging to Scheduled Caste / Scheduled Tribe categories	IV
Information on Differently Abled persons	V
Extract of Annual Return	VI
Annual Report on CSR Activities	VII
Project Wise Ash produced and utilized	VIII
Disclosure of Related Party Transactions in Form AOC-2	IX
Business Responsibility Report for the year 2019-20	X
Secretarial Audit Report in Form MR-3	XI

27. BOARD OF DIRECTORS & KEY MANAGERIAL PERSONNEL (KMP)

Shri A K Gautam had been appointed as Chief Financial Officer w.e.f. 1.8.2019 and Director (Finance) w.e.f 18.10.2019.

Shri Ashish Upadhyaya, AS & FA, Ministry of Power has been appointed as Government Nominee Director w.e.f. 22.1.2020.

Shri Dillip Kumar Patel had been appointed as Director (HR) w.e.f. 1.4.2020.

Shri Ramesh Babu V. had been appointed as Director (Operations) w.e.f. 1.5.2020.

Shri Chandan Kumar Mondol had been appointed as Director (Commercial) w.e.f. 1.8.2020.

Shri Seethapathy Chander ceased be Independent Director w.e.f. 12.6.2019 on completion of three years' tenure.

Shri Anurag Agarwal, AS&FA, Ministry of Power has been appointed as Government Nominee Director w.e.f. 1.7.2019 and ceased to be a Director w.e.f 12.7.2019.

Shri P K Mohapatra ceased to be Director (Technical) of the Company w.e.f. 31.7.2019 on attaining the age of his superannuation.

Shri K. Sreekant, Director (Finance), Powergrid Corporation of India Limited had been entrusted with the additional charge of the post of Director (Finance) of your Company w.e.f. 19.3.2018. His tenure was extended from time to time as additional charge of the post of Director (Finance) of the Company, ceased to be Director (Finance) w.e.f 12.8.2019.

Dr. (Ms.) Gauri Trivedi ceased to be Independent Director w.e.f. 15.11.2019 on completion of one year extended tenure.

Shri S K Roy ceased to be Director (Projects) of the Company w.e.f. 30.11.2019 on attaining the age of his superannuation.

Shri S Roy ceased to be Director (HR) of the Company w.e.f. 31.3.2020 on attaining the age of his superannuation.

Shri Prakash Tiwari ceased to be Director (Operations) of the Company w.e.f. 30.4.2020 on attaining the age of his superannuation.

Shri Anand Kumar Gupta ceased to be Director (Commercial) of the Company w.e.f. 31.7.2020 on attaining the age of his superannuation.

The Board wishes to place on record its deep appreciation for the valuable services rendered by Shri Anurag Agarwal, Shri Seethapathy Chander, Shri P K Mohapatra, Shri K Sreekant, Dr. (Ms.) Gauri Trivedi, Shri S K Roy, Shri S Roy, Shri Prakash Tiwari and Shri Anand kumar Gupta during their association with your Company.

The Board welcomes Shri A.K.Gautam, Shri Ashish Upadhyaya, Shri Dillip Kumar Patel, Shri Ramesh Babu V. and Chandan Kumar Mondol on the Board of your Company.

28. Material changes and commitments affecting financial position between the end of the financial year and date of the report

There have been no material changes and commitments, which affect the financial position of the Company, that have occurred between the end of the financial year to which the financial statements relate and the date of this report.

29. DIRECTORS' RESPONSIBILITY STATEMENT

As required under Section 134(3)(c) & 134(5) of the Companies Act, 2013, your Directors state that:

1. in the preparation of the annual accounts for the year ended March 31, 2020, the applicable accounting standards had been followed along with proper explanation relating to material departures;
2. the Directors had selected such accounting policies and applied them consistently and made judgments and estimates that are reasonable and prudent so as to give a true and fair view of the state of affairs of the Company as at March 31, 2020 and of the profit of the Company for the year ended on that date;
3. the Directors had taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 2013 for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
4. the Directors had prepared the Annual Accounts on a going concern basis;
5. the Directors, had laid down internal financial controls to be followed by the Company and that such internal financial controls are adequate and were operating effectively; and
6. the Directors had devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems were adequate and operating effectively.

30. ACKNOWLEDGEMENT

The Directors of your Company acknowledge with deep sense of appreciation, the co-operation received from the Government of India, particularly the Prime Minister's Office, Ministry of Power, Ministry of New & Renewable Energy, Ministry of Finance, Ministry of Environment, Forests & Climate Change, Ministry of Coal, Ministry of Petroleum & Natural Gas, Ministry of Railways, Ministry of Corporate Affairs, Department of Public Enterprises, Department of Investment and Public Asset Management, Central Electricity Authority, Central Electricity Regulatory Commission, Comptroller & Auditor General of India, Appellate Tribunal for Electricity, State Governments, Regional Power Committees, State Utilities, Stock exchanges and Office of the Attorney General of India.

The Directors of your Company also convey their gratitude to the shareholders, various international and Indian Banks and Financial Institutions for the confidence reposed by them in the Company.

The Board also appreciates the contribution of contractors, vendors and consultants in the implementation of various projects of your Company.

We also acknowledge the constructive suggestions received from the Office of Comptroller & Auditor General of India, Statutory Auditors and Cost Auditors of your Company.

We wish to place on record our appreciation for the untiring efforts and contributions made by the NTPC's family at all levels to ensure that the Company continues to grow and excel.

The Directors of your Company regret the loss of life due to COVID-19 pandemic and are deeply grateful and have immense respect for every person who risked his life and safety to fight this pandemic.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi

Date: 21st August, 2020

CSR Initiatives of NTPC

Annexure-I to Directors' Report

MANAGEMENT DISCUSSION AND ANALYSIS

ECONOMIC AND SECTOR OUTLOOK

As per the provisional estimates of Annual National Income for 2019-20 and quarterly estimates of Gross Domestic Product (GDP) for the fourth quarter (Q4) of 2019-20, released by National Statistical Office of Ministry of Statistics & Programme Implementation (MOSPI), the growth rate of GDP at constant (2011-12) prices for 2019-20 is estimated at 4.2%, as against 6.1% for the previous year.

Quarterly growth rate analysis depicts that during Q1, 2019-20 GDP growth rate was 5.2%, but it has moved in a downward trend with growth rate of 4.4%, 4.1% and 3.1% during Q2, Q3 & Q4 respectively.

As reported by MOSPI on 9 April 2020, the growth in Indices of Industrial Production (IIP) in 2019-20 with respect to previous year (2018-19) has been 1.7%, -1.3% and 1.1 % for Mining, Manufacturing and Electricity sectors respectively.

The outlook of the power sector however seems positive as represented through various global rankings. India's overall rank in World Bank's "Ease of Doing Business" is 63rd in 2020 improving from 142nd in 2015. Indian Power Sector also has improved its ranking to 22nd in 2020 from 137th in 2015 in "Getting Electricity" which is one of the ten parameters of "Ease of Doing Business" ranking.

During the year 2019-20, the major reforms in the power sector are:

- Proposed amendments in Electricity Act with elements such as formulation of National Renewable Energy Policy, setting up of Electricity Contract Enforcement Authority, Tariff determination with Direct benefit transfer of subsidy by State Governments.
- Implementation of Payment Security Mechanism through LC.
- Smart Metering
- Setting up of Renewable Energy Management Centre (REMC).

These reforms are likely to help in the growth of renewable capacity, increase in investment in the sector, improvement in the health of DISCOMs and reduction in pending receivables of the generating companies.

During the month of March 2020, the COVID-19 pandemic has affected the sector in terms of reduction in electricity demand due to country-wide lockdown and slow-down of industrial activities. The demand is likely to improve with gradual opening up of the economic activities.

INDUSTRY STRUCTURE AND DEVELOPMENTS

Power sector is a key enabler for India's economic growth. The sector with its three pillars: generation, transmission and distribution, is crucial to India's infrastructure economic growth. The global stature of Indian Power Sector is depicted well by its positioning in terms of generation capacity. India is ranked 3rd in terms of electricity generation, 4th in installed renewable energy capacity and 5th in installed Hydro capacity as reported by international agencies like IEA, Statista, etc. The achievements and various issues/ challenges faced by the Power Sector are discussed in the ensuing paragraphs.

Snap Shot 2019-20

- Gross annual generation of the country (excluding import from Bhutan) increased by 1% from 1,376 BUs in the previous year to 1,391 BUs in the financial year 2019-20 (including renewables). Generation from renewable sources increased by about 9% from 127 BUs to 138 BUs, while generation from conventional sources increased from 1,249 BUs to 1,253 BUs.
- Generation capacity of 7,065 MW (excluding renewables) was added during financial year 2019-20 compared to 5,672 MW added during the previous year.
- Renewable energy capacity of 9,386 MW added during 2019-20. Renewable energy capacity has increased by about 12% from 77.6 GW as on 31 March 2019 to 87.0 GW as on 31 March 2020.
- 11,664 Ckms of transmission lines added during the year as compared to 22,437 Ckms in the previous year.
- 68,230 MVA of transformation capacity added during the year as against 72,705 MVA in the previous year.
- PLF of thermal stations decreased to 55.99% in the financial year 2019-20 from 60.30% in the previous financial year.
- During the financial year 2019-20, while the energy deficit decreased marginally from 0.6% to 0.5%, the peak power deficit decreased from 0.8% to 0.7% as compared to that in the previous year.

(Source: Central Electricity Authority, Executive Summary)

Existing Installed Capacity

The total installed capacity in the country as on 31 March 2020 was 370 GW (including renewables) with Private sector contributing 47% of the installed capacity followed by State Sector with 28% share and Central sector with 25% share.

	Total Capacity (GW)	% share
Private	173	47
State	103	28
Central	94	25
Total	**370**	**100**

Mode-wise installed capacity in the country as on 31.03.2020 is as under:

	Total Capacity (GW)	% share
Thermal	231	62
Nuclear	6	2
Hydro	46	12
RES (Renewables)	87	24
Total	**370**	**100**

(Source: Central Electricity Authority)

Capacity Utilization and Generation

Sector wise PLF in % (Thermal - Coal & Lignite)

Sector	2019-20	2018-19
State	50.26	57.81
Central	65.36	72.64
Private	54.73	55.24

(Source: Ministry of Power)

In the emerging scenario of high variable renewable energy infusion into the grid, supplying power with reliability has gained prominence over PLF. In this context, it is crucial that the thermal capacities are able to supply fast response balancing power and maintain adequate reserve capacity.

Generation

The total conventional power available in the country (including Bhutan) during the financial year 2019-20 was 1,253 BUs as compared to 1,249 BUs during last year, registering a marginal growth of 0.26%.

Total renewable generation in the country for the year 2019-20 was 138 BUs as compared to 127 BUs in 2018-19.

Sector-wise and fuel-wise break-up of conventional generation (BUs) for the year 2019-20 is detailed as under:

In BUs

Sector	Thermal	Hydro	Nuclear	Bhutan Import	Total
Central	351.87	62.56	46.38	--	**460.81**
State	309.97	78.53	--	--	**388.50**
Private	382.61	14.88	--	--	**397.49**
Bhutan Import	--	--	--	5.81	**5.81**
Total	**1,044.45**	**155.97**	**46.38**	**5.81**	**1,252.61**

(Source: Central Electricity Authority)

Central sector utilities have performed better as compared to those of State and Private sector utilities in terms of share in generation as compared to share in installed capacity.

Sector-wise share in Installed Capacity (conventional) vis-a-vis share in Generation (conventional):

	Share in installed capacity	Share in generation
Central	32%	37%
State	36%	31%
Private	32%	32%

(Source: Central Electricity Authority)

Consumption

The per capita consumption of power in India was 1,181 units in financial year 2018-19 (provisional) *(Source: Central Electricity Authority, Executive Summary)*, which is almost one-third of the global average (3,152 units for 2017).

(Source: IEA Key World Energy Statistics 2019)

Major End users of power are broadly classified into 6 categories: Agricultural, Commercial, Domestic, Industrial, Traction & Railways and others. Their shares of electricity consumption, were approximately 18%, 8%, 24%, 42%, 2% and 6%, respectively.

(Source: Ministry of Statistics and Programme Implementation- Energy Statistics 2020)

Other key initiatives taken by Government of India (GoI) include Payment Ratification and Analysis in Power procurement in Invoicing of generators (to bring transparency in power purchase transactions between Generators and DISCOMs), Integrated Power Development Scheme (for improving and augmenting the distribution and sub-transmission systems in Urban areas with a view to improve reliability) and Deen Dayal Upadhyaya Gram Jyoti Yojana (agricultural feeders segregation, strengthening of sub-transmission & distribution infrastructure in rural areas and rural electrification). 100% village electrification has been achieved.

Transmission

The transmission network (at voltages of 220 kV and above) in the country has grown at an average rate of ~5% CAGR since the end of 12th Plan in terms of circuit kilometres added.

The total inter-regional transmission capacity of country has increased from 75,050 MW at the end of 12th plan to 1,02,050 MW as on 31.03.2020. During the financial year 2019-20, 3,000 MW inter-regional capacity was added.

This augmentation of the national grid will help promote competition leading to reliable and lower cost of power for consumers. Further, it is essential for supporting higher injection of renewables into the grid for transfer of power from RE-rich states to other states. This large-scale integration of renewable energy along with other factors such as increasing power generation capacity and reforms in fuel sector is slated to increase the demand for transmission capacity significantly in the coming years.

Distribution

Distribution is the key link to realize GoI's vision of supplying reliable 24x7 Power for All. For this, the distribution companies need to be healthy to be able to discharge their functions & responsibilities efficiently.

To support DISCOMs in COVID-19 pandemic GoI has come out with a liquidity injection scheme for DISCOMs under Aatmanirbhar Bharat Package. Under the scheme PFC/REC will infuse liquidity to DISCOMs against receivables. Loans will be given against State guarantees for exclusive purpose of discharging liabilities of DISCOMs to GENCOs.

Power Trading

In India, power is transacted largely through long term Power Purchase Agreements (PPAs) entered into between Generating companies and the Distribution utilities. A small portion is transacted through various short-term mechanisms like bilateral transactions through licensees, Day-ahead transactions through power exchanges and real time balancing market mechanism (i.e. Deviation Settlement Mechanism).Further, new trading methods of power like Real Time Market has been introduced.

In the year 2019-20, around 89% of power generated in the Country was transacted through the long-term PPA route and about 11% of the power was transacted through short-term trading mechanisms.

Total volume of short-term transactions of electricity increased from 65.90 BUs in 2009-10 to 137.16 BUs in 2019-20.

(Source: Market Monitoring Report, CERC)

Key Initiatives/Reforms & Regulatory Changes in Power Sector

1. **Renewable Purchase Obligations (RPO) targets:** Ministry of Power in consultation with MNRE has notified trajectory to achieve 21% RPO target by the financial year 2021-22, comprising of 10.5% Solar and 10.5% Non-Solar renewables. For the year 2020-21, RPO target is 19% comprising of 8.75% Solar and 10.25% Non-Solar renewables. SERCs may consider to notify RPO for their respective states in line with notification by Ministry of Power (MoP). To achieve the RPO trajectory, country will need to enhance its renewable assets.

2. **Promotion of Hydro Power:** To promote hydropower in the country, Large Hydro Projects (LHPs) having capacity more than 25 MW have also been declared as Renewable Energy Source. Hydro Purchase Obligations (HPO) as a separate entity within non-solar Renewable Purchase Obligation to cover Large Hydro Projects commissioned after notification of these measures. The trajectory of annual HPO targets will be notified by Ministry of Power.

3. **The Electricity (Amendment) Bill, 2020:** Ministry of Power has introduced draft Electricity Act (Amendment) Bill, 2020. The key proposals include (i) constitution of Central Enforcement Authority to uphold the sanctity of a contract related to sale, purchase or transmission of electricity; (ii) formulation of separate National Renewable Energy Policy; and (iii) Direct Benefit Transfer of subsidy by state governments to consumers.

4. **Letter of Credit as Payment Security Mechanism:** Under this mechanism, w.e.f. 1 August 2019, Power will be scheduled for dispatch only after Letter of Credit (LC) for the desired quantum of power with respect to the generating stations has been opened. It shall be ensured by the concerned Load Despatch Centre that such entity, during the period of non-scheduling of power on account of non-opening of LC or advance payment, has no access to procure power from the Power Exchange(s) and they shall not be granted Short Term Open Access (STOA). The measure is expected to improve payments to the power generators and improve sustainability in the Power Sector.

5. **Renewable Energy Management Centre (REMC):** REMCs have been commissioned to help in Grid integration of Renewable Energy by taking care of intermittency of RE generation and, facilitating real time forecasting, scheduling and real time tracking of Renewable Energy Generation. Till May 2020, 11 such centres have been set up in various states.

6. **Waiver of Inter State Transmission System (ISTS) charges and losses:** In order to promote the capacity addition of Solar and Wind Power Projects, the waiver available for use of Inter State Transmission System (ISTS transmission charges and losses) has been extended for projects commissioned till 2022. The waiver shall be applicable for the twenty-five years from the commissioning of such projects.

7. **Coal allocation for short term power procurement:** GoI on 2 December 2019 has issued guidelines for all power plants including private generators which do not have PPAs, allowing Coal Linkage for a period of minimum 3 months and upto a maximum of 1 year, provided further that the power generated through that linkage is sold in Day Ahead Market (DAM) through power exchanges or in short term by a transparent bidding process through Discovery of Efficient Energy Price (DEEP) portal.

8. **Real Time Market (RTM):** Government has introduced Real Time Market in electricity from June 2020. This real time market is likely to provide an alternate mechanism for DISCOMs to access a larger market. It may also be beneficial for generators for selling their un-requisitioned surplus power.

OPPORTUNITIES & THREATS/CHALLENGES

OPPORTUNITIES

1. **Renewable Energy:**

   GoI has targeted to achieve 175 GW capacity by 2022, comprising of 100 GW Solar, 60 GW Wind, 5 GW Small Hydro and 10 GW Bio-power (including biomass). This target was further enhanced to installed capacity of 450 GW by the year 2030.

   Some of key measures in the renewable energy sector are as below.

a. Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM),

b. Guidelines for Tariff Based Competitive Bidding Process for Procurement of Power from Grid Connected Solar PV and Wind Power Projects,

c. Development of Ultra Mega Renewable Energy Power Parks (UMREPPs)

d. Encouraging 'Make in India' in Solar PV Manufacturing sector through

   i. CPSU-Scheme II (12000 MW) for setting up of solar PV Plants by Government Producers using domestically manufactured solar PV cells

   ii. Solar PV Manufacturing linked PPAs for Solar Power Plant

e. Solar-Wind hybrid policy is intended to create investment opportunities in the Sector. These, coupled with historic lows in solar and wind tariffs have completely transformed business dynamics in the sector.

f. National Offshore wind energy policy was notified in October 2015 with an objective to develop the offshore wind energy in the Indian Exclusive Economic Zone (EEZ) along the Indian coastline of 7,600 km. GoI has a target of achieving off-shore wind power of 30 GW by 2030

g. Energy Storage - As per NITI Aayog, Energy Storage System - Roadmap for India 2019-2032, the grid storage energy requirement is about 33GWh by 2032. Recently SECI has floated some tenders which include battery storage systems.

h. MNRE has set up a Dispute Resolution Mechanism for wind/solar projects to help in smooth implementation of solar/wind energy projects in India, by expeditiously resolving unforeseen disputes that may arise beyond the scope of Contractual Agreements.

i. Setting up of Renewable Energy Management Centre (REMC)

Further, the RPO trajectories set by GoI is likely to enhance the opportunity for capacity growth in RE space.

Your Company has made a target of achieving 32 GW of RE based capacity by 2032 under its long-term Corporate Plan. It is also assisting the GoI in its National Solar Mission.

2. E-Mobility:

GoI has approved FAME-II (Faster Adoption and Manufacturing of Hybrid and Electric Vehicles) scheme with total outlay of ₹10,000 crore over the period 2019-20 to 2021-22. This scheme is the expanded version of the earlier scheme titled 'FAME India', launched in 2015.

The scheme envisages supporting 10 Lakh e-2Wheelers, 5 Lakh e-3Wheelers, 55,000 e-4Wheelers and 7,000 e-Buses and establishment of charging infrastructure across the country, at least one charging station in a grid of 3 km x 3 km. Charging stations are also proposed on major highways at an interval of about 25 km, on both sides of the road

Your Company is envisaging providing hydrogen and pure electric powertrain based green mobility solutions for public transport which includes providing hydrogen fuel cell based electric vehicles as well as pure battery-operated electric buses. It is also playing an important role of e-Mobility 'enabler' by creating a favourable eco-system.

Your Company plans to set-up 400 Nos. of charging infrastructure at various locations across the country. So far 90 Nos. of Chargers have been installed and balance are under progress. Your Company has commissioned a pilot project on the concept of battery charging and swapping at Faridabad for e-3wheelers. Your Company's subsidiary NVVN, is also offering complete e-bus solutions to state transport units.

Besides Battery based E-mobility, your Company has also planned to enter Hydrogen Mobility business. Pilot projects based on green Hydrogen are planned to be carried out in Leh and Delhi with 5 nos. of fuel cell electric bus and 5 nos. of fuel cell cars at each location. An EoI has been invited in this regard from Global FCEV (Fuel Cell Electric Vehicle) manufacturers.

3. Cross Border Power Trading:

The guidelines issued by MoP for cross border trading of power have opened up opportunities to export power to neighbouring countries. Presently, India exports electricity to Nepal, Bangladesh and Myanmar. India imports power from Bhutan, but exports power during lean hydro season.

GoI has assigned subsidiary of your company NVVN, the role of Nodal Agency for cross border trading of power. GoI has also nominated NVVN as Settlement Nodal Agency (SNA) for settlement of Grid operation related charges with neighbouring countries, namely, Bangladesh, Bhutan, Nepal and Myanmar.

NVVN has signed various Power Purchase Agreements with Bangladesh and Nepal aggregating to 710 MW and 350 MW respectively. During this year, NVVN has received LOI from Bangladesh Power Development Board on 31 January 2020 for supply of 500 MW power from GMR Upper Karnali Hydro Power Project, Nepal to Bangladesh.

4. International Business:

Your Company, by virtue of its growing project management and O&M experience with an expanding power generation portfolio, has made a global presence in various countries as described below:

Bangladesh-India Friendship Power Company Private Limited: Your Company has formed a joint venture company with Bangladesh Power Development Board (BPDB), called Bangladesh India Friendship Power Company Limited (BIFPCL), which is constructing a coal-based power plant of 1,320 MW capacity at Rampal (Khulna) and has been christened as 'Maitree Super Thermal Power Plant'

Trincomalee Power Company Limited (TPCL): A 50:50 joint venture between your Company and Ceylon Electricity Board was formed to undertake the development, construction, establishment, operation and maintenance of an electricity generating station at Trincomalee, Sri Lanka. TPCL shall develop 50 MW solar power project at Sampur and a new JV company to be incorporated to develop the LNG based Power Project. The Joint Venture & Shareholders' Agreement (JVSHA) for incorporating a new JV company in Sri Lanka to develop the LNG Power Project at Kerawalapitiya has been signed between your Company and CEB on 25 October 2019.

In addition to above, your Company has been awarded the following consultancy jobs abroad:

- UAE: Energy Audit of Factories in Ras Al Khaimah
- Myanmar: Appointed as Project Management Consultant (PMC) for solar plus DG based village electrification in Rakhine.
- Togo: Appointed as PMC for implementation of a 35 MW solar project and a 250 MW solar park.

Your Company has been registered as an overseas company in Kenya. Also, your Company is associated as a corporate partner with International Solar Alliance (ISA) and has now been selected as PMC / Solar Project Developer to implement solar projects in ISA member countries. Your Company has opened an office in Yangon, Myanmar in April 2019, which will help in exploring opportunities in BIMSTEC countries (The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation).

Your Company is also exploring business opportunities in the areas of power generation, PMC, O&M contracting, R&M of power plants, capability building and cross border power trading etc. in the countries such as Indonesia, Vietnam Oman, UAE, Egypt, Saudi Arabia, Qatar, Uzbekistan, Maldives, Malawi, Togo, Morocco, Botswana and Zimbabwe.

5. **Environmental aspects:**

Your Company has been spearheading the adoption of Flue Gas Desulphurisation and developing solutions for de-NOX that can be used for high ash content coal. Going forward, your Company shall be in a position to provide consultancy services for power plants across the nation for a smooth transition towards compliance of environment norms by the companies.

6. **Efficiency improvement:**

Your Company has laid major stress on efficient utilization of resources and use of technological advancements for improving energy efficiency.

Till date, your company along with its JVs and Subsidiaries, has implemented 11,640 MW capacities based on Super Critical technology. Further, during this year, your Company has commissioned country's first ultra-super critical power plant with a capacity of 1,320 MW at Khargone, Madhya Pradesh.

For the first time in your company, Air Cooled Condenser (ACC) System has been adopted at North Karanpura STPP and Patratu STPP which will bring a significant reduction in specific water consumption for the project. It is also being planned to install ACC for Singrauli-III (2X800 MW) & Lara-II (2X800 MW). In order to reduce the water consumption further, hybrid cooling system (combination of dry and wet cooling system) is being adopted for auxiliary cooling.

7. **Blue Sky Initiatives by NTPC:**

a. Your Company is contributing in reduction of greenhouse emission and pollution by taking up the initiative to blend up to 10% of biomass-based fuels with coal at coal-based stations.

b. **Waste to Energy Plants:**

- Your Company has revamped & made functional the "Waste to Compost" plant at Karsara, Varanasi and has commissioned 24 TPD thermal gasification-based demonstration-scale Waste to Energy plant at Varanasi
- A pilot plant to convert carbonaceous component of Municipal Solid Waste to charcoal has been installed at NTPC Dadri.
- Further, your Company has also signed in principle MoU with Municipal Corporations of Surat, East Delhi, Varanasi and Indore for setting up state of the art Waste to Energy plants.

THREATS/CHALLENGES/CONCERNS

1. **Solar and Wind Power:** With Tariff Based Competitive Bidding applicable for both solar and wind projects, their tariffs have been continuously falling. As the sector matures and consolidates, it is expected that more stable and realistic tariffs may be discovered.

In order to integrate variable RE into the grid, coal-based power plants have to regulate their generation to maintain grid balance. Therefore, influx of more RE power in the grid would require many coal-based plants to operate in a flexible manner. This cyclic operation has impact on coal-based power plants in terms of lower efficiency at partial load leading to higher cost of generation. Other factors like cost for balancing services, reduced life due to flexible operation of thermal plant would also adversely affect the cost of generation.

2. **Environmental Concerns:** The environmental concerns particularly relating to coal based thermal stations have emerged as a major challenge to the sector. In December 2015, MOEF&CC notified the new standards for water consumption, particulate matter, SOX, NOX and mercury for thermal power stations. To comply with these norms, thermal power plants need to implement emission control equipment like FGDs (Flue Gas de-sulphurisation), SCRs (Selective Catalytic Reduction) / SNCRs (Selective Non-Catalytic Reduction) along with necessary combustion modifications and retrofit ESPs (Electrostatic Precipitator).

   Despite many challenges like availability of space, lack of proven technology for high ash domestic coal etc., these power plants have to undergo necessary retrofits to comply with the norms progressively by 2022. The cost of retrofitting appropriate systems to meet these norms will have an adverse impact on tariffs. Logistics and supply chain for sourcing the consumables and disposing of the waste generated impose additional challenges.

   With the changing environmental norms and land acquisition issues, ash disposal is a serious challenge. Further, as per new environment norm, all plants have to achieve 100% ash utilization from the year 2020-21. Your Company in its endeavour to promote ash utilization, is considering implementation of Fly Ash Classification System and Bagging Plant for its upcoming coal based thermal power projects.

3. **Availability of Gas:** Domestic gas availability falls short of requirement making import of RLNG necessary. This leads to higher costs and thus lower PLF. On account of this, the power sector has been struggling to recover costs of capital investment in gas-based capacity. The gas-based plants of your Company are under-utilised due to gas availability issue.

4. **COVID-19:** The COVID-19 pandemic has affected the entire world and India is no exception to it. The lockdown imposed in the country in view of containing the infection is anticipated to result in slowdown of the Indian economy as bouncing back to normal economic state may take considerable time. The electricity consumption being dependent on the economic activities in the country has seen a dip in the demand during the period of lockdown.

   COVID-19 has also affected the supply chain, workforce availability, land acquisition and cashflows of your Company which may affect the timely execution of the under-construction projects adversely affecting the growth plans.

OUTLOOK FOR THE COMPANY

Strategic focus of the Company

Your Company is market leader in power generation, supplying around 21% of the country's electricity supply and thus plays a key role in India's economic activity. As a state-owned utility, your Company's priority is to provide accessible, affordable and reliable power and support for country's economic development. It has a diversified portfolio of coal, gas, solar, wind, hydro and small hydro-based power plants and has integrated both backwards and forward into coal mining and power trading respectively. The stature of your Company is well depicted by its world-wide rankings such as, 2nd Independent Power Producer (IPP) in Platts Top 250 Global Energy Company rankings and 17th in Fortune India 500 companies (2019).

Your Company has targeted to achieve total installed capacity of 130 GW by 2032, to be implemented through development of greenfield & brownfield projects, collaborations and acquisitions. The capacity will have a diversified fuel mix comprising 65.4% coal, 4.6% gas, 1.5% nuclear and 28.5% renewable energy sources including hydro. By 2032, non-fossil fuel-based generation capacity shall make up nearly 30% of your Company's portfolio which includes RE capacity of 32 GW.

Your Company envisages enhancing its current presence in consultancy, power trading and ancillary services and has targeted a 25% market share in ancillary services and storage by 2032 under its long-term plan. It is also planning to make a foray into Hydrogen Economy supported by research & development and collaboration with OEM/OES, research institutes etc.

Inorganic growth opportunities

Your Company is looking for suitable opportunities for acquisition of power plants to fulfil its growth target, after due techno-commercial diligence and appropriate valuation.

In the year 2019-20, your Company has acquired equity stakes in following companies:

- THDC: Acquired 74.496% equity stake held by GoI and balance 25.504% equity stake is with Govt. of Uttar Pradesh. With this acquisition, your Company's installed capacity increased by 1,537 MW (Hydro-1,424 MW, Solar-50 MW, Wind-63 MW)
- NEEPCO: Acquired 100% equity stake held by GoI in NEEPCO. With this acquisition, your Company's installed capacity increased by 1,757 MW (Hydro-1,225 MW, Gas-527 MW, and Solar-5 MW.

New Business Areas Initiatives

In line with its growth strategy, your Company is planning to make a foray into Hydrogen Economy & Battery storage supported by R&D and collaboration with technology partners and research institutes.

Your Company has planned to enter Hydrogen Mobility business. Pilot projects based on green Hydrogen are planned to be carried out in Leh and Delhi with 5 nos. of Fuel cell electric bus and 5 nos. of fuel cell car at each location. An EOI has been invited in this regard from Global FCEV manufacturers.

To diversify its business further, your Company has also signed various MoUs with:

(i) **Himachal Pradesh Govt.** - To setup 2 Hydro projects - Seli HEP (400 MW) and Miyar HEP (120 MW) in Chenab Valley, Himachal Pradesh. The development of the projects is subject to techno-economic viability.

(ii) **Indian Oil Corporation Limited** - To explore possible business opportunities in the areas of mutual interest like Power Supply to Refineries, setting up of new Power Plants/ Acquisition of Power Plants under NCLT, Fuels & Lubricants, Biogas & ethanol plants, Waste to Energy, Technical Consultancy, O&M and R&M services, Knowledge sharing etc.

(iii) **BHEL** - For forming a joint venture company to set up 800 MW Technology Demonstration Plant (TDP) based on Advanced Ultra Supercritical Technology at Sipat, Chhattisgarh.

(iv) **ONGC Ltd.** - To set up a JV Company to explore the setting up of offshore wind and other Renewable Energy Projects in India and overseas

(v) **National Investment and Infrastructure Fund (NIIF)** - To explore opportunities for investments in areas like renewable energy, power distribution among other areas of mutual interest in India.

(vi) **MAHAGENCO** - For the formation of SPV/JV to develop 2,500 MW of RE projects in the state of Maharashtra.

Fuel Security

Your Company has achieved fuel security through its long-term coal supply agreements. The materialization of Annual Contracted Quantity was 93% in the current financial year. Your Company's reliance on imported coal is negligible, thereby contributing to reduction in cost of power. During the financial year 2019-20, approximately 1.8% of your Company's coal consumption was from imported sources.

Your Company has been allocated 10 coal blocks with estimated geological reserves of ~7 Billion Metric Tonnes and plans to produce more than 100 Million Metric Tonnes (MMT) of coal per annum from these mines, when all the mines shall reach their peak-rated capacity. In the financial year 2019-20, your Company has surrendered Kudanali-Luburi coal mine, allotted jointly with the State of J&K. Ministry of Coal, GoI has transferred Badam coal mine, the linked coal mine of Barauni TPS, to your Company on 2 September 2019, subsequent to taking over of Barauni TPS by your Company from Bihar SPGCL.

With these 10 coal mines, your Company aspires to become one of the largest captive coal mining company in the country. To have focussed approach for development and operation of these coal mines, your Company has incorporated NTPC Mining Limited (NML), a wholly-owned subsidiary, on 29 August 2019 and has requested Ministry of Coal, GoI, for transfer of these coal mines of your Company to NML.

Subsequent to commencement of coal production from Pakri Barwadih & Dulanga in the financial years 2016-17 & 2017-18, respectively, your Company has started coal production from its third mine, Talaipalli in 2019-20. During FY 2019-20, 11.15 MMT of coal was produced from the above three mines against the GoI MOU target of 10.4 MMT and was supplied to 21 Thermal Power Plants of your Company, across the country. Pakri Barwadih coal mine has achieved COD on 1 April 2019.

For the year 2019-20, your Company's tie-up for Domestic Gas and RLNG was 2.72 MMSCMD and 15.21 MMSCMD respectively.

Renewable Energy

Your Company is continuously increasing capacity though renewable energy sources of energy in order to diversify its generation fuel mix to ensure long term competitiveness, mitigation of fuel risks and promotion of sustainable power development. Your Company has adopted the two-pronged approach in its renewable energy expansion plan, i.e., Company-owned & Developer Mode.

With 1,046 MW of Renewable installed capacity, your Company has ventured into large-scale deployment of RE assets and is committed to achieve 10 GW of renewable power capacity by 2022. Currently 2,348 MW Solar capacity is under implementation and 2,064 MW Solar Capacity is under tendering. Your Company is also assisting the GoI in National Solar Mission. Under developer mode, your Company has commissioned 3,983 MW so far, 1,600 MW is under implementation and 1,200 MW is under tendering.

Hydro Capacity

With the strategic acquisition of 74.496% & 100% equity stake in THDC & NEEPCO respectively, your Company's Hydro installed capacity has reached 3,449 MW and 2,555 MW capacity is under implementation.

Realisation

Your Company has realised its dues as per the targets fixed by the GoI and is confident of maintaining its track record in future also. Further, with extension of Tri-partite Agreements by most of the states, your Company is assured of its realization to a great extent. Payment security Mechanism through LC will also help in better revenue realization.

Leveraging on Strengths for Delivering Better Future Performance

Your Company derives competitive edge from its strengths and is confident of meeting future challenges in the sector.

a. **Project Management**

Your Company has adopted an integrated system for planning, scheduling, monitoring and controlling of approved projects under implementation. To coordinate and synchronise all the support functions of project management it relies on a three-tiered project management system known as the Integrated Project Management Control System (IPMCS), which integrates its engineering management, contract management and construction management control centres. The IPMCS addresses all stages of project implementation, from concept to commissioning. The IPMCS system provides regular monitoring, analysis of variations identified both within the external and internal control parameters and taking managerial action based on "Management by Exception" philosophy.

Your Company has added 6,984 MW to its Installed Capacity. It includes addition of 1,537 MW of THDCIL and 1,757 MW of NEEPCO, through acquisition.

Your Company has added 8,260 MW to its Commercial Capacity in the financial year 2019-20 including 1,513 MW of THDCIL and 1,457 MW of NEEPCO. NTPC Group (excluding acquisitions) has achieved highest ever commercial capacity addition of 5,290 MW in the financial year 2019-20.

b. **Operational Efficiency**

The operating performance of your Company has been consistently above the national average. During the financial year 2019-20, PLF of Company's coal stations was 68.20% against All India PLF of Thermal stations at 55.99%. Over the years, the Company has consistently operated at much higher operating efficiency as compared to All India operating performance, however for thermal power stations on pan India basis, PLF is decreasing because of large scale integration of renewable power in the grid.

The total generation of the Company was 259.618 BUs during the financial year 2019-20 as against 274.454 BUs in financial year 2018-19. In current year, generation is less due to increasing renewable power in the grid

In order to achieve cost-competitive, environment friendly, efficient & reliable power generation, the Company has adopted following strategies:

- ✓ To improve reliability of the units and to reduce the forced outages, close monitoring of start-ups & shutdowns and root cause analysis of all the outages is carried out and action plan generated to mitigate the outages.
- ✓ Continuous real time monitoring of critical parameter deviations (both reliability & efficiency related) and implementation of action plan to mitigate the deviations.
- ✓ Optimizing planned outage period through implementation of Overhaul Preparedness Index (OPI), ensuring all quality checks and time bound monitoring of each activity.
- ✓ Improvement in Heat Rate & Auxiliary Power Consumption achieved by parametric optimization, especially at part loads by operation of units in sliding pressure mode & optimizing excess air.
- ✓ To minimize efficiency losses in stations, Plant Information (PI) system-based applications for real time efficiency & loss calculations.
- ✓ Structured & regular energy audits to identify potential areas of improvement in APC reduction and Implementation of action plans.
- ✓ To reduce cost of generation, steps have been taken to reduce Energy Charge Rate (ECR) by swapping of coal supplies and maximising use of domestic coal.
- ✓ Use of Comprehensive Performance Evaluation Matrix (PEM) for relative evaluation of the performance of various power plants to create an environment of in-house challenge and competition. The parameters are reviewed annually to include new parameters commensurate with market dynamics and developments in power sector.
- ✓ Adopting advanced technologies in new units e.g. commissioning of super critical units, which improves system efficiency & reduces carbon footprint and retrofits of DeNOx & DeSOx technologies in older units.
- ✓ Renovation & modernization for reduction of greenhouse gas emissions, effective modernized control systems for environment friendly economic generation and particulate emission control.
- ✓ Water conservation measures like increasing Cycle of Concentration (CoC) of circulating water, implementation of zero effluent discharge, increasing ash water recirculation, implementation of high concentration ash-slurry discharge, implementation of dry evacuation of ash etc.
- ✓ Strict compliance of Grid Code, Restricted Governor Mode Operation (RGMO) implementation, Automatic Generation Control and other system requirements.

c. **Human Resources**

Your Company has a highly talented team of committed professionals and has been able to induct, develop and retain the best talent. Your Company has a pool of ~19,000 employees creating value for the Company. Your Company has a very low executive attrition rate. The HR vision of your Company is "To enable its people to be a family of committed world class professionals, making NTPC a learning organisation." Your Company is deeply passionate about ensuring the holistic development of all its employees as distinct individuals and good citizens. Competence building, Commitment building, Culture building and Systems building are the four pillars on which HR Systems of your Company are based.

Your Company has been conferred with various HR Awards over the years by reputed institutions and consistently features among the "Great Places to Work For". The commitment of the employees is also reflected in terms of financial parameters such as sales per employee, value added per employee etc.

d. **Sound Corporate Governance**

Your Company's corporate governance practices have been recognised and awarded at several forums. Your Company believes in following the highest standards of transparency, integrity and accountability. It enjoys the confidence of all stakeholders alike. Your Company not only believes in adopting best practices but also includes public interest in its corporate priorities and has developed extensive social outreach programmes.

e. Robust Financials and Systems

Your Company has strong financial systems in place. It believes in prudent management of its financial resources and strives to reduce the cost of capital. Your Company enjoys highest credit-rating assigned by CRISIL, ICRA and CARE. The foreign ratings by Fitch, S&P & Moody's are at par with sovereign ratings. It has robust financials leading to strong cash flows which are being progressively deployed in generating assets. Your Company has a strong balance-sheet coupled with low gearing and healthy coverage ratios. As a result, your Company has been able to raise resources for its capital expansion projects at very competitive interest rates both in domestic as well international market.

RISK MANAGEMENT

Your Company has an elaborate Enterprise Risk Management framework in place. A Functional Director level sub Committee of the Board, called Risk Management Committee (RMC) has been constituted in compliance with the Companies Act and SEBI LODR. The RMC is responsible for identifying & reviewing the risks and to formulate action plans and strategies to mitigate risks on short term as well as long term basis. The RMC has identified 25 risks, out of which 9 have been classified as the top risks for the Company:

1. Compliance of emission, ash utilization and regulatory norms
2. Threats to safety & security of people & property
3. Legal risks
4. Delay in execution of projects
5. Difficulties in acquisition of land
6. Inadequate fuel supply
7. Risks pertaining to hydro projects
8. Risks related to coal mining
9. Sustaining efficient plant operations

The risks are regularly monitored through reporting of key performance indicators of identified risks. The risk assessment and the action required to be taken are reported regularly to the Board of Directors.

Internal Control

To ensure regulatory and statutory compliance as well to provide highest level of corporate governance, your Company has robust internal systems and processes in place for smooth and efficient conduct of business and complies with relevant laws and regulations. A comprehensive delegation of power exists for smooth decision making which is periodically reviewed to align it with changing business environment and for speedier decision making. Elaborate guidelines for preparation of accounts are followed consistently for uniform compliance. In order to ensure that all checks and balances are in place and all internal control systems are in order, regular and exhaustive internal audits are conducted by the experienced firms of Chartered Accountants in close co-ordination with the Company's own Internal Audit Department. Besides, the Company has two committees of the Board viz. Audit Committee and Committee on Management Controls to keep a close watch on compliance with Internal Control Systems.

A well-defined internal control framework has been developed identifying key controls. The supervision of operational efficiency of designed key controls is done by Internal Audit. The framework provides an elaborate system of checks and balances based on self-assessment as well as audit of controls conducted by Internal Audit at the process level. Gap tracking report for operating efficiency of controls is reviewed by the management regularly and action is taken to further strengthen the Internal Control System by further standardizing systems & procedures and implementing process changes, wherever required, keeping in view the dynamic environment in which yourCompany is operating. The Internal Control Framework system presents a written assessment of effectiveness of Company's internal control over financial reporting by the process owners to facilitate certification by CEO and CFO and enhances reliability of assertion.

FINANCIAL DISCUSSION AND ANALYSIS

A detailed discussion and analysis on financial statements is furnished below. Reference to Note(s) in the following paragraphs refers to the Notes to the standalone financial statements for the financial year 2019-20 placed elsewhere in this report.

A. Financial position

The items of the Balance Sheet are as discussed under:

1 Property, plant & equipment (PPE), Capital work-in-progress, Intangible assets and Intangible assets under development (Note-2 to Note-5)

The PPE, Intangible assets, Capital work-in-progress and Intangible assets under development of the Company are detailed as under:

(₹ Crore)

Particulars	As at March 31		% Change
	2020	2019	
Gross block of PPE (Note-2)	1,92,898.02	1,52,976.05	26%
Net block of PPE (Note-2)	1,56,273.02	1,25,290.68	25%
Capital work-in-progress (Note-3)	73,066.76	90,808.89	(20)%
Net block of Intangible assets (Note-4)	538.28	329.94	63%
Intangible assets under development (Note-5)	292.52	397.80	(26)%

During the year, total gross block of PPE increased by ₹39,921.97 crore over the previous year i.e. by 26%. This was mainly on account of declaration of commercial operation of 3,970 MW capacities & Pakri Barwadih

Coal Mines during financial year 2019-20 and also capitalisation of some other assets. Correspondingly, net block has increased by 25% and capital work-in-progress has decreased by 20%. Intangible assets and intangible assets under development taken together have increased by 14% over the last year.

2 **Non-current financial assets (Note-6 to Note-9)**

(a) Investments in subsidiary and joint venture companies (Note-6)

The break-up of investments in subsidiary and joint venture companies is as follows:

(₹ Crore)

Particulars	As at March 31	
	2020	2019
Investment in Subsidiaries	19,622.77	7,351.57
Investment in Joint ventures	6,727.84	5,702.45
Total	**26,350.61**	**13,054.02**

During the year, investments in subsidiary and joint venture companies increased by 102%. The movement of the Company's investment in the subsidiary and joint venture companies is as under:

(₹ Crore)

Name of Company	Amount
Kanti Bijlee Utpadan Nigam Ltd.	50.00
Bhartiya Rail Bijlee Company Ltd.	142.30
Patratu Vidyut Utpadan Nigam Ltd.	149.00
Nabinagar Power Generating Company Ltd.	429.85
NTPC Mining Ltd.	0.05
THDC India Ltd.*	7,500.00
North Eastern Electric Power Corporation Ltd.*	4,000.00
NTPC Tamil Nadu Energy Company Ltd.	12.50
Meja Urja Nigam Private Ltd.	322.31
Energy Efficiency Services Ltd.	218.11
Hindustan Urvarak and Rasayan Ltd.	310.77
Bangladesh-India Friendship Power Company Private Ltd.	166.89
Total investment	**13,301.78**
Less: Provision for impairment made/ (written back) during the year	(4.43)
Ratnagiri Gas & Power Private Ltd.	41.47
Konkan LNG Ltd.	(36.28)
Net increase in Investment	**13,296.59**

**The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval for the strategic disinvestment of GoI's shareholding in THDC India Limited (THDCIL) & North Eastern Electric Power Corporation Limited (NEEPCO) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired 74.496% of paid up share capital in THDCIL and 100% of paid up share capital in NEEPCO, held by GoI for an aggregate consideration of ₹11,500 crore, on 27 March 2020. Consequently, THDCIL & NEEPCO have become subsidiaries of the Company w.e.f. 27 March 2020.*

(b) Other Non-current financial assets (Note-7 to Note-9)

Other Non-current financial assets mainly comprise of investment in equity instruments, loans to related parties, employees & others, share application money, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Particulars	As at March 31		% Change
	2020	2019	
Other investments (Note-7)	50.28	91.92	(45)%
Loans (Note-8)	600.26	544.38	10%
Other financial assets (Note-9)	1,425.16	1,424.29	0%
Total	**2,075.70**	**2,060.59**	**1%**

Investments mainly comprise of investment in equity instruments of PTC India Ltd. The carrying value of equity instruments of PTC India Ltd. has decreased from ₹ 88.14 crore as at 31 March 2019 to ₹ 46.50 crore as at 31 March 2020 due to decrease in market value of shares of PTC India Ltd.

Loans have increased from ₹ 544.38 crore as at 31 March 2019 to ₹ 600.26 crore as at 31 March 2020. Increase in loans is mainly due to increase in outstanding loans to related parties by ₹ 31.07 crore and to employees by ₹ 25.71 crore.

Other financial assets include share application money pending allotment in subsidiary and joint venture companies, claims recoverable, finance lease receivables and mine closure deposit.

(₹ Crore)

Other financial assets (Note-9)	As at March 31		% Change
	2020	2019	
Share application money pending allotment in subsidiary and joint venture companies	197.28	181.59	9%
Claims recoverable	771.36	739.54	4%
Finance lease receivables	409.14	470.96	(13)%
Mine closure deposit	47.38	32.20	47%
Total	**1,425.16**	**1,424.29**	**0%**

Claims recoverable includes ₹ 749.01 crore (31 March 2019: ₹ 719.71 crore) towards the cost incurred upto 31 March 2020 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the MoP, GoI. It includes ₹ 439.57 crore (31 March 2019: ₹ 413.40 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for others (Note 30). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/ vendors for various packages for this project will be compensated in full by the GoI. Hence, no provision is considered necessary.

As per the guidelines from Ministry of Coal, GoI for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

3 Other non-current assets (Note-10)

Total other non-current assets as at 31 March 2020 were ₹ 11,122.62 crore as against ₹ 13,269.30 crore as at 31 March 2019. Other non-current assets consist of advances for capital expenditure, advances other than capital advances, security deposits, advance tax net of provision for tax, deferred foreign currency fluctuation asset and deferred payroll expenditure.

Other non-current assets have decreased by ₹ 2,146.68 crore. The decrease is mainly due to decrease in advance tax net of provision for tax from ₹ 4,541.90 crore to ₹ 1,601.24 crore. The reduction is mainly on account of Company opting under Vivad Se Viswas Scheme of GoI to settle its pending income tax disputes and consequential creation of additional tax provision amounting to ₹ 2,661.47 crore keeping in view the terms & conditions of the scheme. Further, Capital advances have also decreased from ₹ 4,994.45 crore to ₹ 4,814.27 crore.

Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years. Accordingly, an amount of ₹ 2,404.42 crore has been accounted under this head up to 31 March 2020 (31 March 2019 : ₹ 1,370.53 crore).

4 Current assets (Note-11 to Note-17)

The current assets as at 31 March 2020 and 31 March 2019 and the changes therein are as follows:

(₹ Crore)

Particulars	As at March 31		Y o Y	% Change
Current assets	**2020**	**2019**	**Change**	
Inventories (Note-11)	10,731.86	7,988.02	2,743.84	34%
Trade receivables (Note-12)	15,668.11	8,433.86	7,234.25	86%
Cash & cash equivalents (Note-13)	20.37	24.38	-4.01	(16)%
Bank balances other than cash and cash equivalents (Note-14)	2,188.74	2,119.96	68.78	3%
Loans (Note-15)	308.56	305.79	2.77	1%
Other financial assets (Note-16)	11,529.13	8,331.84	3,197.29	38%
Other current assets (Note-17)	8,378.41	14,929.89	(6,551.48)	(44)%
Total current assets	**48,825.18**	**42,133.74**	**6,691.44**	**16%**

(a) Inventories (Note-11)

Inventories as at 31 March 2020 were ₹ 10,731.86 crore as against ₹ 7,988.02 crore as at 31 March 2019. Inventories mainly comprise of coal and stores & spares which are maintained for operating plants. Value of coal inventory increased from ₹ 3,569.62 crore as at 31 March 2019 to ₹ 5,505.67 crore as at 31 March 2020, which signifies improvement in coal stock at our power plants. Stores and spares inventory also increased from ₹ 3,307.09 crore as at previous year end to ₹ 3,793.24 crore, mainly on account of newly declared commercially operative units.

(b) Trade receivables (Note-12)

Trade receivables as at 31 March 2020 are ₹ 15,668.11 crore as against ₹ 8,433.86 crore as at 31 March 2019. Trade receivables have increased by 86% over the previous year. On number of day's sales basis, receivables have increased from 34 days in previous year to 58 days in current year. The main reason for increase in receivables is onset of COVID-19 pandemic in the month of March-2020 and consequent lockdown across the country. Historically Company has been realizing its major dues in the month of March, but in March-2020 Company was not able to realize its dues as in the past due to lockdown situation and that resulted in increase in receivables.

However, GoI has announced the AATMANIRBHAR Bharat special economic and comprehensive package which includes liquidity infusion to DISCOMs for exclusive purpose of discharging liabilities to power generating companies. The Company believes that, the above referred economic and comprehensive package is expected to improve the realization of the Company against the outstanding dues of DISCOMs due to liquidity infusion.

Based on arrangements between Company, banks and beneficiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net off bills discounted amounting to ₹ 10,692.34 crore (31 March 2019: ₹ 9,998.75 crore).

(c) Cash and cash equivalents (Note-13) & Bank balances other than cash and cash equivalents (Note-14)

Cash and cash equivalents &bank balances other than cash and cash equivalents have increased from ₹ 2,144.34 crore as at 31 March 2019 to ₹ 2,209.11 crore as at 31 March 2020. This increase is mainly due to increase in earmarked balances with banks from ₹ 1,488.10 crore as at 31 March 2019 to ₹ 1,558.88 crore as at 31 March 2020.

(d) Loans (Note-15)

Loans have increased marginally from ₹ 305.79 crore as at 31 March 2019 to ₹ 308.56 crore as at 31 March 2020.

(e) Other financial assets (Note-16)

Other financial assets excluding unbilled revenue are as under:

(₹ Crore)

Particulars	As at March 31	
	2020	2019
Other financial assets (Note-16)	11,529.13	8,331.84
Less: Unbilled revenue	11,025.15	7,870.83
Net Other current financial assets	503.98	461.01

Unbilled revenue consists of items viz. (i) sales for the month of March which is billed in April and (ii) other net amount recoverable which are to be billed to beneficiaries in subsequent periods. Unbilled revenue of ₹ 11,025.15 crore (31 March 2019: ₹ 7,870.83 crore) is net of credits to be passed to beneficiaries at the time of billing and includes ₹ 8,064.11 crore (31 March 2019: ₹ 6,961.66 crore) billed to the beneficiaries after 31 March for energy sales.

Other current financial assets mainly include advances to subsidiary and joint venture companies and other related parties, employees & others and current maturities of finance lease receivables.

(f) Other current assets (Note-17)

Other current assets comprise of security deposits, advances to related parties, contractors and suppliers, short term advances to employees, claims recoverable etc.

(₹ Crore)

Particulars	As at March 31		% Change
	2020	2019	
Security deposits (unsecured)	1,826.13	1,480.21	23%
Advances	1,559.75	9,175.45	(83)%
Claims recoverable	4,732.50	4,095.57	16%
Others	260.03	178.66	46%
Total	**8,378.41**	**14,929.89**	**(44)%**

Other current assets have decreased from ₹ 14,929.89 crore as at 31 March 2019 to ₹ 8,378.41 crore as at 31 March 2020 mainly due to decrease in outstanding advance to Indian Railways against freight payable on coal transportation, by ₹ 5,768.40 crore.

5 Regulatory deferral account debit balances (Note-18)

Expense/income recognized in the Statement of Profit & Loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'. Regulatory deferral account balances are adjusted from the year in which the same become recoverable from or payable to the beneficiaries.

Revision of pay scales of employees of the Company has been implemented w.e.f. 1 January 2017 based on the guidelines issued by Department of Public Enterprises (DPE) The guidelines provide payment of superannuation benefits @ 30 % of basis +DA to be provided to employees of CPSEs which include gratuity at the enhanced ceiling of ₹ 20 lakh from the existing ceiling of ₹ 10 lakh. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations, 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by the CERC. The increase in gratuity limit from ₹ 10 lakh to ₹ 20 lakh falls under the category of Change in Law and a Regulatory Asset has been created. Accordingly, an amount of ₹ 759.40 crore as at 31 March 2020 (31 March 2019: ₹ 759.40 crore) has been accounted for as 'Regulatory deferral account debit balance'.

Further, exchange differences arising from settlement/ translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ 1,271.27 crore as at 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: ₹68.19 crore).

CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹6,265.24 crore as at 31 March 2020 (31 March 2019: ₹2,399.12 crore) has been accounted for as 'Regulatory deferral account debit balance'.

The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, has been favorably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹826.85 crore as at 31 March 2020 (31 March 2019: ₹179.29 crore) has been accounted for as 'Regulatory deferral account debit balance'.

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

(₹ Crore)

Particulars	Regulatory deferral account debit balances
A. Opening balance as on 1 April 2019	**3,406.00**
B. Addition during the year	5,851.26
C. Adjustments during the year	(134.39)
D. Amount collected/refunded during the year	(0.11)
E. Regulatory deferral account balances recognized in the statement of profit and loss (B+D)	5,851.15
F. Closing balance as on 31 March 2020 (A+C+E)	**9,122.76**

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

6 Total equity (Note-19 & Note-20)

The total equity of the Company at the end of financial year 2019-20 increased to ₹113,569.44 crore from ₹107,408.17 crore in the previous year, an increase of 6%. Major reasons for the same are tabulated below:

(₹ Crore)

Particulars	Total Equity (₹ crore)	Book value per Share (₹)
Opening balance as on 1 April 2019	107,408.17	108.55
Profit for the year	10,112.81	10.22
Other comprehensive income and other adjustments to reserves	(375.37)	(0.38)
Dividend & dividend tax	(3,576.17)	(3.61)
Balance as on 31 March 2020	**113,569.44**	**114.78**

The increase in total equity resulted in book value per share rising to ₹114.78 from ₹108.55 as at the end of previous year.

During the financial year 2019-20, GoI sold 5.39% of its stake in the Company through tranches of Bharat 22 ETF (0.36%) and CPSE ETF (5.03%). Accordingly, GoI's stake in the Company came down from 56.41% as at 31 March 2019 to 51.02% as at 31 March 2020.

7 Non-current and current liabilities (Note-21 to Note-30)

Details of non-current and current liabilities are discussed below:

a. Non-current financial liabilities-Borrowings (Note-21):

Total borrowings as at 31 March 2020 were ₹1,52,693.62 crore in comparison to ₹1,27,430.48 crore as at 31 March 2019. Current maturities out of long-term borrowings have been shown under current liabilities. Details of the total borrowings are as under:

(₹ Crore)

Particulars	As at March 31	
	2020	2019
Non-current borrowings in Non-current financial liabilities-Borrowings (Note-21)	1,46,538.70	1,19,698.08
Current maturities of non-current borrowings included in current liabilities-Other financial liabilities (Note-28)	6,154.92	7,732.40
Total borrowings*	**1,52,693.62**	**1,27,430.48**

**Includes adjustments for transaction costs on borrowings as per Ind-AS.*

A summary of the borrowings outstanding is given below:

(₹ Crore)

Particulars	Non-current financial liabilities (Note-21)		Other current financial liabilities (Note-28)		Total borrowings		% Change
	2020	2019	2020	2019	2020	2019	
Secured							
Domestic bonds	38,882.85	33,068.40	1,542.00	1,782.00	40,424.85	34,850.40	16%
Others	13.22	0.65	8.75	0.75	21.97	1.40	1469%
Sub-total	**38,896.07**	**33,069.05**	**1,550.75**	**1,782.75**	**40,446.82**	**34,851.80**	**16%**
Unsecured							
Foreign currency borrowings	42,644.15	36,331.48	1,849.41	3,289.17	44,493.56	39,620.65	12%
Rupee term loans	64,288.44	50,147.89	2,657.10	2,625.13	66,945.54	52,773.02	27%
Others	710.04	149.66	97.66	35.35	807.70	185.01	337%
Sub-total	**1,07,642.63**	**86,629.03**	**4,604.17**	**5,949.65**	**1,12,246.80**	**92,578.68**	**21%**
Total	**1,46,538.70**	**1,19,698.08**	**6,154.92**	**7,732.40**	**1,52,693.62**	**1,27,430.48**	**20%**

Over the last financial year, total borrowings have increased by 20%. Debt amounting to ₹28,775.62 crore was raised during the financial year 2019-20. The amount raised through term loans, bonds and foreign currency borrowings is used for capital expenditure, refinancing, recoupment of capital expenditure and other general corporate purposes.

Details in respect of proceeds and repayment of borrowings for the financial year 2019-20 are as under:

(₹ Crore)

Source (Principal Amount)	Debt raised	Repayment	Net
Rupee term loans	16,700.00	2,527.48	14,172.52
Domestic bonds	7,356.50	1,782.00	5,574.50
Foreign borrowings	4,719.12	3,357.69	1,361.43
Total	**28,775.62**	**7,667.17**	**21,108.45**
FERV on foreign borrowings			3,532.47
Transaction costs			(21.04)
Others (Finance lease obligations)			643.26
Total			**25,263.14**

Rupee Term loans: Banks and domestic financial institutions continued to support the capex program of the Company by extending term loans for financing the on-going capacity expansion plans. During the financial year 2019-20, agreements for term loans of ₹ 20,000 crore were entered into with various banks. An amount of ₹ 16,700 crore was drawn from domestic banks & financial institutions during the year and an amount of ₹ 2,527.48 crore was repaid during the year. The undrawn balance available under various sanctioned loans from domestic banks and financial institutions was ₹ 8,145 crore as on 31 March 2020.

Domestic bonds: During the financial year 2019-20, Company raised ₹ 7,356.50 crore through private placement of domestic bonds. Bonds amounting to ₹ 1,782 crore were redeemed during the year.

Foreign borrowings: During the financial year 2019-20, the Company signed a syndicated loan agreement for JPY equivalent of US$750 million, with three banks namely SMBC Singapore, State Bank of India, Tokyo and Bank of India, Tokyo. The loan consists of two tranches: Tranche A of US$562.50 million with average maturity of 7 years & Tranche B of US$187.50 million with average maturity of 10 years. Out of the US$750 million, US$225 million equivalent JPY amounting to JPY 24.67 billion has been drawn in January 2020. The net proceeds in equivalent INR is ₹ 1,615.04 crore. The loan is being utilised to part finance the capital expenditure of Company's under construction power project having ultra-super critical technology, hydro projects and installation of flue gas desulphurisation systems at various completed and under construction power projects

Earlier during the year, in April 2019, drawdown of ₹ 3,084.30 crore was made as net proceeds (Gross value of loan ₹ 3,087.50 crore) in respect of a US$ 450 million senior, unsecured fixed rate 5-year notes issued on 26 March 2019 under US$ 6 billion medium term note programme. The proceeds were utilised to part finance the capital expenditure on various ongoing power projects of the company.

Under the existing loan facilities available from JBIC during the year, the Company has drawn ₹ 16.58 crore towards capital expenditure of Kudgi.

In all, the Company has drawn ₹ 4,719.12 crore during the year from foreign currency loans and repaid foreign currency debts amounting to ₹ 3,357.69 crore.

The Company continues to enjoy highest credit ratings for its bonds programme and borrowings from banks, while Company's International Ratings are at par with sovereign ratings as detailed hereunder:

Credit Rating Agency	Rating	Remarks
Domestic		
CRISIL	CRISIL AAA/Stable	Highest ratings
ICRA	[ICRA] AAA (Stable)	
CARE	CARE AAA; Stable	
International		
S&P	BBB-/Stable	Equivalent to sovereign ratings
Fitch	BBB-/Negative	
Moody's	baa3/Negative	

The debt to equity ratio at the end of financial year 2019-20 of the Company increased to 1.35. The Debt Service Coverage Ratio (DSCR) and Interest Service Coverage Ratio (ISCR) for financial year 2019-20 are 2.07 and 4.45 respectively.

Formula used for computation of coverage ratios DSCR = Earnings before Interest, Depreciation, Tax and Exceptional items/ (Interest net of transfer to expenditure during construction + Scheduled principal repayments of the long-term borrowings) and ISCR=Earnings before Interest, Depreciation, Tax and Exceptional items/ (Interest net of transfer to expenditure during construction).

The maturity profile of the principal amount of borrowings by the Company is as under:

(₹ Crore)

Particulars	Domestic Borrowings	Foreign Borrowings	Total
Up to 1 year	4,199.10	1,849.41	6,048.51
Beyond 1 and within 3 years	16,823.72	13,878.68	30,702.40
Beyond 3 and within 5 years	23,843.75	9,023.00	32,866.75
Beyond 5 and within 10 years	43,692.29	19,794.03	63,486.32
Beyond 10 years	18,814.50	187.43	19,001.93
Total	**1,07,373.36**	**44,732.55**	**1,52,105.91**

**Excluding transaction costs*

b. Non-current financial liabilities- Trade payables (Note-22) & Other financial liabilities (Note-23)

Non-current trade payables have increased from ₹ 48.17 crore as at 31 March 2019 to ₹ 68.01 crore as at 31 March 2020.

Other financial liabilities primarily consist of liabilities for capital expenditure and others. Other financial liabilities have decreased from ₹ 1,314.29 crore as at 31 March 2019 to ₹ 652.24 crore as at 31 March 2020. Liabilities for capital expenditure which are due for payment within 12 months from the reporting date have been classified under 'Other current financial liabilities' (Note-28).

c. Non-current liabilities- Provisions (Note-24):

Non-current provisions consist of amounts provided towards employees' benefits as per actuarial valuation which are expected to be settled beyond a period of 12 months from the Balance Sheet date. Non-current provisions as at 31 March 2020 were ₹ 635.69 crore as compared to ₹ 588.74 crore as at 31 March 2019.

Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 50 to the financial statements.

d. Non-current liabilities -Deferred tax liabilities (net) (Note-25):

Deferred tax liabilities (net) has increased from ₹ 4,200.14 crore as at 31 March 2019 to ₹ 8,093.98 crore as at 31 March 2020.

The increase in deferred tax liability during the year is mainly on account of capitalisation of new units of 3,970 MW during the year 2019-20 as against 1,930 MW in the previous year.

Net increase in deferred tax liability during the year amounting to ₹ 4,028.49 crore has been debited to the Statement of profit and loss (31 March 2019: net decrease in deferred tax liability amounting to ₹ 5,767.83 crore credited to the Statement of profit and loss).

e. Current liabilities (Note-26 to Note-30):

The current liabilities as at 31 March 2020 were ₹ 54,866.85 crore as against ₹ 55,354.00 crore as at the end of previous year. The break-up of current liabilities is as under:

(₹ Crore)

Particulars	As at March 31		Y-o-Y Change	% Change
	2020	2019		
Borrowings (Note-26)	14,049.36	15,376.09	(1,326.73)	-9%
Trade payables (Note-27)	9,000.63	7,550.94	1,449.69	19%
Other financial liabilities (Note-28)	23,715.74	24,902.27	(1,186.53)	-5%
Other current liabilities (Note-29)	1,270.90	684.34	586.56	86%
Provisions (Note-30)	6,830.22	6,840.36	(10.14)	0%
Total	**54,866.85**	**55,354.00**	**(487.15)**	**-1%**

In order to finance the mismatches in the short-term fund requirement, short term borrowings (Note-26) in the form of commercial papers and cash credit were resorted to by the Company. The commercial papers outstanding net of unamortised discount as on 31 March 2020 were ₹ 12,819.15 crore as against ₹ 15,373.19 crore as on 31 March 2019.

The trade payables (Note-27) mainly comprise amount payable towards supply of goods & services, deposits & retention money from contractors. Trade payables have increased by ₹ 1,449.69 crore i.e. from ₹ 7,550.94 crore as at 31 March 2019 to ₹ 9,000.63 crore as at 31 March 2020.

Other current financial liabilities (Note-28) mainly comprise of current maturities of long-term borrowings, interest accrued but not due on borrowings and payables towards capital expenditure. The details of other current financial liabilities are as under:

(₹ Crore)

Particulars	As at March 31	
	2020	2019
Other current financial liabilities	23,715.74	24,902.27
Less: Current maturities of long-term borrowings and finance lease obligations	6,154.92	7,732.40
Less: Interest accrued but not due on borrowings	1,968.69	1,377.39
Other current financial liabilities (net)	15,592.13	15,792.48

Other current financial liabilities have decreased mainly due to decrease in payables for capital expenditure which has decreased from ₹ 13,609.93 crore as on 31 March 2019 to ₹ 13,421.46 crore as on 31 March 2020.

Other current liabilities (Note-29) consists mainly of advances from customers & others and statutory dues. The main reasons for increase of other current liabilities is due to increase in advance received for the implementation of Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) Scheme of the GoI from ₹ 58.28 crore as on 31 March 2019 to ₹ 460.98 crore as on 31 March 2020.

Current liabilities-provisions (Note-30) mainly consist of provisions for employee benefits, provision for obligations incidental to land acquisition, provision for tariff adjustment and other provisions. As at 31 March 2020, the Company had outstanding current liabilities-provisions of ₹ 6,830.22 crore as against ₹ 6,840.36 crore as at 31 March 2019.

The provision for employee benefits has increased from ₹ 1,244.92 as on 31 March 2019 to ₹ 1,523.26 crore as on 31 March 2020. The increase in provision in the current year is mainly on account of increase in provision towards leave encashment.

Provision for tariff adjustment has become ₹ 190.68 crore as at 31 March 2020 as against ₹ 98.77 crore as at 31 March 2019 as detailed below:

(₹ Crore)

Opening Balance as at 1 April 2019	**98.77**
Add: Provision for interest, which could be payable on the differential amount considered for revenue recognition and billing	91.91
Closing Balance as at 31 March 2020	**190.68**

Provision for others mainly comprise ₹ 101.05 crore (31 March 2019: ₹ 85.14 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 59), ₹ 1,506.83 crore (31 March 2019: ₹ 1,908.43 crore) towards provision for cases under litigation and ₹ 2.39 crore (31 March 2019: ₹ 3.36 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

8 Deferred revenue (Note-31)

Deferred revenue consists of two items detailed as under:

(₹ Crore)

Deferred revenue on account of	As at March 31	
	2020	2019
Income from foreign currency fluctuation	2,672.30	1,602.20
Government grants	570.24	537.17
Total	**3,242.54**	**2,139.37**

Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of fixed assets, which is recoverable from the customers in future years as per accounting policy. This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately under Equities and Liabilities.

Government grants include ₹ 543.61 crore (31 March 2019: ₹ 535.38 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately under Equities and Liabilities.

During the year, due to change in depreciation charge on solar/wind power projects consequent to revision of useful life, corresponding adjustment to the recognition of grants have been made.

B. Results from operations

1 Total revenue (Note-32 & Note-33)

Sl.	Particulars	FY 2019-20	FY 2018-19	Change
	Units of electricity sold (MUs)	240,204	255,715	(6.07)%
	Revenue			**₹ Crore**
1	Energy sales (Including electricity duty)	93,937.48	86,420.90	8.70%
2	Sale of energy through trading	2,903.59	2,894.74	0.31%
3	Consultancy & other services	245.17	215.96	13.53%
4	Lease rentals on assets on operating lease	156.18	233.63	(33.15)%
5	Sale of Captive coal to Subsidiary company	200.91	-	100.00%
6	Energy internally consumed	76.02	64.07	18.65%
7	Interest from beneficiaries	127.09	90.02	41.18%
8	Provisions for tariff adjustments written back	-	276.69	(100.00)%
9	Interest income on assets under finance lease	59.90	70.84	(15.44)%
10	Recognized from deferred revenue-government grant	(5.95)	40.58	(114.66)%
	Revenue from operations	97,700.39	90,307.43	8.19%
11	Other income	2,778.02	1,872.13	48.39%
	Total revenue	**100,478.41**	**92,179.56**	**9.00%**

The revenue of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services, operating lease rentals on assets, sale of captive coal to subsidiary, interest and surcharge received from the beneficiaries, interest earned on investments such as term deposits with banks, interest on loan to employees & subsidiary and Joint Venture companies and dividend from long-term investment in subsidiary, joint venture and other companies. The total revenue for financial year 2019-20 is ₹ 100,478.41 crore as against ₹ 92,179.56 crore in the previous year registering an increase of 9%. The main reasons for increase in total revenue are increase in the energy sales, increase in revenue from consultancy, sale of captive coal to subsidiary, dividend from joint ventures companies and increase in late payment surcharge from beneficiaries.

The major revenue comes from energy sales. The tariff for computing energy sales is determined in terms of CERC Regulations as notified from time to time, which are briefly discussed below:

Tariff for computation of sale of energy (Note-32)

The CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, revenue recognition from sale of energy is being done in terms of the provisions enunciated under the Tariff Regulations 2019. Capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019.In case of projects declared commercial w.e.f. 1 April 2019 and projects where tariff applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in the tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019.

As per the Regulations, 2019, the tariff for supply of electricity comprises of two parts i.e. capacity charges for recovery of annual fixed cost based on plant availability and energy charges for recovery of fuel cost. In addition, Regulations also provide for the recovery of certain miscellaneous charges. The CERC sets tariff for each stage of a station in accordance with the notified tariff regulations/norms.

Capacity charges

The capacity charges are allowed to be recovered in full if normative annual plant availability factor is at least 85%. As the tariff orders for tariff period 2019-24 have not yet being issued, the station-wise calculation of capacity charges for 2019-20, has been made as per the provisions of Tariff Regulations 2019.

Energy charges

The energy charges cover the primary and secondary fuel cost and limestone consumption cost (where applicable). Energy charges for coal-based station has been calculated based on normative heat rate, weighted average landed price of primary fuel & secondary fuel and weighted average GCV of coal on "as received" less 85Kcal/kg on account of variation during storage & weighted average GCV of secondary fuel respectively, as per Tariff Regulations 2019.

Energy charges for gas-based station have been calculated based on normative heat rate, weighted average landed price of primary fuel and weighted average GCV of primary fuel.

Other charges

Besides the capacity and energy charges, the other elements of tariff are:

- Deferred tax liability for the period before 1 April 2009 on generation income is allowed to be recovered from the customers on materialization.

- Cost of hedging in respect of interest and repayment of foreign currency loans and exchange rate fluctuations for the un-hedged portion of interest and repayment of foreign currency loans on a normative basis.

The mechanism of Security Constrained Economic Dispatch (SCED) is under implementation on Pilot project basis on SCED from April 1, 2019 for inter-state generating stations. This mechanism helps in optimization of total schedule of the Inter State Generating Stations based on the variable cost, resulting in savings in cost of procurement for the Discoms.

Each element of total revenue is discussed below:

Energy sales (including electricity duty)

Your Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Income from energy sales (including electricity duty) for the financial year 2019-20 was ₹ 93,937.48 crore constituting 93% of the total revenue. The income from energy sales (including electricity duty) has increased by 9% over the previous year's income of ₹ 86,420.90 crore.

During the year, there is an increase in the commercial capacity by 3,970 MW as detailed below:

Project/Unit	Capacity (MW)	Commercial Operation Date
Gadarwara	800	1 June 2019
Lara	800	1 October 2019
Tanda	660	7 November 2019
Khargone	660	1 February 2020
Barauni	250	1 March 2020
Darlipalli	800	1 March 2020
Total	**3,970**	

Further, the commercial capacity of 1,930MW comprising one unit of 800 MW at Kudgi, one unit of 250 MW at Bongaigaon, one unit of 660 MW at Solapur and one unit of 220 MW at Barauni, which were declared under commercial operation during the financial year 2018-19, were available for the entire financial year 2019-20 as compared to part of financial year in 2018-19.

The CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of projects declared commercial w.e.f. 1 April 2019 and projects where tariff applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in the tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019. The amount provisionally billed is ₹ 91,339.38 crore (31 March 2019: ₹ 88,278.09 crore).

Sales have been provisionally recognized at ₹ 91,491.55 crore (31 March 2019: ₹ 89,007.64 crore) on the said basis.

Sales include ₹ 1,768.88 crore (31 March 2019: (-) ₹ 0.02 crore) on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004. The current year amount is on account of income tax liability determined under Vivad se Vishwas Scheme notified under Direct Tax Vivad se Vishwas Act 2020. Sales also include ₹ 79.97 crore (31 March 2019: ₹ 82.68 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

Energy sales include electricity duty amounting to ₹ 989.29 crore (31 March 2019: ₹ 904.35 crore). Energy sales are net of rebate to beneficiaries amounting to ₹ 433.84 crore (31 March 2019: ₹ 815.80 crore).

The average tariff for the financial year 2019-20 is ₹ 3.90/kWh as against ₹ 3.38/kWh in the previous year. The average tariff includes adjustments pertaining to previous years. If the impact of such adjustments were to be excluded, the average tariff would be ₹ 3.82/kWh in financial year 2019-20 as against ₹ 3.49/kWh in the previous year.

Most of the beneficiaries have opened and are maintaining letter of credit equal to or more than 105% of average monthly billing. In order to ensure prompt and early payment of bills for supply of energy to beneficiaries, your Company has formulated a rebate scheme by way of providing graded incentive for early payment based on the bill (s) raised on state utilities who are the members of NTPC's rebate scheme. The rebate is netted off from energy sales.

Sale of energy through trading

Your Company is purchasing power from the developers and selling it to the Discoms on principal to principal basis. During the financial year, your Company has accounted sales of energy purchased from solar power plants set up under National Solar Mission of ₹ 2,903.59 crore (31 March 2019: ₹ 2,894.74 crore).

Consultancy and other services

Accredited with an ISO 9001:2008 certification, the Consultancy division of your Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

During the financial year 2019-20, Consultancy division posted a revenue of ₹ 245.17 crore as against ₹ 215.96 crore achieved in the last financial year.

Lease rentals on assets on operating lease

The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangements with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease. Accordingly, the lease rentals amounting to ₹ 156.18 crore has been recognised in the financial year 2019-20 as compared to ₹233.63 crore in the last financial year.

Sale of captive coal

Your Company has declared Pakri Barwadih coal mine commercial w.e.f. 1 April 2019. As per clause 36(2) of CERC Tariff Regulations, 2019, till the regulation for computation of input price of coal is notified, the generating company shall continue to adopt the notified price of Coal India Ltd. (CIL), commensurate with the grade of coal from the integrated mine. Therefore, revenue from coal mining has been accounted based on applicable CIL notified price for the financial year 2019-20 as the regulations for computation of input price is yet to be notified by CERC. The amount billed for captive coal supplied to other units of the Company has been eliminated during consolidation.

Energy internally consumed

Energy internally consumed relates to own consumption of power for construction works at station(s), township power consumption, etc. It is valued at variable cost of generation and is shown in 'Revenue from operations' with a debit to corresponding expense head under power charges. The value of energy internally consumed during the financial 2019-20 was ₹ 76.02 crore as compared to ₹ 64.07 crore in the last financial year. This increase of 19% of value over the previous year was mainly due to increase in fuel cost.

Interest from beneficiaries

CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ 127.09 crore (31 March 2019: ₹ 90.02 crore) has been recognised as 'Interest from beneficiaries'.

Provisions written back

The Company has not recognised any amount in financial year 2019-20 as compared to ₹ 276.69 crore in the financial year 2018-19 relating to provisions written back for tariff adjustments.

Interest income on assets on finance lease

The Company had ascertained that the PPA entered into for a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'. Accordingly, an amount of ₹ 59.90 crore has been recognised in the financial year 2019-20 as compared to ₹ 70.84 crore in the last financial year.

Other income (Note 33)

'Other income' mainly comprises income from interest on term deposits with banks, interest on loan to employees, dividend from investments in subsidiary & joint venture companies and 'Other non-operating income' comprising mainly surcharge received from beneficiaries, gain on sale of current investments, sale of scrap, miscellaneous income & Provisions written back.

'Other income' in financial year 2019-20 was ₹ 2,778.02 crore as compared to ₹ 1,872.13 crore in the financial year 2018-19.

Broadly, the break-up of other income is as under:

(₹ Crore)

Particulars	FY 2019-20	FY 2018-19
Income from deposits/loans, current investment in mutual funds, profit on redemption of current investments	29.04	43.35
Dividend from JVs and Subsidiary Companies/Interest from Subsidiary Company	229.78	143.69
Surcharge from beneficiaries	1,633.20	1,299.28
Provision written back	471.04	39.53
Income earned on other heads such as hire charges, profit on disposal of assets, etc.	460.38	402.64
Total	**2,823.44**	**1,928.49**
Less: Transfer to EDC/ development of coal mines/ hedging cost recoverable/ (payable) to/from beneficiaries	45.42	56.36
Net other income	**2,778.02**	**1,872.13**

The Company has earned income of ₹29.04 crore during the financial year 2019-20 on account of term deposits made in banks, investments in mutual funds and redemption of current investments as against ₹ 43.35 crore earned last year. The income from investment in bank term deposits, mutual funds etc. has registered a decrease of 33% from last financial year attributed to decrease in weighted average return to 6.04% in financial year 2019-20 from 6.69% in financial year 2018-19.

The Company has earned ₹ 205.60 crore as dividend from our investments in subsidiaries and joint venture companies. Further, ₹ 24.18 crore has been earned as interest from loan to subsidiary companies. Also, an amount of ₹ 2,564.62 crore has been earned from various other sources mainly consisting of surcharge from beneficiaries ₹ 1,633.20 crore, miscellaneous income ₹ 183.44 crore, sale of scrap ₹ 66.28 crore, interest on loans to employees ₹ 64.47 crore, provision written back pertaining to dispute relating to movement of coal by operator ₹ 374.18 crore, income tax refunds ₹ 55.58 crore and interest on advance to contractors ₹ 46.46 crore.

2. Expenses (Statement of Profit& Loss and Note-34, 35, 36, 37 & 38)

2.1 Expenses related to operations

Year	FY 2019-20		FY 2018-19	
Commercial generation (MUs)	257,829		273,540	
Expenses	**₹ Crore**	**₹ per kWh**	**₹ Crore**	**₹ per kWh**
Fuel	54,241.82	2.10	52,493.74	1.92
Employee benefits expense	4,925.60	0.19	4,779.89	0.17
Other expenses	8,663.81	0.34	7,548.63	0.28
Total	**67,831.23**	**2.63**	**64,822.26**	**2.37**

Expenses indicated above includes expenses of consultancy division and coal supplied to subsidiary company.

The expenditure incurred on fuel, employee benefits expense and other expenses for the financial year 2019-20 was ₹67,831.23 crore as against the expenditure of ₹ 64,822.26 crore incurred during the previous year. In terms of expenses per unit of power produced, it was ₹ 2.63 per unit in financial year 2019-20 as against ₹ 2.37 per unit in financial year 2018-19. Component-wise, there has been increase in the fuel cost, employee benefits expenses and in the other expenses. The increase in commercial generation due to commercial operation of new units i.e. units declared under commercial operations during the year as well as units declared under commercial operation during financial year 2018-19 which were under operation for part of the previous year as against under operation for the full year during the current year has resulted in an additional operational expenditure of ₹ 4,898.85 crore.

A discussion on each of these components is given below:

2.1.1 Fuel

Expenditure on fuel constituted 80% of the total expenditure relating to operations. Expenditure on fuel was ₹ 54,241.82 crore in financial year 2019-20 in comparison to ₹ 52,493.74 crore in financial year 2018-19 representing an increase of 3.33%. The break-up of fuel cost in percentage terms is as under:

Particulars	FY 2019-20	FY 2018-19
Fuel cost (₹ Crore)	**54,241.82**	**52,493.74**
		% break-up
Coal	95.15%	93.29%
Gas	3.67%	5.77%
Oil	1.19%	0.89%
Naphtha	0.00%	0.05%

For the financial year 2019-20, the expenditure towards coal has increased, mainly due to increase in previous year fuel cost by ~4.48% and also due to price variation of ~2.12%. However, this increase is partly compensated by reduction in fuel cost by ~3.28% due to quantity variation as a result of decreased commercial generation in Coal & Gas Plants.

The expenditure towards other component of fuel cost i.e. oil has also increased. The increase in the expenditure towards oil is due to higher average price during the financial year 2019-20 as compared to previous year.

An increase of ₹ 3,417.09 crore in fuel cost is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

Overall, fuel cost per unit generated increased to ₹2.10 in financial year 2019-20 from ₹ 1.92 in financial year 2018-19.

The power plants of the Company use coal and natural gas as the primary fuels. Oil is used as a secondary fuel for coal-fired plants and naphtha as an alternate fuel in gas-fired plants. Under the tariff norms set by the CERC, your Company is allowed to pass on fuel charges through the tariff, provided the Company meets specified operating parameters.

2.1.2 Employee benefits expense (Note 35)

Employee remuneration and benefits expense include salaries & wages, bonus, allowances, benefits, contribution to provident & other funds and welfare expenses.

Employee benefits expense have increased from ₹ 4,779.89 crore in financial year 2018-19 to ₹ 4,925.60 crore in financial year 2019-20.

An increase of ₹ 238.29 crore is attributable to new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

In terms of expenses per unit of generation, it is ₹0.19 in financial year 2019-20 as compared to ₹ 0.17 in previous financial year. These expenses account for approximately 7% of operational expenditure in financial year 2019-20.

2.1.3 Other expenses (Note 38)

Other expenses consist primarily the expenses for repair and maintenance of plant & machinery, buildings, cost of captive coal produced, water charges, security, corporate social responsibility, electricity duty, travelling, power charges, insurance, training and recruitment and provisions. These expenses are approximately 13% of operational expenditure in financial year 2019-20. In absolute terms, these expenses increased to ₹ 8,663.81 crore in financial year 2019-20 from ₹ 7,548.63 crore in financial year 2018-19, registering an increase of approximately 15%.

During the financial year 2019-20, the increase in other expenses is mainly on account of adverse impact of ERV to the tune of ₹ 1,009.46 crore in comparison with previous year. Repair & maintenance expenses constitute 38% of total other expenses and have increased by ₹ 235.21 crore in comparison with previous year, resulting in an increase of approximately 8%.

In terms of expenses per unit of generation, it is ₹ 0.34 in financial year 2019-20 as compared to ₹ 0.28 in previous financial year. An increase of ₹ 1,243.46 crore is on account of new commercial capacity added during the year as well as on commercial capacity added during previous year which was operational for part of the previous year as compared to full year operations during the current year.

Other expenses also include provisions amounting to ₹ 265.73 crore made during the year as against ₹ 1,150.07 crore in previous year.

2.2 Energy purchased for trading

Company has incurred expenditure of ₹ 2,776.44 crore in financial year 2019-20 as compared to ₹ 2,713.68 crore in previous year on purchase of energy for trading from solar power plants set up under National Solar Mission.

2.3 Finance costs (Note 36)

The finance costs for the financial year 2019-20 are ₹ 6,781.97 crore in comparison to ₹ 4,716.74 crore in financial year 2018-19. The details of interest and other borrowing costs are tabulated below:

(₹ Crore)

Particulars	FY 2019-20	FY 2018-19
Interest on:		
Borrowings	9,387.24	8,565.34
Unwinding of discount on vendor liabilities and finance costof commercial papers	983.63	653.49
Others	21.33	1.98
Total interest	**10,392.20**	**9,220.81**
Other borrowing costs	35.67	39.52
Exchange differences regarded as adjustment to interest costs	764.38	156.43
Total	**11,192.25**	**9,416.76**
Less: Transfers to		
Expenditure during construction period	4,182.54	4,430.26
Development of coal mines	227.74	269.76
Total Finance costs	**6,781.97**	**4,716.74**

Total interest (including interest during construction) has increased by 13% over last financial year due to increase in both long-term and short-term borrowings. The total borrowings as on 31 March 2020 was ₹ 152,693.62 crore as against ₹ 127,430.48 crore as on 31 March 2019. Short-term borrowings are ₹ 14,049.36 crore as on 31 March 2020 as compared to ₹ 15,376.09 crore as on 31 March 2019. For the financial year 2019-20, the average cost of borrowing has decreased to 6.81% from 6.92% in previous financial year. The decrease in the average cost of borrowing is because of lower rate of interest on new borrowings.

For the financial year 2019-20, an amount of ₹ 4,182.54 crore relating to finance costs of projects under construction was capitalized while the corresponding amount for the previous year was ₹ 4,430.26 crore. In addition, finance cost of ₹ 227.74 crore has been capitalized in respect of development of coal mines as against ₹ 269.76 crore in previous year.

2.4 Depreciation, amortization and impairment expense (Note 37)

The depreciation and amortization expense charged to the Statement of Profit and Loss during the financial year 2019-20 was ₹ 8,622.85 crore as compared to ₹ 7,254.36 crore in financial year 2018-19, registering an increase of 19%. This is due to increase in the gross PPE by ₹ 39,921.97 crore in financial year 2019-20 over previous financial year.

The increase in gross block is largely on account of increase in commercial capacity by 3,970 MW resulting in additional capitalization on account of commercial declaration of new units. The depreciation on new units capitalized during the year is on pro-rata basis. Further, depreciation for units declared commercial during financial year 2018-19 aggregating to 1,930 MW has been charged for the entire financial year 2019-20 as against a pro-rata charge during the financial year 2018-19. The impact on depreciation on this account for the financial year 2019-20 is ₹ 1,150.38 crore.

As per the accounting policy of the Company, depreciation on the assets of the generation of electricity business except the assets of Solar / Wind Power plants which are not governed by CERC Regulations, is charged on straight line method following the rates and methodology notified by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013 and depreciation on the assets of the coal mining, oil & gas exploration and consultancy business, is charged on straight line method following the rates specified in Schedule II of the Companies Act, 2013. In respect of assets of Solar /Wind power plants which are not covered by CERC regulations, depreciation is charged on straight line method over the useful life of 25 year as technically assessed by the management.

In case of certain assets, the Company has continued to charge higher depreciation based on technical assessment of useful life of those assets.

2.5 Net movement in regulatory deferral account balance (Net of tax) (Note 64)

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC, which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return. This form of rate regulation is known as cost-of-service regulations, which provide the Company to recover its costs of providing the goods or services plus a fair return.

Exchange differences arising from settlement/ translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Net Movements in regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ 1,202.93 crore for the year ended as at 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: (-) ₹ 35.38 crore).

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. An amount of ₹ NIL for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: ₹ 118.26 crore).

CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Regulations, 2014 provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferred account debit balance for such deferred tax liabilities (Net) in its financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ 4,000.77 crore for the year ended 31 March 2020 (31 March 2019: (-) ₹ 5,160.22 crore) has been accounted for as 'Regulatory deferral account debit balance'.

The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ 647.56 crore (31 March 2019: ₹ 179.29 crore) for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance'.

Accordingly, for the financial year 2019-20, net movement in regulatory deferral account balances (net of tax) is ₹ 4,828.84 crore whereas for the financial year 2018-19, (-) ₹ 3,841.34 crore was recognized as net movement in regulatory deferral account balances (net of tax).

3. Profit before tax

The profit of the Company before tax is tabulated below:

(₹ Crore)

Particulars	FY 2019-20	FY 2018-19
Total revenue	100,478.41	92,179.56
Less:		
Expenditure related to operations	67,831.23	64,822.26
Energy purchased for trading	2,776.44	2,713.68
Finance cost	6,781.97	4,716.74
Depreciation, amortization and impairment expenses	8,622.85	7,254.36
Profit before tax	**14,465.92**	**12,672.52**

4. Tax expense (Note 49)

The Company provides for current tax in accordance with provisions of Income Tax Act, 1961 and for deferred tax considering the accounting policy of the Company.

Provision for current tax

A provision of ₹ 5,153.46 crore has been made towards current tax for the financial year 2019-20 as against the provision of ₹ 2,849.12 crore made for the financial year 2018-19.

During the year, the GoI has introduced Vivad se Vishwas Scheme (VsVs) through 'The Direct Tax Vivad Se Vishwas Act, 2020'. The Company has decided to settle its pending Income Tax disputes by opting for the VsVs scheme. The Company has created additional tax provision amounting to ₹ 2,661.47 crore keeping in view the terms & conditions of the scheme.

Provision for deferred tax

Regulations, 2014 provide for recovery of deferred tax liability as on 31 March 2009 from the beneficiaries. Accordingly, deferred tax liability as on 31 March 2009 is recoverable on materialisation from the beneficiaries. For the period commencing from 1 April 2014, Regulations, 2014 provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax.

The deferred tax for the year on account of timing difference is ₹ 4,028.49 crore as against (-) ₹ 5,767.83 crore for the financial year 2018-19.

Details of tax provision

(₹ Crore)

Particulars	FY 2019-20		
	Current tax	Deferred tax	Total
Provision for financial year 2019-20	2,493.29	5,410.81	7,904.10
Adjustments for earlier years	2,660.17	-	2,660.17
MAT credit entitlement	-	(1,382.32)	(1,382.32)
Net provision as per Statement of Profit and Loss	5,153.46	4,028.49	9,181.95

(₹ Crore)

Particulars	FY 2018-19		
	Current tax	Deferred tax	Total
Provision for financial year 2018-19	2,955.00	2,489.55	5,444.55
Adjustments for earlier years	(105.88)	-	(105.88)
MAT credit entitlement	-	(8,257.38)	(8,257.38)
Net provision as per Statement of Profit and Loss	2,849.12	(5,767.83)	(2,918.71)

Net provision of tax for the financial year 2019-20 was ₹ 9,181.95 crore in comparison to (-) ₹ 2,918.71 crore for the financial year 2018-19.

5. Profit after tax

The profit of the Company after tax is tabulated below:

(₹ Crore)

Particulars	FY 2019-20	FY 2018-19
Profit before tax	14,465.92	12,672.52
Less: Tax expense	9,181.95	(2,918.71)
Add: Net movement in regulatory deferral account balances (net of tax)	4,828.84	(3,841.34)
Profit after tax	**10,112.81**	**11,749.89**

6. Other comprehensive income

The other comprehensive income net of tax for the financial year 2019-20 is (-) ₹ 327.22 crore in comparison to (-) ₹ 201.87 crore for the financial year 2018-19. For the financial year 2019-20, net actuarial loss on defined benefit plans is (-) ₹ 285.58 crore, while net loss on fair value of equity instruments is (-) ₹ 41.64 crore as against net actuarial loss on defined benefit plan and net loss on fair value of equity instrument amounting to (-) ₹ 185.13 crore and (-) ₹ 16.74 crore respectively in the previous financial year.

7. Segment-wise Performance

The Company has two reportable segments i.e. 'Generation of energy' and 'Others'. The Company's principal business is generation and sale of bulk power to State Power Utilities. Other segment includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining.

The profit before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges, in the generation business for the financial year 2019-20 was ₹ 27,606.70 crore as against ₹ 13,724.83 crore for financial year 2018-19. The profit before unallocated corporate interest and other income & unallocated corporate expenses, interest and finance charges from other segment was ₹ 569.02 crore for financial year 2019-20 as against a profit of ₹ 389.72 crore in the previous financial year.

C. Cash flows

Cash & cash equivalents and cash flows on various activities are given below:

(₹ Crore)

Particulars	FY 2019-20	FY 2018-19
Opening cash & cash equivalents	**24.38**	**60.49**
Net cash from operating activities	22,014.26	16,157.28
Net cash used in investing activities	(27,677.12)	(20,894.22)
Net cash flow from financing activities	5,658.88	4,700.84
Exchange difference arising from translation of foreign currency cash and cash equivalents	(0.03)	(0.01)
Net increase / (decrease) in cash and cash equivalents	(4.01)	(36.11)
Closing cash & cash equivalents	**20.37**	**24.38**

Statement of cash flows comprises of cash flows from operating activities, investing activities and financing activities.

Net cash generated from operating activities increased to ₹ 22,014.26 crore during the financial year 2019-20 as compared to ₹ 16,157.28 crore in the previous year primarily due to increase in profit before tax and tax adjustments related to deferral account balances.

Cash outflows on investing activities arise from expenditure on setting up power projects, acquisition of power plants, investments in joint ventures & subsidiaries and tax outflow on income from investing activities. Cash inflows arise from interest from banks & dividend income from joint ventures and subsidiaries and mutual funds. Cash invested on purchase of fixed assets decreased from ₹ 17,701.26 crore in financial year 2018-19 to ₹ 14,534.55 crore in financial year 2019-20. Cash outflow on account of business acquisition (Barauni TPS) was ₹ 2,145.33 crore during the previous year as against NIL in the current year. Cash outflow on account of investment in subsidiaries and joint ventures has increased from ₹ 3,051.35 crore in previous year to ₹ 13,317.48 crore in financial year 2019-20 majorly due to acquisition of GoI stake in THDC and NEEPCO. Considering all the investing activities, the net cash used in investing activities was ₹ 27,677.12 crore in financial year 2019-20 as compared to ₹ 20,894.22 crore in the previous year.

During the financial year 2019-20, the Company had an inflow of ₹ 28,775.62 crore from non-current borrowings as against ₹ 24,844.83 in the previous year and outflow of ₹ 1,326.73 crore from current borrowings as against inflow of ₹ 8,875.77 crore in the previous year. Cash used for repayment of non-current borrowings during the financial year 2019-20 was ₹ 7,667.17 crore as against ₹ 13,839.47 crore repaid in the previous year. Interest paid during the year was ₹ 10,503.90 crore as compared to ₹ 9,248.74 crore during the previous year. Cash used for paying dividend was ₹ 2,968.37 crore (previous year ₹ 4,922.55 crore) and the dividend tax thereon was ₹ 607.80 crore (previous year ₹ 1,000.49 crore). Thus, from financing activities during the year, the Company has an inflow of ₹ 5,658.88 crore as against an inflow of ₹ 4,700.84 crore in the previous year.

FINANCIAL SUMMARY OF SUBSIDIARY COMPANIES

Your Company has nine subsidiary companies as at 31 March 2020 out of which six (NESCL, NVVN, KBUNL, NPGCL, NML and NEEPCO) are wholly owned.

A summary of the financial performance of the subsidiary companies during the financial year 2019-20 based on their audited results is given below:

(₹ Crore)

Sl.	Company	NTPC's investment in equity	Total Income	Profit/ (Loss) for the year
1	NTPC Electric Supply Company Ltd. #	0.08	10.18	7.38
2	NTPC Vidyut Vyapar Nigam Ltd.	20.00	4,424.42	17.53
3	Kanti Bijlee Utpadan Nigam Ltd.	1,560.67	1,695.30	103.98
4	Bhartiya Rail Bijlee Company Ltd.	1,741.84	2,334.11	258.46
5	Patratu Vidyut Utpadan Nigam Ltd.	383.12	-	(0.41)
6	Nabinagar Power Generating Company Ltd.	4,417.01	1,191.51	111.33
7	NTPC Mining Ltd.	0.05	-	-
8	THDC India Ltd.	7,500.00	2,469.11	920.25
9	North Eastern Electric Power Corporation Ltd.	4,000.00	2,167.81	165.87
	Total	**19,622.77**	**14,292.44**	**1,584.39**

 # Operations of the Company are suspended since1 April, 2015

FINANCIAL SUMMARY OF JOINT VENTURE COMPANIES

Your Company has interests in the following joint venture companies. Proportion of ownership and financial performance of the companies for the financial year 2019-20 are given below:

(₹ Crore)

Sl.	Company	NTPC's interest (Ex. Share application Money) (%)	NTPC's investment in equity (net of impairment)	Total Income	Profit/ (Loss) for the year
A.	Joint venture companies incorporated in India				
1	Utility Powertech Ltd.*	50.00	1.00	1,197.72	32.27
2	NTPC-GE Power Services Private Ltd.	50.00	3.00	103.66	0.56
3	NTPC-SAIL Power Company Ltd.*	50.00	490.25	2,891.46	368.96
4	NTPC Tamil Nadu Energy Company Ltd.*	50.00	1,428.11	4,124.13	375.46
5	Ratnagiri Gas & Power Private Ltd.	25.51	18.06	2,117.29	(174.10)
6	Konkan LNG Ltd. *	14.82	36.28	778.17	270.27
7	Aravali Power Company Private Ltd.*	50.00	1,433.01	3,328.07	619.67
8	Meja Urja Nigam Private Ltd.*	50.00	1,581.64	597.37	(607.68)
9	NTPC BHEL Power Projects Private Ltd.	50.00	-	61.06	(26.15)
10	National High-Power Test Laboratory Private Ltd.	20.00	30.40	11.56	(21.84)
11	Transformers & Electricals Kerala Ltd.	44.60	31.34	204.70	8.41
12	Energy Efficiency Services Ltd.	47.15	463.61	1,934.07	44.92
13	CIL NTPC Urja Private Ltd.	50.00	0.08	-	(0.01)
14	Anushakti Vidhyut Nigam Ltd.	49.00	0.05	-	-
15	Hindustan Urvarak and Rasayan Ltd.*	29.67	751.09	17.42	0.05
B.	Joint venture companies incorporated outside India				
16	Trincomalee Power Company Ltd., Srilanka	50.00	15.20	-	(0.60)
17	Bangladesh-India Friendship Power Company Private Ltd., Bangladesh	50.00	444.72	-	-
	Total		**6,727.84**	**17,366.68**	**890.19**

**Financial statements are audited.*

As may be seen, out of 17 joint venture companies considered for consolidation, 12 companies listed at Sl. No.1 to 12 are operational with 8 of them registered an aggregate profit of ₹ 1,720.52 crore and balance 4 companies have suffered a loss of ₹ 829.77 crore in the current financial year.

Consolidated financial results of NTPC Ltd.

A brief summary of the results on a consolidated basis is given below:

(₹ Crore)

Particulars	FY 2019-20	FY 2018-19
Total income	112,372.58	102,533.05
Profit before tax	16,377.51	15,325.87
Profit for the year	11,901.98	14,034.49
Other comprehensive income (expense) (net of tax)	(307.72)	(193.18)
Total comprehensive income for the year	**11,594.26**	**13,841.31**

CAUTIONARY STATEMENT

Statements in the Management Discussion and Analysis and in the Directors' Report, describing the Company's objectives, projections and estimates, contain words or phrases such as "will", "aim", "believe", "expect", "intend", "estimate", "plan", "objective", "contemplate", "project" and similar expressions or variations of such expressions, are "forward-looking" and progressive within the meaning of applicable laws and regulations. Actual results may vary materially from those expressed or implied by the forward-looking statements due to risks or uncertainties associated therewith depending upon economic conditions, government policies and other incidental factors. Readers are cautioned not to place undue reliance on these forward-looking statements.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

River Side View of NTPC Talcher Kaniha

Annexure-II to Directors' Report

REPORT ON CORPORATE GOVERNANCE

Corporate Governance is the system of practices, processes, policies and rules and processes by which a company is directed, administered or controlled and it is aimed to allocate resources of the Company in a manner that maximizes value for all stakeholders i.e. shareholders, investors, employees, customers, suppliers, environment and the community. Corporate Governance casts responsibility on the officials at the helm of the affairs of the Company to be accountable to its stakeholders by evaluating their decisions on the parameters of transparency, conscience, fairness, accountability and professionalism.

NTPC is adhering to the best recognized corporate governance practices and continuously benchmarking itself against each such practice in our endeavour to meet the expectations of the stakeholders.

1. CORPORATE GOVERNANCE PHILOSOPHY

Our Corporate Governance philosophy has been scripted as under:

"As a good corporate citizen, our Company is committed to sound corporate practices based on conscience, openness, fairness, professionalism and accountability besides building confidence in its various stakeholders, thereby paving the way for long term success."

The above philosophy of corporate governance is guiding us in managing the company in a transparent manner for maximizing long-term value of the company for its shareholders and all other stakeholders.

2. THE BOARD OF DIRECTORS

The Board is at the core of our corporate governance practice and entrusted with the responsibility of the management, general affairs, direction, performance and long-term success of business as a whole. The Board reviews and approves management's strategic plan & business objectives and monitors the Company's strategic direction. The Board of Directors function in accordance with the powers delegated under the Companies Act, 2013, SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015 {hereinafter referred as SEBI LODR}, Memorandum & Articles of Association, Maharatna Guidelines issued by DPE vide Office Memorandum dated 19th May, 2010 and other guidelines issued by the Government of India from time to time, as may be applicable on the Company.

2.1 Size & Composition of the Board

NTPC is Government Company within the meaning of Section 2(45) of the Companies Act, 2013. As per the provisions of the Articles of Association of the Company, the strength of Board shall not be less than four Directors or more than twenty Directors. The Articles of Association further provide that the power to appoint Directors vests with the President of India. Presently, the sanctioned strength of the Board of Directors is as under:

(i) Six Functional Directors including the Chairman & Managing Director,

(ii) Two Government Nominee Directors and

(iii) Eight Independent Directors as per the requirement of the SEBI LODR.

Ministry of Power, through Order No. 8/20/2018-Th.I dated 22.08.2019 had conveyed approval of competent authority to abolish the post of Director (Technical), NTPC Limited. Accordingly, the posts of functional directors were reduced to six (6) from seven (7).

As on 31st March, 2020, the Board of Directors has an optimum combination of Executive/ Functional Directors and Non-Executive Directors. Details of the Board of Directors as on 31st March 2020 including details of other directorships & Membership/Chairmanship of Committees of Directors are as follows:

S. No.	Names of Directors	Designation	No. of other Directorship in other Companies	Directorship in Listed entity & Category	No. of Committee membership in other Public Companies	
					As Chairman	As Member
1.	Shri Gurdeep Singh	Chairman & Managing Director	1	-	-	-
2.	Shri Saptarshi Roy[1]	Director (HR)	6	-	-	-
3.	Shri A.K.Gupta[2]	Director (Commercial)	8	PTC India Limited-– Non – Executive Director	-	1
4.	Shri Prakash Tiwari[3]	Director (Operations)	2	-	-	-
5.	Shri A.K.Gautam[4]	Director (Finance)	1	-	-	1
6.	Shri Ashish Upadhyaya[5]	Govt. Nominee Director	-	-	-	-

S. No.	Names of Directors	Designation	No. of other Directorship in other Companies	Directorship in Listed entity & Category	No. of Committee membership in other Public Companies	
					As Chairman	As Member
7.	Shri Vivek Kumar Dewangan	Govt. Nominee Director	3	-	-	-
8.	Shri M.P.Singh	Independent Director	1	Scooters India Ltd.- Non– Executive Director	1	1
9.	Shri P.K.Deb	Independent Director	-	-	-	-
10.	Shri Shashi Shekhar	Independent Director	2	-	-	1
11.	Shri Vinod Kumar	Independent Director	-	-	-	-
12.	Shri Subhash Joshi	Independent Director	-	-	-	-
13.	Dr. K. P. Kylasanatha Pillay	Independent Director	-	-	-	-
14.	Dr. Bhim Singh	Independent Director	-	-	-	-

1. Ceased to be Director on 31st March 2020. Shri Dillip Kumar Patel has been appointed as Director (HR) on 1st April 2020.
2. Ceased to be Director on 31st July 2020, Shri Chandan Kumar Mondol has been appointed as Director (Commercial) on 1st August 2020.
3. Ceased to be Director on 30th April, 2020. Shri Ramesh Babu V has been appointed as Director (Operations) on 1st May 2020.
4. Appointed as Director on 18th October 2019.
5. Appointed as Director on 22nd January 2020.

Shri Dillip Kumar Patel has been appointed Director (Human Resource) on 1st April 2020 till the date of his superannuation or until further orders, whichever is the earlier, pursuant to provisions of Article 41 of the Articles of Association of NTPC Limited and order No. 8/4/2019-Th.-1 dated 31st December, 2019 issued by the Ministry of Power on behalf of President of India.

Shri Ramesh Babu V. has been appointed Director (Operations) on 1st May 2020 till the date of his superannuation or until further orders, whichever is the earlier, pursuant to provisions of Article 41 of the Articles of Association of NTPC Limited and order No. 8/7/2019-Th.1 dated 25th March, 2020 issued by the Ministry of Power on behalf of President of India.

Further, Shri Chandan Kumar Mondal has been appointed Director (Commercial) on 1st August 2020 till the date of his superannuation or until further orders, whichever is the earlier, pursuant to provisions of Article 41 of the Articles of Association of NTPC Limited and order No. 8/15/2019-Th.1 (A-1) dated 10th June 2020 issued by the Ministry of Power on behalf of President of India.

None of the directors on Board is a member of more than 10 Committees or Chairperson of more than 5 Committees across all the listed companies in which they are a Director.

During 2019-20, the constitution of the Board of Directors was as per the requirements of Companies Act 2013, DPE Guidelines on Corporate Governance and SEBI LODR, except:

1. from 1st July, 2019 to 11th July, 2019 the number of independent directors were less than 50% of total number of Directors
2. from 16th November 2019 to 31st March 2020, when the position of woman Independent Director was vacant due to cessation of Dr. Gauri Trivedi on 15th November, 2019.

As NTPC is a Government Company, the matter of appointment of Woman Independent Director has been taken up with the Administrative Ministry.

None of Directors of the Company is inter-se related to other directors of the Company.

2.2 Tenure of Directors

The Chairman & Managing Director and other whole-time Directors are generally appointed for a period of five years from the date of taking over the charge or until the date of superannuation or until further orders from the Government of India, whichever event occurs earliest. The tenure of the whole-time director can be extended further by the Government of India till the age of superannuation i.e. 60 years. Independent Directors are generally appointed by the Government of India for tenure of three years. Government Nominee Directors are appointed on ex- office basis during their tenure in Ministry of Power (MOP).

2.3 Resume of Directors

Brief resume of directors seeking appointment or re-appointment at the Annual General Meeting is appended to the Notice calling the Annual General Meeting.

2.4 Core competencies of Directors:

Being a Government Company, appointment of Directors are made by the Government of India in accordance with the DPE Guidelines.

The Board of Directors, in its 251st meeting held on 25th November 2003, had approved the job description, qualification and experience for Board level posts including that of the Chairman & Managing Director. The desirable qualification and experience of the incumbents are as per the requirements in the functional areas i.e. Finance, Operations, Projects, Human Resource and Commercial. At the time of recruitment of the Functional Directors, job description, desirable qualification & experience of candidates are sent to the Public Enterprise Selection Board through the Administrative Ministry for announcement of vacancy and recruitment of candidates.

Further, Board of Directors, in 288th meeting held on 26th June 2006, had deliberated on the areas of expertise of Independent Directors required on the Board of the Company. In the above Board meeting, the Board decided that the Independent Directors, to be nominated by the Government of India on the Board of NTPC should be having expertise in the diverse areas like Economics, Human Resources Management, Regulatory Framework, Management Consultant, Research and Development, academics , Energy & Power Sector, Finance & Banking etc.

As per the requirement of the SEBI LODR, the skills/ expertise of Directors are given in Annexure-I.

2.5 Board Meetings

The meetings of the Board of Directors are convened by giving appropriate advance notices. To address any urgent needs, sometimes Board meetings are also called at a shorter notice subject to observance of statutory provisions. In case of urgency, resolutions are also passed through circulation, if permitted under the statute.

Detailed agenda notes, management reports and other explanatory statements are normally circulated at least a week before the Board Meeting in a defined format amongst the Board Members for facilitating meaningful, informed and focused discussions in the meeting. In exceptional cases, where it is not possible to circulate documents in advance, the same is tabled during the meeting with the approval of Chairman & Managing Director and with the consent of a majority of the Directors present in the Meeting, including at least one Independent Director present at the meeting. As a part of green initiative, agenda for the meetings are sent through electronic mode ensuring encryption and password protection.

The meetings of the Board of Directors are generally held at the Company's registered office at New Delhi.

During the financial year 2019-20, twelve (12) meetings of the Board of Directors were held on 3rd May 2019, 25th May 2019, 1st July 2019, 22nd July 2019, 10th August 2019, 21st August 2019, 21st September 2019, 18th October 2019, 9th November 2019, 27th January 2020, 7th February 2020 and 19th March 2020. The maximum interval between any two meetings was well within the permissible gap of 120 days.

The table below shows attendance of the Board members in Board meetings held during the FY 2019-20 and their attendance in last AGM:

Name of Director	Meeting Date												Whether Attended Last AGM	Total Meetings held during the tenure	No. of Meetings Attended	% of Attendance
	3/5/2019	25/5/2019	1/7/2019	22/7/2019	10/8/2019	21/8/2019	21/9/2019	18/10/2019	9/11/2019	27/1/2020	7/2/2020	19/3/2020				
Shri Gurdeep Singh Chairman & Managing Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	12	12	100%
Shri Saptarshi Roy Director (HR)	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	12	11	91.67%
Shri A.K.Gupta[1] Director (Commercial)	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	Y	12	11	91.67%
Shri S.K. Roy[2] Director (Projects)	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	Y	9	9	100%
Shri P.K. Mohapatra[3] Director (Technical)	✓	✓	✓	✓	-	-	-	-	-	-	-	-	NA	4	4	100%
Shri Prakash Tiwari Director (Operations)	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	Y	12	12	100%
Shri K. Sreekant[4] Director (Finance)	✓	✓	✓	✓	✓	-	-	-	-	-	-	-	Y	5	5	100%
Shri A.K. Gautam[5] Director (Finance)	-	-	-	-	-	-	-	✓	✓	✓	✓	✓	NA	5	5	100%
Shri Anurag Agarwal[6] Govt. Nominee Director	-	-	✓	-	-	-	-	-	-	-	-	-	NA	1	1	100%
Shri Ashish Upadhyaya[7] Govt. Nominee Director	-	-	-	-	-	-	-	-	-	X	✓	✓	NA	3	2	66.67%
Shri Vivek Kumar Dewangan Govt. Nominee Director	✓	✓	✓	✓	X	✓	✓	✓	✓	✓	✓	X	Y	12	10	83.33%
Dr. Gauri Trivedi[8] Independent Woman Director	✓	X	✓	X	✓	✓	✓	X	✓	-	-	-	Y	9	6	66.67%
Shri S. Chander[9] Independent Director	✓	✓	-	-	-	-	-	-	-	-	-	-	NA	2	2	100%
Shri M.P. Singh Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	Y	12	11	91.67%
Shri P.K.Deb Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	Y	12	11	91.67%
Shri Shashi Shekhar Independent Director	✓	✓	X	✓	✓	✓	✓	X	✓	X	X	✓	Y	12	8	66.67%
Shri Subhash Joshi Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	X	Y	12	11	91.67%
Shri Vinod Kumar Independent Director	✓	X	✓	✓	X	✓	✓	✓	✓	✓	✓	X	Y	12	9	75%
Dr. Bhim Singh Independent Director	✓	✓	✓	✓	✓	✓	✓	✓	X	✓	✓	✓	Y	12	11	91.67%
Dr. K. P. Kylasanatha Pillay Independent Director	✓	X	✓	✓	✓	✓	✓	✓	✓	✓	X	X	Y	12	9	75%

1. Ceased to be Director on 31/7/2020 | 2. Ceased to be Director on 30/11/2019 | 3. Ceased to be Director on 31/7/2019 | 4. Ceased to be Director on 12/8/2019
5. Appointed as Director on 18/10/2019 | 6. Appointed as Director on 1/7/2019 and ceased to be Director on 12/7/2019 | 7. Appointed as Director on 22/1/2020
8. Ceased to be Director on 15/11/2019 | 9. Ceased to be Director on 12/6/2019

2.6 Board Independence:

All the Independent Directors have given the declaration that they meet the criteria of independence to the Board of Directors as per the provisions of the Companies Act, 2013 and SEBI LODR. Terms and conditions of appointment of independent directors are hosted on the website of the Company **https://www.ntpc.co.in/en/investors/corporate-governance/letter-terms-and-conditions-appointment-independent-directors**.

2.7 Performance Evaluation of Board Members:

Ministry of Corporate Affairs (MCA) vide General Circular dated 5th June, 2015 has exempted Government Companies from the provisions of Section 178 (2) which provides about manner of performance evaluation of Board of Directors, Committee of Board of Directors and director by the Nomination & Remuneration Committee. The aforesaid circular of MCA further exempted listed Govt. Companies from provisions of Section 134 (3) (p) which requires mentioning the manner of formal evaluation of its own performance by the Board and that of its Committees and Individual Director in Board's Report, if directors are evaluated by the Ministry or Department of the Central Government which is administratively in charge of the company, or, as the case may be, the State Government as per its own evaluation methodology. In this regard, Deptt. of Public Enterprise (DPE) has already laid down a mechanism for performance appraisal of all functional directors. DPE has also initiated evaluation of Independent Directors.

In view of above, as per requirement of Regulation 17(10) of the SEBI LODR, evaluation of Independent Director were not made by the Board of Directors.

It may also be noted that NTPC enters into Memorandum of Understanding (MoU) with Government of India each year, containing key performance parameters for the company. The MoU targets are cascaded down and form an integral part of the performance appraisal of the individuals. The internal MoU covers all operational and performance parameters like Plant Performance and Efficiency, Financial targets, Cost cutting targets, Environment, Welfare, Community development and any other relevant factor. The performance of the Company is evaluated by the Department of Public Enterprise vis-à-vis MoU entered into with the Government of India.

2.8 Separate Meeting of Independent Directors:

Ministry of Corporate Affairs vide Notification dated 5th July, 2017 has exempted government Companies from applicability of clause (a) and (b) of sub-paragraph (3) of paragraph VII of Schedule IV of the Companies Act, 2013 which requires that the Independent Directors in their separate meeting shall review the performance of non-independent directors, performance of the Board as a whole, performance of the Chairperson of the company, taking into account the views of executive directors and non-executive directors. However, similar exemptions are not available under the provisions of the SEBI LODR.

A separate meeting of Independent Directors was held on 14th February, 2020. The meeting was attended by all Independent Directors. In this meeting, independent directors assessed the performance of the Board as a whole and also the quality, quantity and timeliness of flow of information between the Company management and the Board which is necessary for the Board to effectively and reasonably perform their duties. Further, in line with the provisions of SEBI LODR, Independent Directors had reviewed the performance of Chairman & Managing Director and Non independent Directors.

2.9 Information placed before the Board of Directors:

The Board has complete access to any information within the Company to be able to take informed decisions, exercise control over the organisation as well as to review the progress of implementation of the strategic decisions and corporate plans formulated by the Board. Information provided to the Board normally includes:

- Annual operating plans and budgets and any updates.
- Capital Budgets and any updates.
- Quarterly financial results.
- Annual Accounts, Directors' Report.
- Major investments, formation of subsidiaries and Joint Ventures or collaboration agreement, Strategic Alliances, etc.
- Minutes of meetings of Audit Committee and other Committees of the Board.
- Minutes of meetings of Board of Directors of subsidiary companies.
- Fatal or serious accidents, dangerous occurrences, etc.
- Operational highlights and substantial non-payment for goods sold by the Company.
- Award of large value contracts.
- Disclosure of Interest by Directors about directorships and committee positions occupied by them in other companies.
- Declaration of independence by Independent Directors.
- Quarterly Report on foreign exchange exposures.
- Quarterly status of investors complaints.
- Quarterly Report on Foreign Travel of CMD, Functional Directors and Employees.
- Quarterly Report on Short Term Deposits and Investments.
- Report on Contract awarded on nomination basis.
- Quarterly Report on Reconciliation of Share Capital Audit.

- Quarterly Report on Business Activities of various Joint Venture Companies and Subsidiaries of NTPC.
- Quarterly Report on Compliance of various laws including show cause demand, prosecution notices.
- Quarterly Report on Compliance with Corporate Governance norms.
- Non-compliance of any regulatory, statutory or listing requirements and shareholders services such as non-payment of dividend, delay in share transfer, etc.
- Appointment of Key Managerial Personnel and information on recruitment and promotion of senior officers to the level of Executive Director which is just below the Board level and Company Secretary.
- Any significant development in Human Resources/ Industrial Relations like signing of wage agreement, implementation of Voluntary Retirement Scheme, etc.
- Information relating to major legal disputes.
- Highlights of important events from last meeting to the current meeting.
- Any other information as may be required to be presented to the Board for information or approval.

The important decisions taken at the Board / Committee meetings are communicated to the concerned departments promptly..

3. COMMITTEES OF THE BOARD OF DIRECTORS

With a view to ensure effective decision making, the Board of Directors has constituted various Committees to have focused attention on crucial issues. Some of these committees have been constituted voluntarily.

3.1 Audit Committee

The composition, quorum, scope, etc. of the Audit Committee are in line with the Companies Act, 2013, SEBI LODR and Guidelines on Corporate Governance as issued by Department of Public Enterprises, Govt. of India.

Composition

As on 31st March 2020, the Audit Committee comprised the following members:-

S.No.	Name of the Member	Designation
1	Shri Vinod Kumar, Independent Director	Chairman of the Committee
2	Shri M.P. Singh, Independent Director	Member
3	Shri P.K.Deb, Independent Director	Member
4	Shri Ashish Upadhyaya (Add. Secretary & Finance Advisor, MoP)	Member

Director (Finance) is permanent invitee to the Audit Committee meetings. Head of Internal Audit Department and Senior Executives are also invited to the Audit Committee Meetings for interacting with the members of the Committee, if required. The Joint Statutory Auditors and Cost Auditors of the Company are also invited to the meetings of the Audit Committee while discussing financial statements/ financial results and Cost Audit Reports respectively.

The Company Secretary acts as the Secretary to the Committee.

Scope of Audit Committee

The scope of Audit Committee is as follows:-

1. Before commencement of Audit, discussion with the auditors about the nature and scope of audit and after the completion of Audit, deliberation on area of concern.
2. Provide an open avenue of communication between the independent auditors, internal auditors and the Board of Directors.
3. Approval or any subsequent modification of transactions of the company with related parties
4. Scrutiny of inter-corporate loans and investments
5. Reviewing, with the management, the quarterly financial statements before submission to the Board for approval.
6. Reviewing, with the management, the annual financial statements and draft auditor's report thereon before submission to the board for approval, with particular reference to:
    a. Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (c) of sub-section 3 of section 134 of the Companies Act, 2013;
    b. Changes, if any, in accounting policies and practices and reasons for the same;
    c. Major accounting entries involving estimates based on the exercise of judgment by management;
    d. Significant adjustments made in the financial statements arising out of audit findings;
    e. Compliance with listing and other legal requirements relating to financial statements;
    f. Disclosure of related party transactions;
    g. Qualifications in the draft audit report.

7. Noting the appointment and removal of independent auditors. Recommending audit fee of independent auditors and also approval for payment for any other service.

8. Recommending to the Board the appointment and remuneration of the cost auditors of the Company.

9. Review of observations of C&AG including status of Government Audit paras.

10. Reviewing with the management, statement of uses/ application of funds raised through an issue (public issue, rights issue, preferential issue etc.), statement of funds utilised for purposes other than those stated in the offer documents/prospectus/notice and the report submitted by the monitoring agency monitoring the utilisation of proceeds of a public or rights issue, and making appropriate recommendations to the board to take up steps in this matter.

11. Valuation of undertakings or assets of the company, wherever it is necessary

12. Evaluation of internal financial controls and risk management systems.

13. To look into the reasons for substantial defaults in the payment to the depositors, debenture holders, shareholders (in case of non-payment of declared dividends) and creditors.

14. To review the functioning of the Whistle Blower mechanism.

15. Reviewing the findings of any internal investigations by the internal auditors into matters where there is suspected fraud or irregularity or a failure of internal control systems of a material nature and reporting the matter to the Board.

16. To review the follow up action taken on the recommendations of Committee on Public Undertakings (COPU) of the Parliament.

17. Review of:

    a. Management discussion and analysis of financial condition and results of operations;

    b. Management letters/ letters of internal control weaknesses; issued by the statutory auditors

    c. Internal Audit Reports relating to internal control weaknesses.

18. Oversight of the company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.

19. Review with the independent auditor the co-ordination of audit efforts to assure completeness of coverage, reduction of redundant efforts and the effective use of all audit resources.

20. Reviewing the adequacy of internal audit function, if any, including the structure of the internal audit department, staffing and seniority of the official heading the department, reporting structure coverage and frequency of internal audit.

21. Consider and review the following with the independent auditor and the management:

    a) The adequacy of internal controls including computerized information system controls and security, and

    b) Related findings and recommendations of the independent auditors and internal auditors, together with the management responses.

22. Consider and review the following with the management, internal auditor and the independent auditor:

    a) Significant findings during the year, including the status of previous audit recommendations.

    b) Any difficulties encountered during audit work including any restrictions on the -scope of activities or access to required information.

23. Review of appointment and removal of the Chief Internal Auditor.

24. Reviewing, with the management, the performance of the internal auditors and of the independent auditors and effectiveness of the audit process.

25. Review of internal audit observations outstanding for more than two years.

26. Reviewing the utilization of loans and/ or advances from/ investment by the holding company in the subsidiary exceeding rupees 100 crore or 10% of the asset size of the subsidiary, whichever is lower including existing loans / advances / investments.

27. To review compliance with the provisions of SEBI Insider Trading Regulations at least once in a financial year.

28. To verify that the systems for internal control are adequate and are operating effectively.

29. Any matter referred to it by the Board or any other terms of reference as amended by the Companies Act, 2013 & rules made thereunder, SEBI LODR and Guidelines issued by DPE.

Meetings and Attendance

During the financial year 2019-20, nine (9) meetings of the Audit Committee were held and details including attendance of members of the Committee are as follows:

Name of Member	Meeting Date									Total Meetings held during the tenure	No. of Meetings Attended
	3/5/2019	25/5/2019	11/6/2019	1/7/2019	10/8/2019	21/9/2019	9/11/2019	27/1/2020	7/2/2020		
Shri Vinod Kumar[1]	-	-	-	-	-	-	-	✓	✓	2	2
Shri M.P. Singh	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	9
Shri P.K. Deb	✓	✓	✓	✓	✓	✓	✓	✓	✓	9	9
Shri Ashish Upadhyaya[2]	-	-	-	-	-	-	-	X	✓	2	1
Shri S. Chander[3]	✓	✓	✓	-	-	-	-	-	-	3	3
Dr. Gauri Trivedi[4]	✓	X	✓	✓	✓	✓	✓	-	-	7	6

1. Appointed as member of the Audit Committee on 22/1/2020.
2. Appointed as Member of Audit Committee on 22/1/2020
3. Ceased to be Director on12/6/2019
4. Ceased to be Director on 15/11/2019

Dr.Gauri Trivedi, Chairperson of the Audit Committee was present in the Annual General Meeting held on 21st August, 2019 to answer the queries of the shareholders.

3.2 Stakeholders' Relationship Committee

This Committee considers and resolves the grievances of security holders of the Company inter-alia including grievances related to transfer of shares, non-receipt of Annual Report, non-receipt of dividend etc. The Committee also reviews measures taken for effective exercise of voting rights by shareholders, adherence to the service standards adopted by the listed entity in respect of various services being rendered by the Registrar & Share Transfer Agent and measures and initiatives taken by the listed entity for reducing the quantum of unclaimed dividends and ensuring timely receipt of dividend warrants/annual reports/ statutory notices by the shareholders of the company

Composition

As on 31st March 2020, this committee comprised following Directors:

S.No.	Name	Designation
1.	Shri M.P. Singh, Independent Director	Chairman of the committee
2.	Shri Subhash Joshi, Independent Director	Member
3.	Shri Shashi Shekhar, Independent Director	Member
4.	Shri A.K.Gautam, Director (Finance)	Member

Meeting and Attendance

During the financial year 2019-20, two (2) meetings of the Stakeholders' Relationship Committee were held and details including attendance of members of the Committee are as follows:

Name of Members	Meeting Date		Total Meetings held during the tenure	Meetings Attended	% of Attendance
	25/5/2019	9/11/2019			
Shri M.P. Singh	✓	✓	2	2	100%
Shri Shashi Shekhar	✓	✓	2	2	100%
Shri Subhash Joshi	✓	✓	2	2	100%
Shri K. Sreekant[1]	✓	-	1	1	100%
Shri A.K.Gautam[2]	-	✓	1	1	100%

1. Ceased to be Director on 12th August 2019
2. Appointed as Director on 18th October 2019.

Name and designation of Compliance Officer

The Board of Directors has appointed Ms. Nandini Sarkar, Company Secretary as the Company Secretary & Compliance Officer in terms of Regulation 6 of SEBI LODR.

Investor Grievances:

The Company has always valued its investor's relationship. During the financial year ending 31st March 2020, Company has attended its investor grievances expeditiously except for the cases constrained by disputes or legal impediments. The details of the complaints received, resolved and disposed off during the year are as under:

Particulars	Opening Balance	Received	Resolved	Pending
Complaints relating to				
Equity Shares	0	595	595	0
Bonus Debentures	0	849	849	0
Private Placement of Bonds	0	0	0	0
Public Issue of Bonds	0	87	87	0

3.3 Nomination and Remuneration Committee including PRP

As per the requirements of Section 178 of the Companies Act, 2013, Regulation 19 of SEBI LODR and DPE Guidelines, a Nomination & Remuneration Committee including Performance related Pay (PRP) has been constituted. The scope of the Committee includes approval of annual bonus/ variable pay pool and policy for its distribution across the executives and non-unionized supervisors within the prescribed limit in addition to scope as defined under the Companies Act, 2013 and SEBI LODR. The Committee also recommend to the Board, all remuneration, in whatever form, payable to senior management.

Being a Government Company, as per the Articles of Association, all Directors including Chairman & Managing Director are appointed by the Govt. of India. Their tenure and remuneration are also fixed by the Government of India. The remuneration of Functional Directors and employees of the Company is fixed as per extant guidelines issued by Department of Public Enterprises (DPE), from time to time. The Part time Non- official Independent Directors are paid sitting fees for attending Board and Committee meetings. As per the norms of Government of India, the Government Nominee Director is not entitled to get any remuneration/sitting fee from the Company.

As appointment of Directors are made by the Government of India, accordingly, evaluation of Directors are done by the Government of India. It may also be noted that Ministry of Corporate Affairs (MCA) vide notification dated 5th June, 2015, has exempted Government Companies from the provisions of section 178(2), (3) and (4) which requires formulation of criteria for determining qualifications, positive attributes, independence and annual evaluation of Directors & policy relating to remuneration of Directors.

In view of above, Nomination & Remuneration Committee including PRP has not formulated criteria for evaluation of performance of independent directors and the board of directors as required under Regulation 19 read with Schedule II Part D of the SEBI LODR.

As on 31st March 2020, the Nomination and Remuneration Committee including PRP comprised the following Members:

S. No.	Name	Designation
1.	Shri P.K. Deb, Independent Director	Chairman
2.	Shri Vinod Kumar, Independent Director	Member
3.	Dr.Bhim Singh, Independent Director	Member

Meeting and Attendance

During financial year 2019-20, five (5) meetings of Nomination and Remuneration Committee including PRP were held. Details of the meeting including attendance of members of the Committee are as follows:

Name of Member	Meeting Date					Total Meetings held during the tenure	Meetings Attended	% of attendance
	1/7/2019	10/8/2019	18/10/2019	8/11/2019	7/2/2020			
Shri P.K. Deb	✓	✓	✓	✓	✓	5	5	100%
Shri Vinod Kumar	✓	X	✓	✓	✓	5	4	80%
Dr.Bhim Singh[1]	-	-	-	-	✓	1	1	100%
Dr. Gauri Trivedi[2]	✓	✓	X	✓	-	4	3	75%

1. Appointed as member of the Committee on 21/01/2020.
2. Ceased to be Director on 15/11/2019.

3.4 Corporate Social Responsibility and Sustainability Committee-

This Committee has been constituted as per the requirements of Section 135 of the Companies Act, 2013 and DPE guidelines on sustainability (SD). CSR committee formulates and recommends the Corporate Social Responsibility & Sustainability Policy to the Board, along with the amount of expenditure to be incurred on the activities specified in the CSR & SD Policy and monitors the CSR Policy of the company apart from looking into the such matter as the Board may delegate from time to time.

As on 31st March 2020, the Committee comprised the following members:

S. No.	Name	Designation
1.	Shri Vinod Kumar, Independent Director	Chairman of the Committee
2.	Shri P.K.Deb, Independent Director	Member
3.	Shri Saptarshi Roy*, Director (HR)	Member

*Ceased to be Director on 31/3/2020.

NTPC's Policy on CSR & Sustainability can be viewed at the weblink: https://www.ntpc.co.in/sites/default/files/downloads/ntpc-policy-csr-sustainability.pdf.

Meeting and Attendance

During 2019-20, Six (6) meetings of the Committee for CSR & Sustainability were held and details including attendance of members of the Committee are as follows:

Name of Members	Meeting Date						No. of Meetings held during tenure	Total Meetings attended	% Attendance
	9/4/2019	1/7/2019	9/8/2019	9/11/2019	7/2/2020	19/3/2020			
Shri Vinod Kumar	✓	✓	X	✓	✓	✓	6	5	83.33%
Shri Saptarshi Roy[1]	✓	✓	✓	✓	✓	✓	6	6	100%
Shri P.K. Deb	✓	✓	✓	✓	✓	✓	6	6	100%
Dr. Gauri Trivedi[2]	✓	✓	✓	✓	-	-	4	4	100%
Shri Vivek Kumar Dewangan[3]	✓	-	-	-	-	-	1	1	100%
Shri Anurag Agarwal[4]	-	X	-	-	-	-	1	0	0%

1. Ceased to be Director on 31/3/2020
2. Ceased to be Director on 15/11/2019.
3. Ceased to be member of the CSR Committee consequent upon change in designation from Joint Secretary & FA to Joint Secretary (Thermal), MoP on 30th April, 2019.
4. Appointed as Director on 1/7/2019 and ceased to be Director on 12/7/2019

3.5 Risk Management Committee

Pursuant to Regulation 21 of SEBI LODR, Risk Management Committee has been constituted for risk assessment under the Risk Management Framework, monitoring and reviewing risk management plan/ framework as approved by the Board, informing the Board about the risk assessed and action required to be taken/ already taken for mitigating the risks on quarterly basis by the Chief Risk Officer (CRO) and taking up any other matter as directed by the Board from time to time. The terms of reference of the Committee has been amended to include review of cyber security risk.

The Risk Management Framework is being reviewed periodically by the Board. Details on risk management mechanism are given in the Management's Discussion and Analysis report annexed with the Directors' Report.

As on 31st March, 2020, the Committee comprised the following Members:

1.	Director (Projects)*
2.	Director (Operations)
3.	Head of Corporate Planning (CP)/ Chief Risk Officer(CRO), Member

* As on 31/3/2020, position of Director (Projects) was vacant. Director (Commercial) was having additional charge of Director (Projects).

Meeting and Attendance

During 2019-20, three (3) meeting of the Risk Management Committee were held and details including attendance of members of the Committee are as follows:

Name of Members	Meeting Date			No. of Meetings held during tenure	Total Meetings attended	% Attendance
	29/5/2019	17/9/2019	25/11/2019			
Shri S.K. Roy[1]	✓	✓	✓	3	3	100%
Shri P.K. Mohapatra[2]	✓	-	-	1	1	100%
Shri Prakash Tiwari	✓	✓	✓	3	3	100%
Head of Corporate Planning	✓	✓	✓	3	3	100%
Head of Mining[3]	✓	X	x	3	1	33.33%

1. Ceased to be Director on 30.11.2019
2. Ceased to be Director on 31.07.2019.
3. Ceased to be member of the Committee on 21/1/2020.

3.6 Other Committees of the Board of Directors:

Other sub-committees of the Board of Directors are as under:

S.No.	Name of the Committee	Role & Responsibility	Members (As on 31.03.2020)
1.	**Committee on Management Controls**	Review of significant deviations in project implementation and construction, operation and maintenance budgets etc.	1. Shri Shashi Shekhar, Independent Director & Chairman of the Committee 2. Director (Finance) 3. Director (Operations) 4. Shri M.P.Singh, Independent Director 5. Shri Vinod Kumar, Independent Director
2.	**Projects Sub-Committee**	To examine and give recommendations to the Board on proposals for Investment in New/ Expansion Projects and approves Feasibility Reports of new projects.	1. Director (Projects)*, Chairman of the Committee 2. Director (Finance) 3. Director (Operations) 4. Shri Subhash Joshi, Independent Director 5. Dr.Bhim Singh, Independent Director *Position Vacant
3.	**Committee of Functional Directors for Contracts**	Award of works or purchase contracts or incurring of commitments exceeding ₹ 150 crore but not exceeding ₹ 250 crore.	1. Chairman & Managing Director 2. Director (HR) 3. Director (Commercial) 4. Director (Projects)* 5. Director (Operations) 6. Director (Finance) *Position Vacant
4.	**Contracts Sub-Committee**	Award of works or purchase contracts or incurring commitments of value exceeding ₹ 250 crore but not exceeding ₹ 500 crore, Consultancy assignments including foreign consultancy assignments exceeding ₹ 5 crore each and Appointment of Sponsor/ Agents for Overseas Consultancy Assignments involving sponsorship/ agency commission exceeding ₹ 5 crore each.	1. Chairman & Managing Director 2. Director (Projects)* 3. Director (Finance) *Position Vacant

5.	**Committee for Allotment and Post-Allotment Activities of NTPC's Securities**	To approve allotment, issue of Certificate(s)/Letter of allotment(s), transfer, transmission, re-materialisation, issue of duplicate certificate(s), consolidation/ split of NTPC's domestic and foreign Securities.	1. Director (HR) 2. Director(Finance)/ Director (Operations) 3. Director (Projects)/Director (Commercial)
6.	**Committee for Vigilance Matters**	To examine all the petitions which are submitted before the Board as appellate/ reviewing authority in terms of CDA rules. It also reviews other major complaints as referred to it from time to time other than complaints registered under whistle blower mechanism under purview of Chief Vigilance Officer.	1. Shri Subhash Joshi, Independent Director & Chairman of the Committee 2. Director (HR) 3. Dr.K.P.K.Pillay, Independent Director (Note- In case where Director (HR) acts as a Disciplinary Authority, any other whole-time Director as may be decided by the Chairman & Managing Director on case to case basis, shall be the member in place of Director (HR). Further, for vigilance cases, Chief Vigilance Officer is co-opted.)
7.	**Exchange Risk Management Committee**	To review the foreign currency loan portfolio, hedged and un-hedged exposures and effectiveness of hedging strategy, approve amendments in Exchange Risk Management Policy, new derivative instruments, hedging proposals etc.	1. Shri M.P. Singh, Independent Director & Chairman of the Committee 2. Director (Finance) 3. Director (Commercial)* 4. Shri P.K. Deb, Independent Director 5. Shri Shashi Shekhar, Independent Director (*In the absence of Director (Commercial), either Director (Projects) or Director (Operations) shall be the Member of the Committee.)
8.	**Committee for Guiding Acquisition of Power Assets**	To guide the process of acquisition of power assets and to make recommendation to the Board	1. Shri P.K.Deb, Independent Director & Chairman of the Committee 2. Shri Shashi Shekhar, Independent Director 3. Dr.K.P.K.Pillay, Independent Director 4. Director (Commercial) 5. Director (Finance) 6. Director (Projects)* 7. Shri Vivek Kumar Dewangan (Joint Secretary (Thermal), MoP) *Position Vacant
9.	**Committee of Directors on Fuel Management and Development & Operation of Coal Blocks**	To examine proposals for appointment of MDO, review of availability of fuel at NTPC Stations and to recommend measures for improvement etc.	1. Shri Subhash Joshi, Independent Director 2. Shri P.K.Deb, Independent Director 3. Shri Vinod Kumar, Independent Director 4. Director (Fin.) 5. Director (Commercial) 6. Director (Operations)
10.	**Committee for Considering the Proposal Having Financial Implication Beyond Provisions of the Contract**	For considering the proposal having Financial Implication beyond provisions of the Contract	1. Shri P.K.Deb, Independent Director & Chairman of the Committee 2. Shri Vinod Kumar, Independent Director 3. Dr. K.P.K.Pillay, Independent Director 4. Director (Projects)* 5. Director (Finance) *Position Vacant
11.	**Committee for Supervising Legal Matters**	For supervising legal matters and giving guidance regarding handling of legal matters	1. Dr. K.P.K.Pillay, Independent Director & Chairman of the Committee 2. Dr.Bhim Singh, Independent Director 3. Director (in charge of Legal Dept.) 4. Director (Commercial)

4. REMUNERATION OF DIRECTORS

The remuneration of Functional Directors and employees of the Company is fixed as per extant guidelines issued by Department of Public Enterprises (DPE), from time to time. The Part time Non- official Independent Directors are paid sitting fees for attending Board and Committee meetings. As per the norms of Government of India, the Government Nominee Directors are not entitled to get any remuneration/ sitting fee from the Company.

The Ministry of Power, Government of India vide their letter dated 8th August 2018 has conveyed approval for enhancement of sitting fee payable to Independent Directors from Rs. 20,000/- to Rs.40,000/- for attending each meeting of the Board and Rs.30,000/- for attending each meeting of the Committee.

No stock option was given to any Director during the financial year 2019-20.

Details of remuneration of Functional Directors for the financial year 2019-20 are given below:-

(in ₹)

Name of the Director	Salary	Benefits	Performance Linked Incentives[2]	Total[3]
Sh. Gurdeep Singh	63,33,153	22,07,839	30,68,735	1,16,09,727
Sh. Saptarshi Roy[1]	84,34,029	7,29,759	17,18,031	1,08,81,819
Sh. A.K. Gupta[2]	42,97,121	6,53,058	15,96,606	65,46,785
Sh. Susanta Kumar Roy[3]	68,48,076	7,26,582	17,34,743	93,09,401
Sh. P K Mohapatra[4]	55,03,653	3,13,818	16,81,411	74,98,882
Sh. Prakash Tiwari	38,68,413	15,71,286	15,92,143	70,31,842
Sh. A.K. Gautam[5]	21,67,005	2,89,290	-	24,56,296

1. Ceased to be Director on 31/03/2020, 2. Ceased to be Director on 31/07/2020, 3. Ceased to be Director on 30/11/2019, 4. Ceased to be Director on 31/07/2019, 5. Appointed as Director on 18/10/2019

Note:- 1.Performance linked incentives paid is based on the incentive scheme of the Company. The Company has not issued any stock options during the financial year 2019-20. 2. Besides above, Functional Directors are also entitled for medical benefit as per the applicable employees' rules of the company.

Details of payments towards sitting fee to Independent Directors during the financial year 2019-20 are given below:

Name of Independent Directors	Sitting Fees (Excluding GST) (Rs.)		
	Board Meeting	Committee Meeting	Total
Dr. Gauri Trivedi[1]	2,40,000	4,20,000	6,60,000
Sh. Seethapathy Chander[2]	80,000	90,000	1,70,000
Sh. P.K.Deb	4,40,000	10,80,000	15,20,000
Sh. M.P. Singh	4,40,000	5,40,000	9,80,000
Sh. Subhash Joshi	4,40,000	3,00,000	7,40,000
Sh. Vinod Kumar	3,60,000	5,70,000	9,30,000
Sh. Shashi Shekhar	3,20,000	3,30,000	6,50,000
Dr. K.P. K. Pillay	4,00,000	4,80,000	8,80,000
Dr. Bhim Singh	4,40,000	3,60,000	8,00,000
Total	**31,60,000**	**41,70,000**	**73,30,000**

1. Ceased to be Director on 15/11/2019
2. Ceased to be Director on 11/06/2019

5. MATERIAL SUBSIDIARY:

The Company has formulated a Policy for determining 'Material' Subsidiaries as per Regulation 16(1)(c) of SEBI LODR. The same is available at the weblink: http://www.ntpc.co.in/download/policy-determining-material.

In the year 2019-20, the Company had no 'Material Subsidiary' as defined under Regulation 16(1) (c) of SEBI LODR or the subsidiaries as defined under Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises, Govt. of India.

6. FAMILIARIZATION PROGRAMME FOR DIRECTORS

With a view to augment leadership qualities, knowledge and skills, Directors are being imparted training organised from time to time by the Company and other agencies/ institutions. The training also enables them to get a better understanding of Sector as well as the Company. Directors are also briefed from time to time about changes/ developments in Indian as well as international corporate and economic scenario including Legislative/ Regulatory changes.

At the time of induction, new Directors undergo a familiarization programme which highlights organisation structure, subsidiaries/ joint ventures, business model of the company, risk profile of the business etc. Web link of details of familiarization programme imparted to independent directors is as under: https://www.ntpc.co.in/en/Familiarisation%20Program%20to%20Directors.

7. GENERAL BODY MEETINGS

Annual General Meetings

Date, time and location where the last three Annual General Meetings along with details of Special Resolutions passed are as under:

Date & Time	20th September, 2017	20th September, 2018	21st August, 2019
Time	10:30 A.M.	10:30 A.M.	10.30 A.M.
Venue	Manekshaw Centre, Parade Road, New Delhi - 110010	Manekshaw Centre, Parade Road, New Delhi - 110010	Manekshaw Centre, Parade Road, New Delhi - 110010
Special Resolution	i) Authorization to Board to raise funds upto Rs. 15,000/- Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue. ii) Approval of Shareholders for amending Articles of Association of the Company with a view to insert provision regarding Consolidation and re-issuance of debt Securities.	Authorization to Board to raise funds upto Rs. 12,000/- Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.	i) Re-appointment of Dr.Gauri Trivedi, Independent Director ii) Enhancing borrowing limit from Rs.1,50,000 Crore to Rs. 2,00,000 Crore. iii) Authorisation to the Board for creation of mortgage and /or charge over the movable and immovable properties of the Company. iv) Authorization to Board to raise funds upto Rs. 15,000/- Crore through issue of secured/ unsecured, redeemable, taxable/ tax-free, cumulative/ non-cumulative, non-convertible Bonds/ Debentures on Private Placement Basis in one or more tranches through Private Placement in domestic market and authorising the Board to decide the terms and conditions of the Issue.

The Annual General Meeting held on 21st August, 2019, was attended by Partner/authorised representative of two Statutory Auditors firms. Leave of absence was given to the other statutory auditors, as per their request pursuant to section 146 of the Companies Act 2013. Meeting was also attended by the Scrutiniser appointed by the Board for E-voting/ Polling at AGM and Secretarial Auditor of the Company.

In accordance with Regulation 44 of the SEBI LODR and Section 108 of Companies Act 2013, e-voting facility was provided to the shareholders, in respect of resolutions passed at the AGM held on 21st August, 2019 . In addition to above, facility of voting through electronic mode (through tablets) was also provided to those shareholders, who did not, cast their vote through remote e-voting.

Special Resolution passed through Postal Ballot

No special resolution was passed during last year through postal ballot. There is no immediate proposal for passing any special resolution through Postal Ballot.

8. DISCLOSURES

(a) Related Party Transaction: -

The Company has formulated a Related Party Transaction (RPT) Policy containing criterion of deciding Materiality of Related Party Transactions and dealing with Related Party Transactions.

The RPT Policy is available at the web link: https://www.ntpc.co.in/sites/default/files/downloads/related-party-transaction-policy-ntpc.pdf

Review of Related Party Transactions is being done periodically by the Audit Committee. The details of Related Party Transactions are given in form AOC-2 forming part of Board's Report.

(b) The Company has broadly complied with all the requirements of SEBI LODR, the Companies Act, 2013 except as mentioned above in the Report. The Company has complied with the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises, Ministry of Heavy Industries and Public Enterprises, Government of India.

(c) The Company had received notices from the NSE and BSE for non-compliance with the provisions of Regulation 17 (1) of the SEBI LODR in respect of Q2 and Q3 of 2018-19. As powers of appointment of independent directors are vested with the Government of India and compliance was not within the powers of the Board of Directors , request was made to the Stock Exchanges for waiver of the Penalty. Except mentioned above, there were no penalties imposed on the Company by any statutory authorities for non-compliance on any matter related to Indian capital markets, during the last three years.

(d) The Company has complied with corporate governance requirements specified in Regulations 17 to 27 and clauses (b) to (i) of sub-regulation (2) of Regulation 46 of SEBI LODR. Non-compliance, if any, of the Regulations of SEBI LODR has been specifically mentioned in the Report. The discretionary requirements as specified in Part E of Schedule II adopted by the Company are at Annex-II of the Report.

(e) Schedule of Compliances with Presidential Directive issued during the financial year 2019-20 and during last three years preceding the financial year 2019-20 is at Annex-III.

(f) **Credit Ratings:**

Domestic Credit Instruments:

	CRISIL	ICRA	CARE
Long Term Loans	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable
Domestic Bonds	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable
Commercial Papers	CRISIL A1+	ICRA A1+	CARE A1+
Bank Guarantees	CRISIL A1+	ICRA A1+	CARE A1+
Letter of Credit	CRISIL A1+	ICRA A1+	CARE A1+
Cash credit/ WCL /Bill Discounting /Factoring	CRISIL AAA/ Stable	ICRA AAA/ Stable	CARE AAA/ Stable

There has not been any revision in credit rating of above mentioned domestic credit instruments during the relevant financial year.

International Credit Instruments:

	S&P	Moody's	Fitch
Company Rating	B B B - / Stable	Baa3/ Negative	BBB-/ Negative
Rating of USD 6 billion MTN Programme	BBB-	Baa3	BBB-

(g) Disclosure under the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act 2013:

No. of cases under process/ investigation as on end of the 2018-19	No. of cases reported during the 2019-20	No. of cases disposed-off during the 2019-20	No. of cases under process/ investigation as on end of the 2019-20
2	2	4	0

(h) Dis-qualification of Directors:

M/s A. Kaushal & Associates, Practising Company Secretary certified that none of the Directors on the Board of the Company have been debarred or disqualified from being appointed or continuing as Directors of the Companies by the SEBI/Ministry of Corporate Affairs/ any such authority as on 31st March, 2020. Copy of certificate is enclosed as Annexure-IV.

(i) During the year 2019-20, there was no Preferential Allotment / Qualified Institutional Placement of Shares which is required to be reported under Regulation 37(A) of the SEBI LODR.

(j) During the year 2019-20, there was no instance where the recommendation of the Committee of the Board was not accepted by the Board, which was mandatorily required.

(k) During the year 2019-20, total fee of ₹ 4.88 Crore was paid to the Statutory Auditors by the Company. Further, the statutory auditors of the company have not carried out any work of subsidiary companies.

9. CEO/CFO CERTIFICATION

As required under Regulation 17(8) of SEBI LODR, the certificate duly signed by Chairman & Managing Director and CFO was placed before the Board of Directors at the meeting held on 27th June 2020 and the same is annexed to the Corporate Governance Report.

10. MEANS OF COMMUNICATION

The Company communicates with its shareholders through its Annual Report, General Meetings and disclosures through Stock Exchanges & its own Website. The Company also communicates with its institutional shareholders through a combination of analysts briefing and individual discussions and also participation in investor conferences from time to time. Annual analysts and investors meet is held normally during the month of August where Board of the Company interacts with the investing community. Financial results are discussed by way of conference calls regularly after approval of financial results of each quarter.

Information, latest updates and announcements regarding the Company can be accessed at company's website: www.ntpc.co.in including the following:-

- Quarterly/ Annual Financial Results
- Quarterly Shareholding Pattern
- Quarterly Corporate Governance Report
- Transcripts of conferences with analysts
- Corporate Disclosures made from time to time to the Stock Exchanges

The Company's official news releases, other press coverage, presentations made to institutional investors or to the analysts are also hosted on the Website.

During 2019-20, Quarterly Results have been published as per details given below:

Quarter	Date of Publication	Newspaper (s)
Q1	11/08/2019 & 12/08/2019	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economics Times (English), Business Line (English), DNA Money (English), Free Press Journal (English), Mail Today (English), Pioneer (English), Milennium Post (English), Navbharat (Hindi), Jansatta (Hindi), Hindustan (Hindi), Dainik Bhasker (Hindi).
Q2	10/11/2019 & 11/11/2019	Financial Express (English), Hindustan Times (English), Business Standard (English & Hindi), Mint (English), The Times of India (English), Economics Times (English), Business Line (English), Hindu (English), Free Press Journal (English), Dainik Jagran (Hindi), Jansatta (Hindi), Hindustan (Hindi), Dainik Bhasker (Hindi).
Q3	08/02/2020, 09/02/2020 & 10/02/2020	Financial Express (English), Hindustan Times (English), Mint (English), Business Standard (English & Hindi), The Times of India (English), Economics Times (English), Business Line (English), Mid Day (English), The Pioneer (English), Milennium Post (English), Telegraph (English), Amar Ujala (Hindi), Jansatta (Hindi), Hindustan (Hindi).

11. CODE OF CONDUCT:

The Company has in place Code of Conduct for Directors and Senior Management Personnel (Code) with a view to enhance ethical and transparent process in managing the affairs of the Company. This code is applicable to all the Board Members including Government Nominee(s) and the Independent Director(s) and the Senior Management Personnel of the Company. A copy of the Code of Conduct is available at the website of the Company at the web link: http://www.ntpc.co.in/en/investors/code-of-conduct.

Declaration as required under Regulation 34 (3) Schedule V of the SEBI (LODR) Regulations, 2015

The members of the Board and Senior Management Personnel have affirmed compliance of the Code of Conduct for Board Members & Senior Management Personnel for the financial year ended on 31st March, 2020.

New Delhi
20th May, 2020

(Gurdeep Singh)
Chairman & Managing Director

12. CODE OF INTERNAL PROCEDURES AND CONDUCT FOR PREVENTION OF INSIDER TRADING

Pursuant to Regulation 9(1) of SEBI (Prohibition of Insider Trading) Regulations, 2015 as amended by the SEBI (Prohibition of Insider Trading) (Amendment) Regulations, 2018, the Board has laid down Internal Code of Conduct for Prevention of Insider Trading in dealing with Securities of NTPC Limited (Insider Trading Code) with the objective that insiders of the company shall not derive any benefit or assist others to derive any benefit from the access to and possession of Unpublished Price Sensitive Information (UPSI) about the Company which is not in public domain. Company Secretary has been designated as Compliance Officer for this Insider Trading Code. Further, in line with the SEBI Regulations, a "Code of Practices and Procedures for Fair Disclosure Of UPSI" & "Policy for Determination of Legitimate Purposes" have also been formulated by the Board of Directors. Under the "Code of Practices and Procedures for Fair Disclosure Of UPSI", Company Secretary/ General Manager (Finance-ISD) or any other person authorised by the Chairman & Managing Director shall be responsible for prompt dissemination of information and disclosure of Unpublished Price Sensitive Information. Copy of the Insider Trading Code is available on following web-link: https://www.ntpc.co.in/en/investors/insider-trading.

In order to strengthen the internal controls for monitoring & enforcing compliance with the Insider Trading Code, an IT enabled system has been installed, which help in mapping of designated employees, monitors compliance with the provisions of the Insider Trading Code by the designated employees, disseminates information of trading windows, periodic disclosures, database of persons or entities as the case may be with whom information is shared etc.

13. WHISTLE BLOWER POLICY

The Company has a Board approved 'Whistle Blower Policy' for directors and employees to report to the management concerns about unethical behaviour, actual or suspected fraud or violation of the company's code of conduct or ethics policy. It also provides safeguards against victimization of employees, who avail the mechanism and for direct access to the Chairman of the Audit Committee.

No personnel of the company had been denied access to the Chairman of audit committee. The Whistle Blower Policy is available at the web link: https://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy.pdf.

14. DIRECTORS AND OFFICERS INSURANCE

As per approval accorded by the Board of Directors in its 263rd meeting, NTPC is taking Directors and Officers insurance Policy (D&O Policy) every year. Present D&O Policy is for ₹ 250 Crore and it covers Independent Directors also. The Board had delegated power to decide extent of coverage, settle terms and conditions etc. to the Chairman & Managing Director or Director (Finance).

15. SECRETARIAL AUDIT

Secretarial Audit Report, given by a Company Secretary in Practice for the FY 2019-20 is enclosed with the Directors' Report.

16. SECURITYHOLDERS' INFORMATION

i) Annual General Meeting

Date : 24th September, 2020

Time : 10.30 a.m.

Venue : The Company is conducting meeting through Video Conferencing / Other Audio Visual means pursuant to the MCA Circular dated May 5, 2020 and as such there is no requirement to have a venue for the AGM. For details please refer to the Notice of this AGM.

Financial Calendar for FY 2020-21

Particulars	Date
Accounting Period	1st April , 2020 to 31st March , 2021
Unaudited Financial Results for the first three quarters	Announcement within stipulated period under SEBI LODR
Fourth Quarter Results	Announcement within stipulated period under SEBI LODR
AGM (Next year)	August, 2021 (Tentative)

ii) Book Closure

The Register of Members and Share Transfer Books of the Company will remain closed from 18th September, 2020 to 24th September, 2020 (both days inclusive).

iii) Payment of Dividend & Record date

The Board of Directors of the Company has recommended payment of final Dividend of ₹ 2.65 per share (26.5%) on the paid-up share capital for the financial year ended 31st March, 2020 in addition to the Interim Dividend of ₹ 0.50 per share (5%) on the paid-up share capital paid on 31st March 2020.

The Company has fixed 14th August, 2020 as record date for payment of final dividend. The final dividend on equity shares, if declared at the Annual General Meeting, will be paid on 3rd October, 2020 to the Members whose names appear on the Company's Register of Members on record date.

iv) Dividend History

Year	Total paid-up capital (₹ in crore)	Total amount of dividend paid (₹ in crore) and amount per share	Date of AGM in which dividend was declared	Date of payment of Dividend (Interim and Final)
2014-15	8245.46	2061.38 (₹ 2.50)	30/01/2015* 18/09/2015	30/01/2015* 18/09/2015
2015-16	8245.46	2762.22 (₹ 3.35)	29/01/2016* 20/09/2016	15/02/2016 30/09/2016
2016-17	8245.46	3941.33 (₹ 4.78)	08/02/2017* 20/09/2017	22/02/2017 29/09/2017
2017-18	8245.46	4221.67 (₹ 5.12)	31/01/2018* 20/09/2018	15/02/2018 01/10/2018
2018-19	9894.56**	5,425.52 (₹ 6.06)	30/01/2019* 21/08/2019	14/02/2019 03/09/2019
2019-20	9894.56**	494.73# (Re.0.50)	21/3/2020*	31/03/2020

* Date of Board Meeting in which interim dividend was declared. # amount represents the interim dividend paid for the year 2019-20.

**paid up share capital was increased consequent upon Bonus issue.

v) Listing on Stock Exchanges:

NTPC equity shares are listed on the following Stock Exchanges:

National Stock Exchange of India Limited Address: Exchange Plaza, Plot No. C/1, G Block, Bandra (E), Mumbai - 400051 **Scrip Code of NTPC: NTPC EQ**	**BSE Limited** Address: Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai - 400001 **Scrip Code of NTPC: 532555**

Stock Code : ISIN – INE733E01010

The Annual Listing Fee for the financial year 2020-21 have been paid to National Stock Exchange of India Limited and BSE Limited.

Details of Listing of Domestic Bonds:

Series of Bonds	Listed on
32, 34 to 36, 38 to 49, 53	National Stock Exchange of India Limited
37	BSE Limited
50 to 52, 54 to 69	National Stock Exchange of India Limited and BSE Limited

Details of Listing of Bonds issued under the MTN Programme

S.No.	Series	ISIN No.	Name of Bond	Listed on Stock Exchanges
1	Euro Bond-II	XS0648477593	USD 500 million 5.625% Notes due 2021	SGX, India INX & NSE IFSC
2	Euro Bond-III	XS0835676353	USD 500 million 4.75% Notes due 2022	SGX, India INX & NSE IFSC
3	Euro Bond-IV	XS1143390679	USD 500 million 4.375% Notes due 2024	SGX, India INX & NSE IFSC
4	Euro Bond-V	XS1372846003	USD 500 million 4.25% Notes due 2026	SGX, India INX & NSE IFSC
5	Euro Bond-VI	XS1467374473	INR 20000 million 7.375% Notes due 2021	SGX, LSE, India INX & NSE IFSC
6	Euro Bond-VII	XS1551677260	EUR 500 million 2.75% Notes due 2027	SGX, FSE, India INX & NSE IFSC
7	Euro Bond-VIII	XS1604199114	INR 20000 million 7.25% Notes due 2022	SGX, LSE, India INX & NSE IFSC
8	Euro Bond-IX	XS1792122266	USD 400 million 4.50% Notes due 2028	SGX, LSE, India INX & NSE IFSC
9	Euro Bond-X	XS1967614469	USD 450 million 3.75% Notes due 2024	SGX, India INX & NSE IFSC

SGX	**Singapore Exchange Ltd.,** SGX Centre Office, 2 Shenton Way, #02-02, SGX Centre 1, Singapore 068804
India INX	INDIA INTERNATIONAL EXCHANGE (IFSC) LTD 1st Floor, Unit No. 101, The Signature,Building no. 13B, Road 1C, Zone 1, GIFT SEZ, GIFT City, Gandhinagar, Gujarat – 382355
NSE IFSC	NSE IFSC Limited, Unit No.1201, Brigade International Financial Centre, 12th floor, Block-14, Road 1C, Zone -1, GIFT SEZ, Gandhinagar, Gujarat - 382355
LSE	London Stock Exchange 10 Paternoster Square, London EC4M 7LS, United Kingdom
FSE	Deutsche Börse AG, 60485 Frankfurt/Main

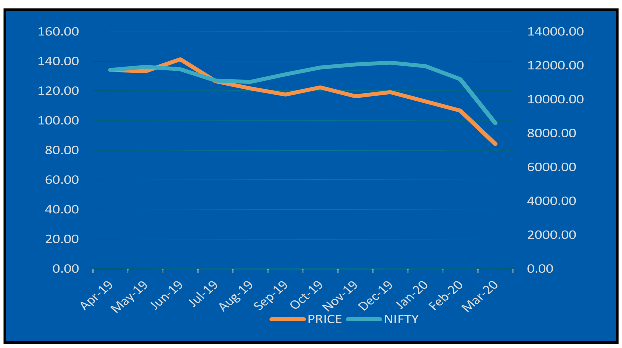
Listing fees to the above exchanges in respect of the securities was paid (where ever applicable) at the time of the listing of the securities.

vi) Market Price Data :

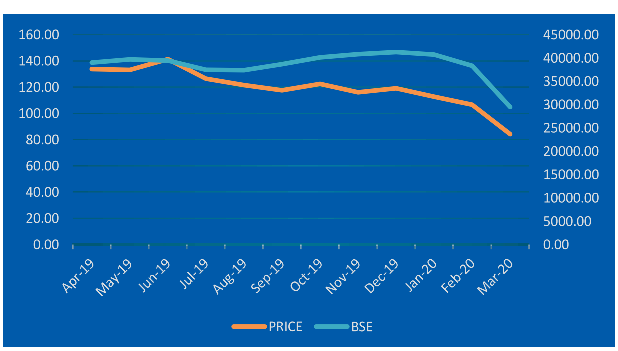
Month	BSE				NSE				INDEX	
	Price (in ₹)			Nos.	Price (in ₹)			Nos.		
	HIGH	LOW	CLOSE	Volume	HIGH	LOW	CLOSE	Volume	BSE	NSE
Apr-19	138.30	131.55	133.65	23802839	138.00	131.45	134.05	211050013	39031.55	11748.15
May-19	136.70	122.50	133.20	10700169	136.65	122.40	133.25	240944944	39714.20	11922.8
Jun-19	141.95	131.50	141.35	14874331	142.00	131.40	141.35	193917714	39394.64	11788.85
Jul-19	145.85	125.60	126.50	10584365	145.85	125.50	126.55	361247627	37481.12	11118
Aug-19	127.70	113.80	121.70	7281451	127.75	113.85	121.65	292260581	37332.79	11023.25
Sep-19	129.55	114.40	117.65	7983660	129.65	114.05	117.50	248814813	38667.33	11474.45
Oct-19	124.20	114.80	122.40	6260557	124.20	114.60	122.40	208891779	40129.05	11877.45
Nov-19	123.20	114.85	116.10	12183211	123.20	114.80	116.35	184273477	40793.81	12056.05
Dec-19	119.35	109.70	119.05	3604442	119.70	109.70	119.05	153875354	41253.74	12168.45
Jan-20	125.00	110.90	112.80	8758599	125.00	110.90	112.85	283403874	40723.49	11962.1
Feb-20	118.85	103.90	106.55	7728297	118.90	103.80	106.65	381517766	38297.29	11201.75
Mar-20	110.95	74.00	84.20	15017858	111.00	73.20	84.20	677029175	29468.49	8597.75

vii) Performance in comparison to indices

NSE NIFTY 50 and NTPC Share Price



BSE Sensex and NTPC Share Price



viii) (a) Registrar and Transfer Agent for Equity Shares,

M/s Alankit Assignments Limited,
Alankit House, 4E/2, Jhandewalan Extension, New Delhi-110055

Contact person:
Shri Mahesh Pandey, Shri Surinder Sharma
Tel No.: 011-42541234 Fax No.: 011-41543474
E-mail: alankit_ntpc@alankit.com

(b) Registrar and Transfer Agent for Tax Free Bonds (Series 50) and Bonus Debentures (Series 54) and Tax Free Bonds 2015 (Series 56).

KFin Technologies Private Limited
Selenium Tower B, Plot No. 31 & 32,
Gachibowli Financial District, Nanakramguda,
Serilingampally Hyderabad-500008
Phone No: 040-67161518; Fax: (+91 40) 2343 1551
Email: einward.ris@kfintech.com
Website: www.kfintech.com

(c) Registrar and Transfer Agent for Bonds (Series 19 to 26)

MAS Services Ltd.
T-34, 2nd Floor, Okhla Industrial Area, Phase-II,
New Delhi-110020.
Phone No: 011-26387281 / 82 / 83;
Fax: 011-26387384
Email: sm@masserv.com; info@masserv.com
Website: www.masserv.com

(d) Registrar and Transfer Agent for Bonds (Series 13A, 13B, 16, 17, 27 to 49, 51 to 53, 55 and 57 to 69

Beetal Financial & Computer Services Pvt. Ltd.
99, Madangir, Near Dada Harsukh Das Mandir
New Delhi-110062.
Phone No: 011-29961281, 011-29961282
Fax: 011-29961284
Email: beetalrta@gmail.com

ix) Share Transfer System

In terms of Regulation 40(1) of SEBI Listing Regulations, as amended, securities can be transferred only in dematerialized form w.e.f. April 1, 2019, except in case of request received for transmission or transposition of securities. Members holding shares in physical form are requested to consider converting their holdings to dematerialized form. Transfers of equity shares in electronic form are effected through the depositories with no involvement of the Company.

x) Transfer of Unclaimed Amount of Dividend to Investor Education and Protection Fund (IEPF)

In accordance with Section 125 of the Companies Act, 2013, during the financial year 2019-20, an amount of ₹ 29.23 lakh pertaining to unclaimed final dividend for financial year 2011-12 have been transferred to Investor Education and Protection Fund.

The Company has uploaded the details of shareholders/ depositors of the Company containing information like name, address, amount due to be transferred to IEPF and due date of transfer of amount to IEPF on its website. The Company has been issuing notices in the newspapers from time to time in order to invite attention of the shareholders who have not preferred their claims, to submit their claims towards the unpaid and unclaimed dividend.

xi) Transfer of Shares to IEPF :

In terms of Section 124(6) of the Companies Act, 2013 and IEPF Authority (Accounting, Audit, Transfer and Refund) Rules, 2016 as amended from time to time (IEPF Rules), the shares in respect of which the dividend has not been paid or claimed for a period of seven years or more, is required to be transfered to Investor Education and Protection Fund (IEPF) Authority account.

In line with the provisions Section 124(6) and rules made thereunder as well as in accordance with the circulars/ notifications issued by the MCA from time to time, during the financial year 2019-20, 193105 shares of 1732 shareholders were transferred to the DEMAT Account of the IEPF Authority opened with CDSL. Details of the shareholders whose shares were transferred to the IEPF Account is available on the website at the following link: https://www.ntpc.co.in/en/Investors/miscellaneous-download. Members may check their details on the aforesaid web-link.

xii) Claim from IEPF Account:

Any person, whose shares, unclaimed dividend, matured deposits, matured debentures, application money due for refund, or interest thereon, sale proceeds of fractional share, redemption proceeds of preference shares etc. has been transferred to the IEPF , may claim the shares under provision to sub-section (6) of section 124 or apply for refund under clause (a) of sub-section (3) of section 125 or under proviso to sub-section (3) of section 125, as the case may be, to the Authority making an online application in Form IEPF-5. Detailed procedure regarding claiming shares from IEPF account is available on NTPC website at the following link: https://www.ntpc.co.in/en/investors/procedure-claiming-dividend-shares-iepf-authority-0.

xiii) Divestment of NTPC's Equity Shares by Government of India

During the financial year 2019-20, Government of India has divested 5.39% of the paid-up capital in NTPC.

Particulars	Month	% holding sold
CPSE ETF	July 2019	1.91%
BHARAT 22 ETF	October 2019	0.36%
CPSE ETF	February 2020	3.12%

xiv) Debenture Trustees for various Series

For Series 17, 44 to 50(TFB-2013), 53 to 55, 57 to 66 Vistra ITCL (India) Ltd. (Formerly known as IL&FS Trust Company Limited) The IL&FS Financial Centre, Plot No. C-22, G-Block, Bandra – Kurla Complex, Bandra (East), Mumbai – 400051 Tel: (+91 22) 26533908 Fax: (+91 22) 26533297 E-mail: itclcomplianceofficer@ilfsindia.com Website: www.itclindia.com	**For Series 20 to 43, 51, 52 and 56 (TFB-2015)** IDBI Trusteeship Services Limited Asian Building, Ground Floor, 17, R. Kamani Marg, Ballard Estate, Mumbai – 400 001 Tel : +91 22 4080 7000 Fax : +91 22 6631 1776 E-mail : itsl@idbitrustee.com Website: www.idbitrustee.com **For Series 67 to 69** AXIS TRUSTEE SERVICES LTD. GDA House, Plot No. 85, Axis House, Bombay Dyeing Mills Compound, Pandurang Budhkar Marg, Worli, Mumbai- 400 025 Email: debenturetrustee@axistrustee.com Website: www.axistrustee.com

xv) **Distribution of Shareholding**

Shares held by different categories of shareholders and according to the size of holdings as on 31st March 2020 are given below:

According to Size

a. Distribution of shareholding according to size, % of holding as on 31st March, 2020:

Number of shares	Number of shareholders	% of shareholders	Total No. of shares	% of shares
1-5000	601518	99.384	145804644	1.474
5001-10000	2003	0.331	13727310	0.139
10001-20000	669	0.111	9342718	0.094
20001-30000	179	0.030	4349012	0.044
30001-40000	85	0.014	2899999	0.029
40001-50000	72	0.012	3280586	0.033
50001-100000	166	0.027	11999033	0.121
100001 and above	552	0.091	9703153978	98.066
Total	**605244**	**100.000**	**9894557280**	**100.000**

b. **Shareholding pattern on the basis of ownership:**

Category	As on 31.03.2019			As on 31.03.2020			
	No of shareholders	Total Shares	%	No of shareholders	Total Shares	%	Change
GOVERNMENT OF INDIA	1	5581167271	56.41*	1	5048097508	51.02	-5.39
INDIAN FINANCIAL INSTITUTIONS/ BANK	36	1254883764	12.68	28	1129080697	11.41	-1.27
MUTUAL FUNDS	32	1520472666	15.37	36	1965942572	19.87	4.50
FOREIGN PORTFOLIO INVESTORS/ FII	537	1135551735	11.48	527	1250976561	12.64	1.16
RESIDENT INDIVIDUALS	535520	153815432	1.55	593432	179695537	1.81	0.26
BODIES CORPORATES	1912	103748293	1.05	1902	22431972	0.23	-0.82
INSURANCE COMPANIES	21	66120794	0.67	34	213509977	2.16	1.49
TRUSTS	55	30079729	0.3	52	50300499	0.51	0.21
H U F	10010	4761007	0.05	4	120	0	-0.05
Others	13565	43956589	0.44	9228	34521837	0.35	-0.09
	561689	**9894557280**	**100**	**605244**	**9894557280**	**100**	**0.00**

(* including 0.32% kept in separate demat account as on 31.03.2019.)

c. **Major Shareholders**

Details of Shareholders holding more than 1% of the paid-up capital of the Company as on 31st March, 2020 are given below:

Name of the Share Holder	No. of Shares	%	Category
PRESIDENT OF INDIA	5048097508	51.02	INDIAN PROMOTER
LIFE INSURANCE CORPORATION OF INDIA P & GS FUND	1032663960	10.44	FI
ICICI PRUDENTIAL VALUE FUND SERIES 8	735585649	7.43	MUTUAL FUND
HDFC TRUSTEE COMPANY LTD. A/C HDFC TOP 100 FUND	421546989	4.26	MUTUAL FUND
RELIANCE CAPITAL TRUSTEE CO LTD.A/C RELIANCE POWER & INFRA FUND	260053226	2.63	MUTUAL FUND
SBI-ETF SENSEX	124853527	1.26	MUTUAL FUND
T. ROWE PRICE INTERNATIONAL STOCK FUND	108456571	1.10	FOREIGN PORTFOLIO INVESTOR
ADITYA BIRLA SUN LIFE TRUSTEE PRIVATE LIMITED	105668928	1.07	MUTUAL FUND

xvi) Dematerialisation of Shares and Liquidity

The shares of the Company are in compulsory dematerialised segment and are admitted with both the Depositories i.e. National Securities Depository Ltd. (NSDL) and Central Depository Services (India) Limited (CDSL).

In pursuance of Article 7 of the Articles of Association of the Company and as per Rule 6 of the Companies (Share Capital and Debentures) Rules, 2014, the Company has prescribed a fee of ₹ 50/- per share/ bond certificate on issue of certificates on splitting/ consolidation/ rematerialisation/ duplicate on loss of shares/ bonds.

Secretarial Audit Report for Reconciliation of the Share Capital of the Company obtained from Practising Company Secretary has been submitted to Stock Exchanges within stipulated time.

No. of shares held in dematerialized and physical mode as on 31st March, 2020 are as under:

TYPE	HOLDERS	SHARE	% HOLDING
DEMAT	603574	9894470525	99.9991
PHYSICAL	1670	86755	0.0009
TOTAL	**605244**	**9894557280**	**100**

xvii) The names and addresses of the Depositories are as under:

1. National Securities Depository Ltd.
   Trade World, 4th Floor, Kamala Mills Compound
   Senapathi Bapat Marg, Lower Parel, Mumbai-400 013
2. Central Depository Services (India) Limited
   Phiroze Jeejeebhoy Towers
   28th Floor, Dalal Street, Mumbai-400 023

xviii) Demat Suspense Account:

Details of shares/ debentures in the suspense accounts opened and maintained after Initial Public Offering, Further Public Offering of Equity Shares of NTPC and Bonus Debentures as on 31st March, 2020 is furnished below:

Details of "NTPC LIMITED – IPO – Unclaimed Shares Demat Suspense Account" (account opened and maintained after IPO):

Opening Balance (as on 01/04/2019)		Requests Disposed off during 2019-20		Closing Balance (as on 31/03/2020)	
Cases	Shares	Cases	Shares	Cases	Shares
9	2072	4	888*	5	1184

*Transferred to IEPF authority.

Details of "NTPC LIMITED – FPO Unclaimed Shares Demat Suspense Account" (account opened and maintained after FPO):

Opening Balance (as on 01/04/2019)		Disposed off during 2019-20		Closing Balance (as on 31/03/2020	
Cases	Shares	Cases	Shares	Cases	Shares
7	1206	1	67*	6	1139

*Transferred to IEPF Authority..

Details of "NTPC LIMITED – Bonus Debentures – Unclaimed Debentures Demat Suspense Account" (account opened and maintained after Issue of Bonus Debentures):

Opening Balance (as on 01/04/2019)		Requests received and Disposed off during 2019-20		Closing Balance (as on 31/03/2020)	
Cases	Shares	Cases	Shares	Cases	Shares
29	5474	-	-	29	5,474

xix) Outstanding GDRs/ ADRs/ Warrants or any Convertible instruments, conversion date and likely impact on equity

No GDRs/ ADRs/Warrants or any Convertible instruments has been issued by the Company.

xx) Commodity price risk or foreign exchange risk and hedging activities:

The Company does not deal in commodities and hence the disclosure pursuant to SEBI Circular dated November 15, 2018 is not required to be given. For a detailed discussion on foreign exchange risk and hedging activities, please refer to Directors' Report and Management Discussion and Analysis Report.

xxi) Number of Shares held by the Directors :

Directors	No. of shares (as on 31/03/2020)
Shri Gurdeep Singh	5828
Shri Saptarshi Roy	1341
Shri A.K.Gupta	7224
Shri Prakash Tiwari	NIL
Shri A.K.Gautam	12370
Shri Ashish Upadhyaya	NIL
Shri Vivek Kumar Dewangan	NIL
Shri M.P.Singh	NIL
Shri P.K.Deb	NIL
Shri Shashi Shekhar	829
Shri Vinod Kumar	5555
Shri Subhash Joshi	NIL
Dr. Bhim Singh	NIL
Dr. K. P. K. Pillay	NIL

xxii) Locations of NTPC plants

Dadri, Badarpur & Faridabad (DBF) Region:

Thermal Power Stations

i) National Capital Thermal Power Station - Distt. Gautam Budh Nagar, Uttar Pradesh

Gas Power Stations

i) Faridabad Gas Power Project – Distt. Faridabad, Haryana

ii) National Capital Gas Power Project- Distt. Gautam Budh Nagar, Uttar Pradesh

Solar Power Stations

i) 5MWp, Dadri Solar Power Plant, Dadri, Distt. Gautam Budh Nagar, Uttar Pradesh

ii) 5MWp, Faridabad Solar Power Plant, Distt. Faridabad, Haryana

Eastern Region - I

Thermal Power Stations

i) Barh Super Thermal Power Project- Patna, Bihar

ii) Farakka Super Thermal Power Station – Distt. Murshidabad, West Bengal

iii) Kahalgaon Super Thermal Power Project- Distt. Bhagalpur, Bihar

iv) North Karanpura Super Thermal Power Project – Distt. Hazaribagh, Jharkhand

v) Barauni Thermal Power Project, Distt. Begusarai, Bihar

Eastern Region - II

Thermal Power Stations

i) Talcher Super Thermal Power Station- Distt. Angul, Odisha

ii) Talcher Thermal Power Station- Distt. Angul, Odisha

iii) Bongaigaon Thermal Power Project, Distt. Kokrajhar, Assam.

iv) Darlipalli Super Thermal Power Project, Distt. Sundergarh, Jharsuguda, Odisha

Solar Power Station

10 MWp Talcher Kaniha Solar Power Station, Distt. Angul, Odisha

Northern Region

Thermal Power Stations

i) Feroze Gandhi Unchahar Thermal Power Station – Distt. Raebareli, Uttar Pradesh

ii) Rihand Super Thermal Power Project – Distt. Sonebhadra, Uttar Pradesh

iii) Singrauli Super Thermal Power Station- Distt. Sonebhadra, Uttar Pradesh

iv) Tanda Thermal Power Station- Distt. Ambedkar Nagar, Uttar Pradesh

v) Vindhyachal Super Thermal Power Station- Distt. Singrauli, Madhya Pradesh

Gas Power Stations

Auraiya Gas Power Project – Distt. Auraiya, Uttar Pradesh

Solar Power Station

i) 10 MWp Unchahar PV Solar Power Station, Distt. Raebareli, Uttar Pradesh

ii) 15 MWp Singrauli Solar PV Power Stations, Distt. Sonebhadra, Uttar Pradesh

iii) 140 MWp Bilhaur Solar Power Project, Dist. Kanpur, Uttar Pradesh

iv) 20 MWp Auraiya Solar Power Project – Distt. Auraiya, Uttar Pradesh

Southern Region

Thermal Power Stations

i) Ramagundam Super Thermal Power Station- Distt. Karimnagar, Telangana

ii) Simhadri Super Thermal Power Project- Distt. Vishakapatnam, Andhra Pradesh

iii) Telangana Super Thermal Power Project, Distt. Karimnagar, Telangana

iv) Kudgi Thermal Power Project, Distt. Bijapur, Karnataka

Gas Power Stations

i) Rajiv Gandhi Combined Cycle Power Project – Distt. Alappuzha, Kerala

Solar Power Station

i) 5 MWp Solar PV Power Plant, Port Blair, A&N Islands

ii) 10 MWp Ramagundam Solar Power Station, Distt. Karimnagar, Andhra Pradesh

iii) 250 MWp Anantapur Solar PV Project, Distt. Anantapur, Andhra Pradesh

Western Region -I

Thermal Power Stations

i) Solapur Super Thermal Power Project – Distt. Solapur, Maharashtra

ii) Mouda Super Thermal Power Project – Distt. Nagpur, Maharashtra

Gas Power Stations

i) Jhanor Gandhar Gas Power Project- Distt. Bharuch, Gujarat

ii) Kawas Gas Power Project- Distt. Surat, Gujarat

iii) Anta Gas Power Project – Distt. Baran, Rajasthan

Solar Power Project

i) 260MWp Bhadla Solar Power Project, Distt. Jodhpur, Rajasthan

Wind Power Project:

i) Rojmal Wind (50 MW) Project, Gujarat

Western Region -II

Thermal Power Stations

i) Korba Super Thermal Power Station- Distt. Korba, Chhattisgarh

ii) Sipat Super Thermal Power Project-Distt. Bilaspur, Chattisgarh

iii) Gadarwara Super Thermal Power Project, Distt. Narsinghpur, Madhya Pradesh

iv) Lara Super Thermal Power Project, Distt. Raigarh, Chattisgarh

v) Khargone Super Thermal Power Project, Distt. Khargone, Madhya Pradesh

vi) Barethi Super Thermal Power, Distt. Chhatarpur, Madhya Pradesh

Solar Power Station

i) 50 MWp Solar PV Power Plant, Rajgarh, Madhya Pradesh

ii) 250MWp Mandsaur Solar Power Project, Distt. Mandsaur, Madhya Pradesh

HYDRO POWER PROJECTS

i) Koldam Hydro Power Project – Distt. Bilaspur, Himachal Pradesh

ii) Tapovan – Vishnugad Hydro Power Project – Distt. Chamoli, Uttarakhand

iii) Lata Tapovan Hydro Power Projects – Distt. Chamoli, Uttarakhand

iv) Rammam – III Hydro Electric Power Project Distt. Darjeeling, West Bengal.

v) Singrauli Small Hydro Power Projects, Distt. Sonebhadra, Uttar Pradesh

POWER PROJECTS UNDER SUBSIDIARY COMPANIES

Thermal Power Projects

i) Kanti Bijlee Utpadan Nigam Limited : Muzaffarpur Thermal Power Station, Muzaffarpur, Bihar

ii) Bhartiya Rail Bijlee Co. Ltd. : Nabinagar Thermal Power Project, Distt. Aurangabad, Nabinagar, Bihar (in JV with Railways)

iii) Patratu Vidyut Utpadan Nigam Limited: Patratu Thermal Power Project, Patratu, Jharkhand

iv) Nabinagar Power Generating Company Limited : Nabinagar Super Thermal Power Project – Distt. Aurangabad, Nabinagar, Bihar

v) THDC (India) Ltd, Ganga Bhawan, Pragatipuram, By-Pass Road Rishikesh-249201.

vi) North Eastern Electric Power Corporation Limited, Brookland Compound, Lower New Colony,Shillong

JOINT VENTURE POWER PROJECTS

Thermal Power Stations

a. NTPC –SAIL Power Company Ltd.

i) Rourkela CPP-II - Distt. Sundargarh, Odisha

ii) Durgapur CPP-II - Distt. Burdwan, West Bengal

iii) Bhilai CPP - Bhilai (East), Chattisgarh

b. Ratnagiri Gas & Power Pvt. Ltd. : Ratnagiri Power Project - Maharashtra

c. NTPC Tamil Nadu Energy Co. Ltd: Vallur Thermal Power Project – Chennai, Tamil Nadu

d. Aravali Power Co. Pvt. Ltd.: Indira Gandhi Super Thermal Power Project - Distt. Jhajjar, Haryana

e. Meja Urja Nigam Pvt. Ltd.: Meja Super Thermal Power Project – Tehsil Meja, Allahabad

Overseas Joint Venture Projects

i) Trincomalee Power Co. Ltd. : Trincomalee Power Project, Trincomalee, Srilanka

ii) Bangladesh- India Friendship Power Company (Pvt) Ltd. : Maitree Power Project at Khulna, Bangladesh

COAL MINING SITES

i) Pakri Barwadih Coal Mining Project, Hazaribagh, Jharkhand

ii) Chatti-Bariatu Coal Mining Project, Hazaribag, Jharkhand

iii) Kerandari Coal Mining Project, Hazaribagh, Jharkhand

iv) Talaipalli Coal Mining Project, Raigarh, Chattisgarh

v) Dulanga Coal Mining Project, Sundargarh, Odisha

vi) Banai Coal Mining Project, Raigarh, Chattisgarh

vii) Bhalumunda Coal Mining Project, Raigarh, Chattisgarh

viii) Mandakini-B Coal Mining Project, Angul, Odisha

JOINT VENTURE COAL MINES

ix) Banhardih Coal Mining Project, Latehar, Jharkhand (in JV with JVBNL)

xxiv) Address for correspondence:

NTPC Bhawan, SCOPE Complex
7, Institutional Area, Lodhi Road,
New Delhi – 110003

The phone numbers and e-mail reference for communication are given below:

	Telephone No.	Fax No.
Registered Office NTPC Limited NTPC Bhawan, Core-7, Lodhi Road, 7 Institutional Area, SCOPE Complex, New Delhi -110003	011-2436 0100	011- 2436 1018
Company Secretary & Compliance Officer Ms. Nandini Sarkar	011-24360959	011-2436 0241
E-mail id	nsarkar@ntpc.co.in	
Chief Investor Relations Officer Shri Aditya Dar	011-2436 7072	011-2436 1724
E-mail id	adityadar@ntpc.co.in	
Nodal officer for IEPF Mr. A.K. Gautam Director (Finance)	011- 24365552	011-24361018
E-mail id	isd@ntpc.co.in	
Dy. Nodal officer for IEPF Mr. Aditya Dar Chief General Manager (Finance)	011-24367072	011-24361724
E-mail id	iepf@ntpc.co.in	
E-mail ID (exclusive) for redressal of investors complaints	**For Shares and Tax Free Bonds, 2015:** isd@ntpc.co.in **For Tax Free Bonds, 2013:** tfb@ntpc.co.in **For Bonds including Bonus Debentures:** powerbonds@ntpc.co.in	

16. CORPORATE GOVERNANCE AWARDS & RECOGNITIONS

NTPC has been conferred various awards in area of Corporate Governance from time to time including:

(i) ASSOCHAM Corporate Governance Excellence Award – 2014-15 for Listed Companies in PSU category in recognition for outstanding governance practices undertaken by the Company.

(ii) 'Golden Peacock Global Award for Excellence in Corporate Governance' by World Council for Corporate Governance for the year 2014. This award was also received by the Company during the years 2007, 2009 and 2012.

(iii) Award for Excellence 2011 - Good Corporate Citizen Award by PHD Chamber of Commerce and Industry.

(iv) 'ICSI National Award for Excellence in Corporate Governance – 2009 by the Institute of Company Secretaries of India.

For and on behalf of Board of Directors

Place: New Delhi
Date: 14th August, 2020

(Gurdeep Singh)
Chairman & Managing Director

SKILL/COMPETENCE MATRIX OF DIRECTORS:

Annex-I

S. No.	Names of Directors	Designation	Technical/ Engineering	Energy & Power Sector	Finance & Banking	Economics	Human Resources Management	Regulatory Framework	Management	Environment	Academics	Research and Development
I.	Shri Gurdeep Singh	Chairman & Managing Director	✓	✓					✓			
II.	Shri A.K.Gautam	Director (Finance)		✓	✓			✓				
III.	Shri Dillip Kumar Patel	Director (HR)	✓	✓			✓		✓			
IV.	Shri Ramesh Babu V.	Director (Operations)	✓	✓								
V.	Shri Chandan Kumar Mondol	Director (Commercial)	✓	✓				✓				
VI.	Shri Ashish Upadhyaya	Govt. Nominee Director		✓	✓	✓		✓				
VII.	Shri Vivek Kumar Dewangan	Govt. Nominee Director	✓	✓	✓			✓				
VIII.	Shri M.P.Singh	Independent Director			✓							
IX.	Shri P.K.Deb	Independent Director			✓		✓	✓				
X.	Shri Shashi Shekhar	Independent Director			✓					✓		
XI.	Shri Vinod Kumar	Independent Director							✓	✓		
XII.	Shri Subhash Joshi	Independent Director				✓					✓	
XIII.	Dr. K. P. Kylasanatha Pillay	Independent Director						✓				
XIV.	Dr. Bhim Singh	Independent Director	✓	✓							✓	✓

Annex-II

DISCRETIONARY REQUIREMENTS

Besides the mandatory requirements, as mentioned in preceding pages, the status of compliance with discretionary requirements under Regulation 27(1) of SEBI LODR are as under:

1. **The Board:** The Company is headed by an Executive Chairman.
2. **Shareholder Rights:** The quarterly financial results of the Company are published in leading newspapers as mentioned under heading 'Means of Communication' and also hosted on the website of the Company. These results are not separately circulated.
3. **Modified opinion(s) in audit report:** The Auditor's report is unmodified.
4. **Reporting of the Internal Auditor:** The Internal Auditor reports to the Audit Committee of the Board.

Annex-III

Schedule of Compliances with Presidential Directives issued during the financial year 2019-20 and during last three years preceding the financial year 2019-20:

Year	Content of Presidential Directives	Compliance
2019-20	NIL	NIL
2018-19	Presidential Directive for wage revision	Complied
2017-18	NIL	NIL
2016-17	NIL	NIL

Chief Executive Officer (CEO) & Chief Financial Officer (CFO) Certification

We, Gurdeep Singh, Chairman & Managing Director and A. K. Gautam, Director (Finance) of NTPC Limited, certify that:

(a) We have reviewed financial statements and the cash flow statement for the year ended March 31, 2020 (stand alone and consolidated) and to the best of our knowledge and belief:

(i) these statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;

(ii) these statements together present a true and fair view of the Company's affairs and are in compliance with existing accounting standards, applicable laws and regulations.

(b) To the best of our knowledge and belief, no transactions has been entered into by the Company during the year, which is fraudulent, illegal or violative of the company's various code(s) of conduct.

(c) We are responsible for establishing and maintaining internal controls for financial reporting and we have evaluated the effectiveness of the internal control systems of the Company pertaining to financial reporting and have disclosed to the auditors and the Audit Committee, deficiencies in the design or operation of internal controls, if any, of which we are aware and the steps we have taken or propose to take to rectify these deficiencies.

(d) We have indicated to the Company's auditors and the Audit Committee of NTPC's Board of Directors:

(i) significant changes, if any, in internal control over financial reporting during the year;

(ii) significant changes, if any, in accounting policies during the year and the same have been disclosed in the notes to the financial statements; and

(iii) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting.

Place: New Delhi
Date : June 24, 2020

(A.K. Gautam)
Director (Finance)

(Gurdeep Singh)
Chairman & Managing Director

NTPC Dadri Solar Plant

Independent Auditors' Certificate on Compliance of Conditions of Corporate Governance

To
The Members of
NTPC Limited

1. This certificate is issued in accordance with the terms of our engagement letter dated 7th February, 2020.
2. We have examined the compliance of conditions of Corporate Governance by NTPC Limited ('the Company') for the year ended 31st March, 2020 as stipulated in regulations 17 to 27, clause (b) to (i) of regulation 46 (2) and paragraphs C and D of Schedule V of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 ("the Listing Regulations") and as stipulated in the Guidelines on Corporate Governance for Central Public Sector Enterprises issued by Department of Public Enterprises (DPE), Ministry of Heavy Industries and Public Enterprises, Government of India ("the DPE Guidelines").

Management's Responsibility for compliance with the conditions of Listing Regulations

3. The compliance with the terms and conditions contained in the corporate governance is the responsibility of the Management of the Company including the preparation and maintenance of all relevant supporting records and documents. This responsibility includes the design, implementation and maintenance of internal control and procedures to ensure the compliance with the conditions of Corporate Guideline stipulated in the Listing Regulations and DPE Guidelines.

Auditor's Responsibility

4. Our examination is limited to procedures and implementation thereof adopted by the Company for ensuring the compliance of the conditions of Corporate Governance. It is neither an audit nor an expression of opinion on the financial statements of the Company.
5. Pursuant to the requirements of the Listing Regulations and DPE Guidelines , it is our responsibility to provide a reasonable assurance whether the Company has complied with the conditions of Corporate Governance as stipulated in the Listing Regulations and DPE Guidelines for the year ended 31st March, 2020.
6. We conducted our examination in accordance with the Guidance Note on Reports or Certificates for Special Purposes (Revised 2016) (the 'Guidance Note') issued by the Institute of Chartered Accountants of India ('ICAI'). The Guidance Note requires that we comply with the ethical requirements of the Code of Ethics issued by ICAI.
7. We have complied with the relevant applicable requirements of the Standard on Quality Control (SQC) 1, Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services Engagements.

Opinion

8. In our opinion, and to the best of our information and according to explanations given to us, we certify that the Company has complied with the conditions of Corporate Governance as stipulated in the above-mentioned Listing Regulations and DPE Guidelines except for following:
   i) As stated in Point No. 2.1 of the Corporate Governance Report, the Company has not complied with the Listing Regulations, with regard to the appointment of minimum number of Independent Directors and Women Independent Director in the composition of the Board of Directors as per details given below,
      a) from 1st July, 2019 to 11th July, 2019 the number of independent directors were less than 50% of total number of Directors
      b) from 16th November, 2019 to 31st March, 2020, when the position of woman Independent Director was vacant.
   ii) As stated in Point No.2.7 and 3.3 of Corporate Governance Report , regarding compliance with the Board Members and Independent Directors Evaluation Policy.
9. We state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 20091382AAAAKC6011
Place: New Delhi

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S. K. Khattar)
Partner
M. No.084993
UDIN: 20084993AAAACL1976
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 20025854AAAABV6600
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C
(Thalendra Sharma)
Partner
M. No.079236
UDIN: 20079236AAAACI7617
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E
(C.K.Prusty)
Partner
M. No.057318
UDIN: 20057318AAAABK5737
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C
(Ranjeet Singh)
Partner
M. No.073488
UDIN: 20073488AAAAAW5590
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C
(Suresh Agarwal)
Partner
M. No.072534
UDIN: 20072534AAAAHW1802
Place: Hazaribagh

Date: 14th August, 2020

Digitally signed by signatory

Annex-I

CERTIFICATE OF NON-DISQUALIFICATION OF DIRECTORS

(Pursuant to Regulation 34(3) and Schedule V Para C clause (10)(i) of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015)

To,
The Members of
NTPC LIMITED
NTPC Bhawan, SCOPE Complex,
7, Institutional Area, Lodhi Road,
New Delhi – 110 003

We have examined the relevant registers, records, forms, returns and disclosures received from the Directors of **NTPC Limited** having CIN: L40101DL1975GOI007966 and having registered office at NTPC Bhawan, SCOPE Complex, 7, Institutional Area, Lodhi Road, New Delhi – 110 003 (hereinafter referred to as 'the Company'), produced before us by the Company for the purpose of issuing this Certificate, in accordance with Regulation 34(3) read with Schedule V Para-C Sub clause 10(i) of the Securities Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015, for the Financial Year ending on 31st March, 2020 (hereinafter referred to as 'financial year under review').

In our opinion and to the best of our information and according to the verifications [including Directors Identification Number (DIN) status at the portal www.mca.gov.in] as considered necessary and explanations furnished to us by the Company & its officers, we hereby certify that none of the Directors on the Board of the Company, as on the closure of the financial year under review, have been debarred or disqualified from being appointed or continuing as Directors of companies by the Securities and Exchange Board of India, Ministry of Corporate Affairs or any such other Statutory Authority.

Ensuring the eligibility for the appointment/continuity of every Director on the Board is the responsibility of the management of the Company. Our responsibility is to express an opinion on these based on our verification. This certificate is neither an assurance as to the future viability of the Company nor of the efficiency or effectiveness with which the management has conducted the affairs of the Company.

For A. Kaushal & Associates
(Company Secretaries)

CS Amit Kaushal
Mem. No. : F6230
C. P. No. : 6663

Place: New Delhi
Date: 26/06/2020

ENERGY CONSERVATION, TECHNOLOGY ABSORPTION AND FOREIGN EXCHANGE EARNINGS & OUTGO PURSUANT TO SECTION 134 (3) (M) OF THE COMPANIES ACT, 2013 READ WITH RULE 8 (3) OF THE COMPANIES (ACCOUNTS) RULES, 2014

A. CONSERVATION OF ENERGY

a) Energy conservation measures taken:

Some of the important energy conservation measures taken during the year 2019-20 in different areas are as under:

ENERGY AUDITS

During 2019-20, under PAT scheme (2^{nd} cycle) Measurement & Verification audit of 21 stations was carried out. Two stations had got Mandatory Energy Audit conducted as per BEE regulation. All your Company stations had conducted Auxiliary Power Consumption Energy Audits.

AUXILIARY POWER CONSUMPTION

Some of the actions undertaken to reduce auxiliary power consumption at various stations are:

Retrofitting HT VFD in ID Fans of one unit of 210MW, Replacement of inefficient BFP cartridges based on high SEC, Installing grid-connected roof top Solar PV systems, Energy Efficient Coating on pump internals of Cooling Water / other large water pumps, Installation of VFD's in various LT drives, Retrofitting FRP hollow blades in CT fans, Replacing existing motors with Energy Efficient motors, De-staging of BFP to optimize power consumption, ESP duct modification using CFD, Optimizing nos. of running BFP's, CEP's, mills and CW pumps and fans during prolonged partial loading.

LIGHTING

Large scale replacement of existing lighting (FTL's, HPSV's, CFL's, Halogen) in main plant, off sites, office buildings, area and street lighting of the station and township, common facilities and residential units of township were undertaken at all stations during the year.

HEAT ENERGY

HP / IP cylinder efficiency improvement during capital overhaul, Boiler modifications to improve steam parameters & to reduce RH spray, TDBFP cartridge replacement were taken up at few stations.

b) Additional investments and proposals for reduction in consumption of energy:

Provision of ₹ 2,142 lacs has been kept in Budget Estimate (BE) 2020-21 for different energy conservation schemes like:

- Retrofitting VFD's in CEP's
- LED lighting & energy efficient ceiling fans
- Grid-connected roof top Solar PV systems
- Energy efficient LT motors
- Wireless DAS box
- Water flow meters

c) Impact of measures taken for energy conservation:

Savings achieved during 2019-20 on account of specific efforts for energy conservation:-

S.No.	Area/Activities	Energy Unit	Savings Qty.	₹ (Crore)
1	Electrical	MU	130.1	31.34
2	Heat Energy (equivalent MT of coal)	MT	21222	5.73
3	Heat Energy (equivalent MCM of Gas)	MCM	0.246	0.34
	Grand Total			**37.41**

Savings achieved during 2018-19 - ₹ 36.74 Crore.

B TECHNOLOGY ABSORPTION:

Efforts made towards technology absorption are contained in enclosed Form–B.

C. FOREIGN EXCHANGE EARNINGS AND OUTGO

The Foreign Exchange earned in terms of actual inflow during the year and the foreign Exchange outgo during the year in terms of actual outflow as under:

Total Foreign Exchange Used/ Earned (2019-20)	(₹ Crore)
1. Foreign Exchange Outgo	
- Capital Goods & Spare Parts	1,580.74
- Professional and Consultancy Fee	24.22
- Interest & Bond Issue Expenses	1,935.50
- Others	20.90
2. Foreign Exchange Earned	NIL

FORM B

Form for disclosure of particulars with respect to Absorption of Technology

1.0 Specific areas in which NETRA activities have been carried out during 2019-20:

a. **Recently Major Completed Projects:**

Water Technology:

I. Development, installation and commissioning of 20 TPD Solar Water Desalination Plant at NTECL-Vallur

II. Pilot project for Adiabatic Cooling Tower at NETRA

III. Mauda St-I Cooling Tower performance improvement

IV. Study and Trial of Nano-Silver H2O2 Biocide treatment for effectiveness study

Ash-Technology:

V. M40 grade Geo-polymer road at NTPC Ramagundam and NTPC Farakka

VI. Bottom Ash as Replacement of Fine Aggregate (sand) in Cement Concrete

VII. Development of Fly ash based Geopolymer mortar

VIII. Development of Fly ash based Geopolymer Tetrapod and paver blocks

Renewables:

IX. Development, installation and commissioning of 1MW Floating Solar PV plant at Kawas

X. Installation and commissioning of Solar Thermal Hybrid Plant at Dadri

Efficiency and other areas:

XI. Development of Robotic System for Remote Visual Inspection of Boiler Headers

XII. In-situ Non-destructive assessment of Post Weld Heat Treatment Quality of T-91 tubes

XIII. Ultrasonic Testing based Hydrogen damage assessment of Boiler Tubes

XIV. Development and installation of Fiber Bragg Grating based Fiber Optic Sensor for Vibration Measurement of generator end winding at Korba

XV. Installation of Fiber Bragg Grating based Fiber Optic Sensor for Temperature Measurement in APH at Dadri

XVI. Pneumatic Ash Conveying system: Development of design guide by experimentation in pilot plant

XVII. Methodology for identification of secondary (used) CRGO strips using electromagnetic sensor

XVIII. Completion of AUSC-R&D Projects (Total 13 No)

b. **Developmental Projects (ongoing):**

Carbon capture and Utilization:

I. Development, Design and Setup of 10 TPD Flue Gas Carbon Capture and Methanol Demo Plant in NTPC Power Station

II. Development of indigenous catalyst for hydrogenation of CO_2 to produce methanol and to design and set up of a pilot plant

Hydrogen:

III. Development of Electrodes and design of a prototype for the Hard/Sea water electrolysis

IV. Development of Lab Scale Reactor for production of Hydrogen through Photo-Electro-chemical process

Water Technology:

V. Development, installation and commissioning of Electro-Coagulation & Dissolved Air Floatation System

VI. Design & Setup of 240 TPD Non Thermal Forward Osmosis System at NTPC Mouda from Secondary Treated STP Water

Ash-Technology:

VII. Development of Fly Ash based Controlled Low Strength Material (CLSM)

VIII. Light Weight Aggregate (LWA) Plant at Sipat

IX. Geo-polymeric concrete Roads at various stations

X. Development of Fly Ash based Coarse Aggregate

Efficiency and other areas:

XI. Flexibilization project for Reducing Technical Minimum to 40% for U#6 Dadri (2nd Phase)

XII. Development of technology for Detection & Quantification of Exfoliation of Boiler Tube using Magnetic Coercive Force (MCF) and Ultrasonic Method

XIII. Development of underwater robotic system for inspection of CT basin, CW channel, CW Pump and fore bay

XIV. Preparation of Nano N- doped Graphene at NETRA for lubricating oil of ID fan at NTPC station to reduce power consumption

XV. Development of Phase Change Material Based Thermal Energy System

XVI. Development of sensor for Ash Level Measurement and Online measurement of Moisture in transformer oil

XVII. Set up of 30 kWp DC Microgrid pilot at NETRA

c. **Scientific Support to NTPC Stations (Continuous basis):**

NETRA also provides advanced scientific support to NTPC Stations and outside power utilities mainly in the following areas:

I. Health assessment and residual life assessments of power plant components for improving the reliability and availability of boiler, steam turbines, gas turbines components by using different advanced NDE tools and techniques

II. Remote Inspection of boiler header using in-house developed robotic system, evaluation of Post Weld Heat Treatment Quality of Ferromagnetic Steel Weld etc using Magnetic Coercive Force Measurement

III. Implementation of advance NDE Techniques such as Phased Array Ultrasonic Testing (PAUT) for inspection of weld joints on Boiler Tubes, in-situ detection of hydrogen damage in water wall, in-situ detection of crack in root region of LP turbine blades, Time of Flight Diffraction (TOFD)

IV. Microstructural characterization of various alloys, stainless steels, super alloys and other advanced materials:

- Identification of damage mechanisms in pressure part components to reduce forced outages and thereby improve availability & reliability of components and recommendation of suitable measures to other relevant departments
- Root cause analysis of boiler, turbine, generator and auxiliaries of power plant

V. Substitution of OEM on high end & costly health assessment of GT components

VI. Development of chemical formulations for cooling water treatment for high COC, to reduce the specific water consumption of plant.

VII. Quantitative and qualitative analysis of deposit, solvent selection and post operational chemical cleaning recommendations for boilers and condensers.

VIII. Corrosion analysis, monitoring & its control in power plants for fire fighting system and CW system

IX. Specialized analytical support for characterizing the turbine, boiler, condenser, CT and Deaerator deposits, corrosion products, heavy metals in effluents using state of art equipment such as SEM, XRD, IC, TOC, Particle Count Analyzer, AAS & ICPMS etc.

X. Improvement in STP water quality by enhancing the performance of sewage treatment and by carrying out testing of organic matter, COD, BOD and TKN. Trace level mercury testing in coal and effluents

XI. Residual life assessment of ACF, Cation Exchange Resin, Anion Exchange Resin, MB-SAC resin, MB-SBA resin, CPU resin through analysis such as TEC, SSC, WRC etc.

XII. Particle size distribution and bead integrity of Cation Exchange, Anion Exchange, MB & CPU resin.

XIII. Condition Monitoring of:

- High voltage transformers through tools such as Dissolve gas Analysis (DGA), FDS, SFR and Interfacial Tension (IFT).
- Super heater / Re-heater tubes of ageing boilers through accelerated creep testing.
- Lubricating oils of rotating components using wear debris analysis.
- Ion exchange resins & activated carbon for capacity enhancement and its kinetics.

XIV. Advanced coal & ash characterization of samples of station to determine ash fusibility characteristics, slagging & fouling behavior of coal, elemental composition of coal & biomass, particle size analysis of fly ash, reactivity, abrasion behavior & grade determination of coal. Compositional analysis of fly ash using EDXRF. Estimation of mercury in coal in ppm/ppb level.

XV. CFD services in power plant domain and other relevant areas.

2.0 Benefits derived as a result of above Research & Technology Development:

NETRA activities are aligned for solving some of the major concerns of your Company and the power sector in today's scenario. In this regard, NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc.

NETRA has taken projects for reducing carbon footprints by means of carbon capture from flue gas and its subsequent utilization. Continuous work is going on for the development of new products and processes for bulk ash utilization and as a result novel technologies & products such as Geo Polymeric Concrete (GPC) Road, Geo polymeric Pavers & Tetrapod and GPC Mortar have been successfully developed and implemented.

NETRA has successfully commissioned 120 TPD sea water desalination plant at Vallur and is working on projects such as Electro-Coagulation & Dissolved Air Floatation System at Mauda and Forward osmosis system. These projects are aimed at reducing water intensity.

Various developments such as in house floaters for PV plant, Fiber grating sensors for vibration monitoring in generator windings and temperature monitoring in APH have led to significant cost reduction.

Working in the area of new and renewable energy, NETRA has commissioned Solar Thermal Hybrid at Dadri, 1MW floating solar plant at Kawas and Solar thermal sea water desalination plant. For tackling problems such as Flexibilization of units for reducing technical minimum and energy storage, projects have been initiated. Projects have been taken in areas of future energy carriers such as hydrogen, methanol and municipal solid waste etc.

Through advanced scientific services like Non Destructive Evaluation and Imaging, CFD analysis and Metallurgy & Failure Analysis, etc, NETRA is working constantly for improvement in reliability & efficiency and reduction in auxiliary power consumption and O&M cost by the diagnosis of faults. NETRA is also working on cutting edge technologies for the development of robotics for visual inspection of boiler headers, Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time as well manpower requirements

Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers, condensers, cooling towers, heat exchangers etc.

3.0 R&D Expenditure:

S. No	Description	Expenditure in (₹ /Crores)
a)	Capital	48.97
b)	Revenue	134.36
c)	Total	183.33

4.0 Technology Absorption, Adaptation and Innovation

Particulars of some of the important technology imported during last five (5) years are as follows:

S.No.	Technology	Year	Stations
1	Adoption of USC steam parameters 260 Kg/ cm^2 steam pressure and 593/593 deg C at turbine end	2013-14	Being implemented in (3x660 MW) North Karanpura.
2	Air cooled condenser for super critical units	2013-19	Being implemented in (3x660 MW) North Karanpura, Patratu (3x800MW), Singrauli-III (2x800MW), and Lara-II (2x800MW)
3	Ultra- supercritical Power plants with steam parameters 270 kg/cm^2 steam pressure and 600/600 deg^C at turbine end.	2014-19	Implemented in Khargone (2X660 MW). Being implemented in Telangana –I (2X800 MW) ,Patratu (3x800 MW), Singrauli-III (2x800 MW), and Lara-II (2x800 MW). Two USC units (2X660 MW) have been commissioned in Khargone.
4	Cooling Tower of FRP construction	2016-19	Installed in BRBCL Nabinagar (4x250 MW) and under execution in CTs of Simhadri-I (2X500 MW)
5	Waste to Energy Plant	2017-18	24TPD WTE plant implemented at Varanasi.
6	Replacement of Halon based (Ozone depleting CFC) Fire Fighting System with Inert gas based system	2017-18	Being implemented in your Company Stations Control room and CER.
7	Environmental norms compliance (SO_2 emission control by FGD)	2017-20	For SO_2 emission compliance FGDs are under implementation in 58,180 MW (which includes some of units where it is already under operation). Out of the total capacity where FGD works are progressing, 25810 MW capacity Wet lime stone based FGD has been awarded for during 2019-20.
8	Bio-Mass co-firing	2017-20	Successful trial testing of 10% bio-mass firing completed at Dadri Boiler. Over 6000 Tonnes agro residue pellets fired at your Company Dadri plant. Purchase order placed for approx 4 lakh tones for NTPC Dadri.
9.	Online Coal analysers	2018-20	Being implemented in nine number coal based non pit head stations and all upcoming coal based thermal power plants.
10.	AMS (Advanced monitoring of Stockyard)	2018-19	Successfully implemented at Simhadri as a pilot project. Further ten (10) more stations are considered for tendering in 2020-21
11.	APC (Advanced Process control)	2018-19	Technology demonstration completed at Simhadri. Thirteen (13) more units have been considered for tendering in next phase in 2020-21.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

Annexure-IV to Directors' Report

STASTICAL INFORMATION ON RESERVATION OF SCs/STs FOR THE YEAR 2019-20

Representation of SCs/STs as on 01.01.2020:

Group	Employees on Roll	SCs	% age	STs	% age
A	12512	1791	14.31	718	5.74
B	3398	562	16.54	325	9.56
C	2982	435	14.59	221	7.41
D	534	140	26.22	67	12.55
Total*	**19426**	**2928**	**15.06**	**1331**	**6.86**

*The above data is inclusive of manpower posted at JVs and Subsidiaries and manpower of taken over projects and FTE.

Recruitment of SCs/STs during the calendar year 2019:

Group	Total Recruitment	SCs	% age	STs	% age
A	83	12	14.45	9	10.84
B	0	0	0.0	0	0.0
C	418	60	14.35	47	11.24
D	7	2	28.57	0	0.0
Total	**508**	**74**	**14.57**	**56**	**11.02**

Promotions of SCs/STs during the calendar year 2019:

Group	Total Promotion	SCs	% age	STs	% age
A	2662	414	15.56	211	7.93
B	785	136	17.32	64	8.15
C	453	59	13.02	34	7.51
D	58	19	32.76	7	12.07
Total	**3958**	**628**	**15.86**	**316**	**7.98**

For and on behalf of the Board of Directors

Place: New Delhi
Date: 21st August, 2020

(Gurdeep Singh)
Chairman & Managing Director

NTPC'S Power Management Institute

Annexure-V to Directors' Report

INFORMATION ON DIFFERENTLY ABLED PERSONS

With a view to focus on its role as a socially responsible and socially conscious organization, your Company has endeavored to take responsibility for adequate representation of physically challenged persons in its workforce. With this in view, total of 6 PwBD (Persons with Benchmark Disabilities) were recruited during the year 2019. As on 01.01.2020, 509(2.6%) PwBD (97 with Blindness and low vision, 112 with Deaf and Hard of Hearing and 300 with Locomotor Disabilities) are on the rolls of your Company. Reservation has been provided as per rules/policy. Some of the other initiatives taken for the welfare of PwBD over the years by your Company are as under:

- In compliance to RPwD Act 2016, your Company has in place Equal opportunity Policy.
- Additional benefit of 4(four) days in the form of Special Casual leave in a calendar year for specific requirements relating to the disability of the employee has been provided to PwBD.
- Travelling Allowance in respect of Attendant/Escort for accompanying a Employee with Disabilities on travel during Tour/ Training.
- Liaison Officer (PwBD) and Grievance Redressal Officer has been nominated at all Projects/stations/Regions.
- For individual needs of the VH employees, screen reading software and Braille shorthand machines are made available by the Projects. A website has been made DAP friendly, particularly for Low Vision Employees.
- Changes in the existing building have been/are being made to provide barrier free access to differently abled. Ramps have also been provided for unhampered movement of wheel chairs.
- At most of the your Company Projects, wherever houses are located in multi-storied structures, allotments to PwBD has been made on the ground floor. Wherever required, gates/ door of the quarter have been widened.
- NTPC Medial Attendance and Treatment (MAT) rules provide reimbursement towards expenses incurred by the employees towards purchase/replacement/repair/adjustment of artificial limbs/appliances for self and/or dependent family members and reimbursement towards Low Vision Aids for visually challenged employees and/or their dependents and Hearing Aid for hearing impaired employees and/or their dependents
- Medical camps have been organized in various projects of your Company for treatment and distribution of aids like artificial limbs, tricycles, wheelchairs, calipers etc.
- Shops have been allotted in your Company Township to DAP (Differently abled Persons) so that they may earn their livelihood.
- Regular interactive meetings are being organized with PwBD.
- 20 number of Scholarships @ ₹ 4,000/- per month/ per student are given to differently abled students pursuing MBA/ PGDBM/ Degree in Engineering Courses /MBBS.
- In order to encourage and motivate children and youth from neighborhood villages of your Company Projects/Stations for higher studies, your Company has in place 'NTPC Utkarsh'-Merit Scholarship under "NTPC Foundation" for students (including Physically Challenged) from the neighborhood of its projects / stations. The scheme benefits students from neighborhood communities pursuing X, XII, ITI, BE/B.Tech and MBBS studies.
- DIVYANG (Orthopedically Handicapped) employees have been allowed to purchase a three wheeler vehicle with a hand fitted engine against their normal entitlement (advance for scooter/ motorcycle/ moped) under your Company conveyance Advance Rules.
- Relaxation in qualifying marks: Pass marks in lateral recruitment and 10% relaxation in Executive Trainees recruitment. 10% relaxation in written test and interview.
- The minimum performance level marks for promotions (in workman categories) within the cluster is relaxed by 3 marks in case of employees belonging to SC/ ST/ DIVYANG category.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

Annexure–VI to Directors' Report

FORM NO. MGT 9

EXTRACT OF ANNUAL RETURN

As on financial year ended on March 31, 2020

Pursuant to Section 92 (3) of the Companies Act, 2013 and rule 12(1) of the Company (Management & Administration) Rules, 2014

I. REGISTRATION & OTHER DETAILS:

1.	CIN	L40101DL1975GOI007966
2.	Registration Date	7th November 1975
3.	Name of the Company	NTPC Limited
4.	Category/Sub-category of the Company	Public Company / Government Company
5.	Address of the Registered office & contact details	NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003 Telephone No : 011-24360100 /7072 Fax No : 011 24361018 /1724 E-mail : csntpc@ntpc.co.in
6.	Whether listed company	Yes
7.	Name, Address & contact details of the Registrar & Transfer Agent, if any.	**(a) Registrar and Transfer Agent for Equity Shares** M/s Alankit Assignments Limited, Alankit House, 4E/2, Jhandewalan Extension, New-Delhi-110055 Contact person: Shri Mahesh Pandey, Shri Surinder Sharma Tel No.: 011-42541234 Fax No.: 011-41543474 E-mail: alankit_ntpc@alankit.com **(b) Registrar and Transfer Agent for Tax Free Bonds (Series 50) and Bonus Debentures (Series 54) and Tax Free Bonds 2015 (Series 56)** Karvy Computershare Pvt. Ltd. Karvy Selenium Tower B, Plot No. 31 & 32, Gachibowli Financial District, Nanakramguda, Serilingampally Hyderabad-500008 Phone No: 040-67161518 Email: einward.ris@karvy.com

II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY :

(All the business activities contributing 10% or more of the total turnover of the company shall be stated)

Sl.No.	Name and Description of main products / services	NIC Code of the Product/Service	% to total turnover of the company
1	Electric power generation by coal based thermal power plant	35102	89.70%

III. PARTICULARS OF HOLDING, SUBSIDIARY AND ASSOCIATE COMPANIES:

Sl. No.	Name and address of the company	CIN/GLN	% of shares held
Subsidiary Company {Section 2(87)(ii)}			
1	NTPC Vidyut Vyapar Nigam Limited NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40108DL2002GOI117584	100.00
2	NTPC Electric Supply Co. Limited NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40108DL2002GOI116635	100.00
3	Kanti Bijlee Utpadan Nigam Limited NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40102DL2006GOI153167	100.00
4	Nabinagar Power Generating Company Limited NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40104DL2008PLC183024	100.00
5	Bhartiya Rail Bijlee Co. Limited NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40102DL2007GOI170661	74.00
6	Patratu Vidyut Utpadan Nigam Limited NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40300DL2015GOI286533	74.00
7	NTPC Mining Ltd. NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U10300DL2019GOI354454	100.00
8	North Eastern Electric Power Corporation Ltd. BROOKLAND COMPOUND LOWER NEW COLONY DIST.EAST KHASI HILLS SHILLONG ML 793003 IN	U40101ML1976GOI001658	100.00
9	THDC India Ltd. BHAGIRATH BHAWAN TOP TERRACE BHAGIRATHIPURAM TEHRI GARHWAL UR 249001 IN	U45203UR1988GOI009822	74.496
Associate Company {Section 2(6)}			
1	Utility Powertech Limited, H block, 1st Floor, Dhirubhai Ambani Knowledge City, Thane Belapur Road, Navi Mumbai, Mumbai-400710	U45207MH1995PLC094719	50.00
2	NTPC SAIL Power Company Limited, 4th Floor NBCC Tower, 15th Bhikaji Kama Place, New Delhi-110066	U74899DL1999PLC098274	50.00
3	NTPC GE Power Services Pvt. Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U74899DL1999PTC101702	50.00
4	NTPC Tamil Nadu Energy Company Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40108DL2003PLC120487	50.00
5	Ratnagiri Gas and Power Pvt. Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40105DL2005PTC138458	25.51
6	Aravali Power Company Pvt. Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U40105DL2006PTC156884	50.00
7	Meja Urja Nigam Pvt. Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U74900DL2008PTC176247	50.00
8	NTPC BHEL Power Projects Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003%	U40102DL2008PTC177307	50.00
9	BF-NTPC Energy Systems Limited, 14th Floor, Antariksh Bhawan, 22 KG Marg, New Delhi-110003@	U40106DL2008PLC179793	49.00
10	Transformers and Electricals Kerala Limited, AP VII/336, Angamali South PO Ernakulam, Dist. Cochin, Kerala- 683573#	U31102KL1963SGC002043	44.60
11	National High Power Test Laboratory Pvt. Limited, NHPTL, POWERGRID Complex, 765/400 k.v. Substation, Khimlasa Road, Bina, Sagar, M.P.-470113	U73100MP2009PTC047744	20.00

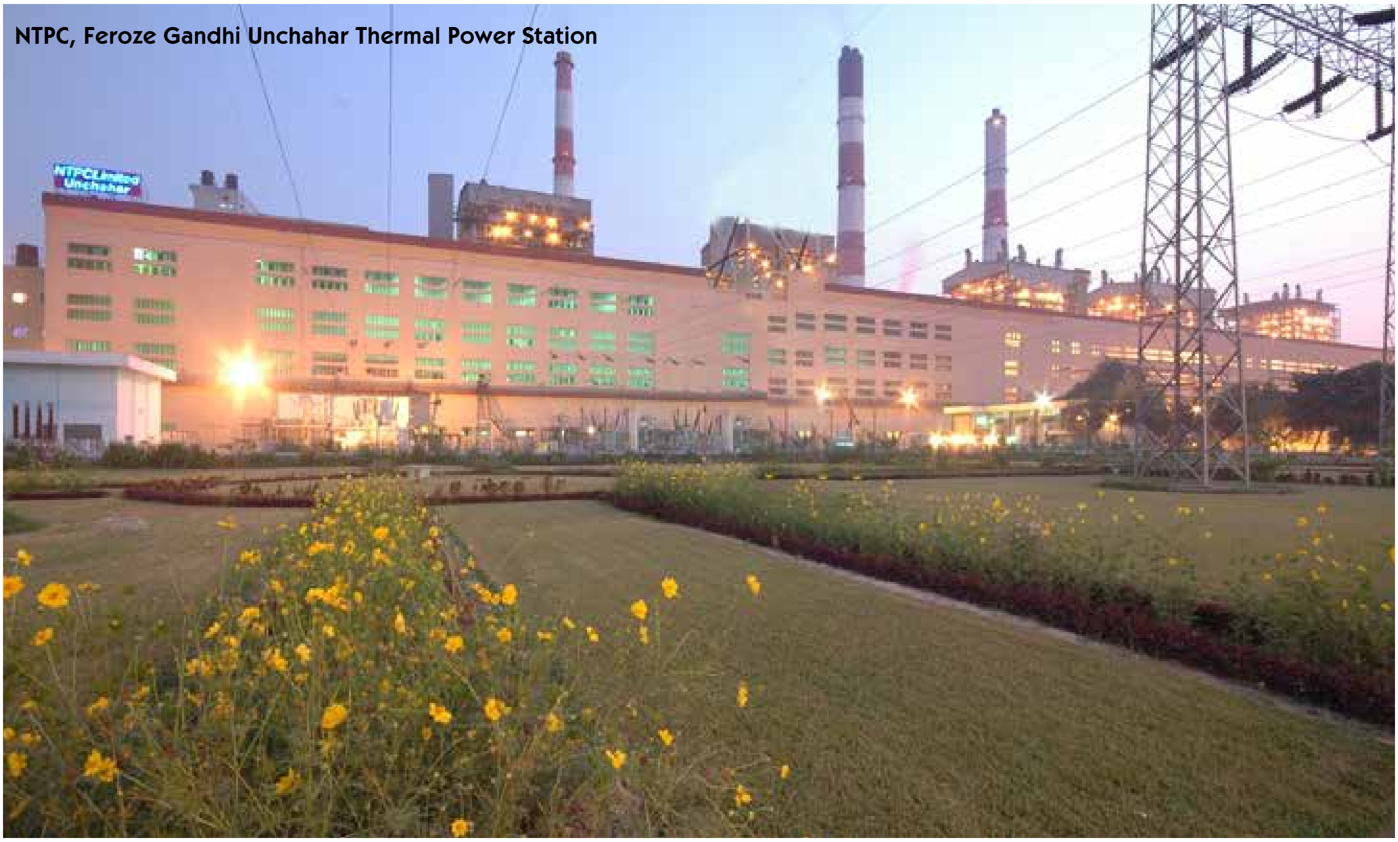
Sl. No.	Name and address of the company	CIN/GLN	% of shares held
12	Energy Efficiency Services Limited, NFL Building, 5th & 6th Floor, Core-III, SCOPE Complex, Lodhi Road, New Delhi-110003	U40200DL2009PLC196789	47.15
13	CIL NTPC Urja Private Limited, NTPC Bhawan, 7, Institutional Area, SCOPE Complex, Lodhi Road, New Delhi-110003	U14105DL2010PTC202053	50.00
14	International Coal Ventures Pvt. Limited, 20th Floor, Scope Minar, (Core-2), North Tower, Laxmi Nagar District Centre, Delhi-110092%	U10100DL2009PTC190448	0.11
15	Anushakti Vidhyut Nigam Limited, 16th Floor, Centre 1 , World Trade Centre, Cuffe Parade, Mumbai-400021	U40300MH2011GOI212727	49.00
16	Hindustan Urvarak & Rasayan Limited, Core-4, 9th Floor Scope Minar, Laxmi Nagar, District Centre New Delhi Delhi East Delhi - 110092	U24100DL2016PLC358399	33.33
17	Konkan LNG Ltd, 16, Bhikaji Cama Place, R. K. Puram New Delhi-110066	U11100DL2015PLC288147	14.82
18	Trincomalee Power Company Limited, 3rd Floor, No. 240, High Level Road, Kirulapone, Colombo – 00600, Sri Lanka	Not Applicable / Foreign Company	50.00
19	Bangladesh - India Friendship Power Company (P) Limited, 14th Floor, Bidyut Bhawan, 1 Abdul Gani Road, Dhaka	Not Applicable / Foreign Company	50.00

% NTPC has decided to exit from International Coal Ventures Pvt. Limited and NTPC BHEL Power Projects Private Limited (NBPPL), approval from Government of India is awaited.

@ BF-NTPC Energy Systems Limited is after getting approval from Ministry of Power is under the Process of Winding Up and Liquidator was appointed for voluntary Liquidation of JV Company.

NTPC has decided to exit from Transformers and Electricals Kerala Limited (TELK) and Ministry of Power, Government of India also accorded its approval for the same but Government of Kerala through Additional Chief Secretary to Government vide letter dated May 2, 2017, requested NTPC to review and cancel decision to quit TELK. The matter is still under examination.

NTPC, Feroze Gandhi Unchahar Thermal Power Station



IV. (A) SHARE HOLDING PATTERN (Equity Share Capital Breakup as percentage of Total Equity)

Category- wise Share Holding

CATEGORY OF SHAREHOLDER		NO. OF SHARES HELD AT THE BEGINNING OF THE YEAR i.e. 01/04/2019				NO. OF SHARES HELD AT THE END OF THE YEAR i.e. 31/03/2020				% CHANGE DURING THE YEAR
		DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
(A)	PROMOTER / AND PROMOTER GROUP									
(1)	INDIAN									
(a)	Individual /HUF	0	0	0	0.00	0	0	0	0.00	0.00
(b)	Central Government/ State Government(s)	5581167271	0	5581167271	56.41	5048097508	0	5048097508	51.02	(5.39)
(c)	Bodies Corporate	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Financial Institutions / Banks	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total A(1):	**5581167271**	**0**	**5581167271**	**56.41**	**5048097508**	**0**	**5048097508**	**51.02**	**(5.39)**
(2)	FOREIGN									
(a)	Individuals (NRIs/Foreign Individuals)	0	0	0	0.00	0	0	0	0.00	0.00
(b)	Bodies Corporate	0	0	0	0.00	0	0	0	0.00	0.00
(c)	Institutions	0	0	0	0.00	0	0	0	0.00	0.00
(d)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
(e)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total A(2):	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0.00**	**0.00**
	Total A=A(1)+A(2)	**5581167271**	**0**	**5581167271**	**56.41**	**5048097508**	**0**	**5048097508**	**51.02**	**(5.39)**
(B)	PUBLIC SHARE-HOLDING									
(1)	INSTITUTIONS									
(a)	Mutual Funds /UTI	1521970895	0	1521970895	15.39	1965942572	0	1965942572	19.87	4.48
(b)	Financial Institutions /Banks	1135551735	0	1135551735	11.48	1129080697	0	1129080697	11.41	(0.07)
(c)	Central Government / State Govt(s)	31846828	0	31846828	0.32	9600994	0	9600994	0.10	(0.22)
(d)	Venture Capital Funds	0	0	0	0.00	0	0	0	0.00	0
(e)	Insurance Companies	66120794	0	66120794	0.67	213509977	0	213509977	2.16	1.49
(f)	Foreign Institutional Investors	1254883764	0	1254883764	12.67	1253083529	0	1253083529	12.65	(0.02)
(g)	Foreign Venture Capital Investors	0	0	0	0.00	0	0	0	0.00	0.00
(h)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
(i)	Others	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total B(1):	**4010374016**	**0**	**4010374016**	**40.53**	**4571217769**	**0**	**4571217769**	**46.19**	**5.66**
(2)	NON-INSTITUTIONS									
(a)	Bodies Corporate	104348541	126480	104475021	1.06	24071184	0	24071184	0.25	(0.81)
(b)	Individuals									
	(i) Individuals holding nominal share capital upto ₹ 2 lakh	134434732	38779	134473511	1.36	150737774	0	150737774	1.52	0.16
	(ii) Individuals holding nominal share capital in excess of ₹ 2 lakh	19341921	0	19341921	0.20	20649951	0	20649951	0.21	0.01
(c)	Others									
	Clearing Members	26688002	0	26688002	0.27	13815845	0	13815845	0.14	(0.13)
	Directors/ Employees	8727858	0	8727858	0.08	8307812	0	8307812	0.08	0.00

CATEGORY OF SHAREHOLDER		NO. OF SHARES HELD AT THE BEGINNING OF THE YEAR i.e. 01/04/2019				NO. OF SHARES HELD AT THE END OF THE YEAR i.e. 31/03/2020				% CHANGE DURING THE YEAR
		DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	DEMAT	PHYSICAL	TOTAL	% OF TOTAL SHARES	
(I)	(II)	(III)	(IV)	(V)	(VI)	(VII)	(VIII)	(IX)	(X)	(XI)
	Foreign Bodies	3000	0	3000	0.00	3000	0	3000	0.00	0.00
	Foreign Nationals	0	0	0	0.00	0	0	0	0.00	0.00
	Non Resident Indians	5454654	58260	5512914	0.06	6467237	0	6467237	0.07	0.01
	Trusts/HUF	34840616	120	34840736	0.35	50300619	0	50300619	0.51	0.17
	IEPF	0	0	0	0	888581	0	888581	0.01	0.01
	Unclaimed or Suspense or Escrow Account	(31046970)	0	(31046970)	(0.32)	0	0	0	0	(0.32)
(d)	Qualified Foreign Investor	0	0	0	0.00	0	0	0	0.00	0.00
	Sub-Total B(2) :	**302792354**	**223639**	**303015993**	**3.06**	**275242003**	**0**	**275242003**	**2.79**	**(0.27)**
	Total B=B(1)+B(2) :	**4313166370**	**223639**	**4313390009**	**43.59**	**4846459772**	**0**	**4846459772**	**48.98**	**5.39**
	Total (A+B) :	**9894333641**	**223639**	**9894557280**	**100**	**9894557280**	**0**	**9894557280**	**100**	
(C)	Shares held by custodians, for GDRs/ADRs									
(1)	Promoter and Promoter Group	0	0	0	0.00	0	0	0	0.00	0.00
(2)	Public	0	0	0	0.00	0	0	0	0.00	0.00
	Total C	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0.00**	**0.00**
	GRAND TOTAL (A+B+C) :	**9894333641**	**223639**	**9894557280**	**100**	**9894557280**	**0**	**9894557280**	**100**	

B) Shareholding of Promoter-

S. No.	Shareholder's Name	Shareholding at the beginning of the year i.e 1/4/2019			Shareholding at the end of the year i.e 31/3/2020			% change in shareholding during the year
		No. of Shares	% of total Shares of the company	% of Shares Pledged / encumbered to total shares	No. of Shares	% of total Shares of the company	% of Shares Pledged / encumbered to total shares	
1	PRESIDENT OF INDIA	**5,58,11,67,271**	**56.41**	0	**5,04,80,97,508**	**51.02%**	0	(5.39)

C) Change in Promoters' Shareholding (please specify, if there is no change)

S. No.	Particulars	Shareholding at the beginning of the year		Transaction during the year			Cumulative Shareholding during the year	
		No. of shares	% of total shares of the of the company	Date	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the company
1	At the beginning of the year (i.e 1.4.2019)	**5,58,11,67,271**	**56.41**				**5,58,11,67,271**	**56.41***
2	CPSE ETF- Divestment of 1.91%			July 2019	(18,82,47,114)	CPSE ETF	5,39,29,20,157	54.50%
3	Bharat ETF- Divestment of 0.36%			October 2019	(3,60,73,713)	Bharat ETF	5,35,68,46,444	54.14%
4	CPSE ETF- Divestment of 3.12%			Feb 2020	(30,87,48,936)	CPSE ETF	5,04,80,97,508	51.02%
5	At the end of the year (i.e 31.3.2020)	5,04,80,97,508	51.02%				**5,04,80,97,508**	**51.02%**

* Including 0.32%, which was kept in separate Demat account as on 31.3.2019

D) Shareholding Pattern of top ten Shareholders (Closing Balance)
(Other than Directors, Promoters and Holders of GDRs and ADRs)

S. No.	For Each of the Top 10 Shareholders*	Shareholding at the beginning of the year i.e 1/4/2019		Cumulative Shareholding during the year i.e 31/3/2020	
		No. of shares	% of total shares of the company**	No. of shares	% of total shares of the company**
1	**LIC OF INDIA FUTURE PLUS NON UNIT FUND**				
	At the beginning of the year	1138446831	11.51	1138446831	11.51
	Bought during the year	8754717	0.09	1147201548	11.60
	Sold during the year	114536988	1.16	1032664560	10.44
	At the end of the year	1032664560	10.44	1032664560	10.44
2	**ICICI PRUDENTIAL RETIREMENT FUND-HYBRID AGGRESSIVE PLAN**				
	At the beginning of the year	545342820	5.51	545342820	5.51
	Bought during the year	264501118	2.67	809843938	8.18
	Sold during the year	74258289	0.75	735585649	7.43
	At the end of the year	735585649	7.43	735585649	7.43
3	**HDFC TRUSTEE COMPANY LTD. A/C HDFC INDEX FUND-NIFTY 50 PLAN**				
	At the beginning of the year	344588316	3.48	344588316	3.48
	Bought during the year	81132497	0.82	425720813	4.30
	Sold during the year	4173824	0.04	421546989	4.26
	At the end of the year	421546989	4.26	421546989	4.26
4	**RELIANCE CAPITAL TRUSTEE CO LTD.A/C RELIANCE POWER & INFRA FUND**				
	At the beginning of the year	288549830	2.92	288549830	2.92
	Bought during the year	511985989	5.17	800535819	8.09
	Sold during the year	540482593	5.46	260053226	2.63
	At the end of the year	260053226	2.63	260053226	2.63
5	**SBI ARBITRAGE OPPORTUNITIES FUND**				
	At the beginning of the year	84822156	0.86	84822156	0.86
	Bought during the year	56824806	0.57	141646962	1.43
	Sold during the year	16793435	0.17	124853527	1.26
	At the end of the year	124853527	1.26	124853527	1.26
6	**T. ROWE PRICE INTERNATIONAL STOCK FUND**				
	At the beginning of the year	103429996	1.05	103429996	1.05
	Bought during the year	11746981	0.12	115176977	1.17
	Sold during the year	6720406	0.07	108456571	1.10
	At the end of the year	108456571	1.10	108456571	1.10

7	**ADITYA BIRLA SUN LIFE TRUSTEE PRIVATE LIMITED A/C ADITYA BIRLA SUN LIFE PSU EQUITY FUND**				
	At the beginning of the year	71585605	0.72	71585605	0.72
	Bought during the year	50374857	0.51	121960462	1.23
	Sold during the year	16291534	0.16	105668928	1.07
	At the end of the year	105668928	1.07	105668928	1.07
8	**FRANKLIN INDIA TAXSHIELD**				
	At the beginning of the year	69083284	0.70	69083284	0.70
	Bought during the year	21889743	0.22	90973027	0.92
	Sold during the year	416633	0.00	90556394	0.92
	At the end of the year	90556394	0.92	90556394	0.92
9	**THE INCOME FUND OF AMERICA**				
	At the beginning of the year	132306417	1.34	132306417	1.34
	Bought during the year	-	-	132306417	1.34
	Sold during the year	50889536	0.52	81416881	0.82
	At the end of the year	81416881	0.82	81416881	0.82
10	**UTI - CCF -SAVINGS PLAN**				
	At the beginning of the year	39712247	0.40	39712247	0.40
	Bought during the year	31553104	0.32	71265351	0.72
	Sold during the year	5823202	0.06	65442149	0.66
	At the end of the year	65442149	0.66	65442149	0.66

*The shares of the Company are traded on a daily basis and hence the date wise increase / decrease in shareholding is not indicated. Shareholding is consolidated based on permanent account number (PAN) of the shareholder.
**Percentage has been calculated as on 31st March,2020 total shares of the Company.

E) Shareholding of Directors and Key Managerial Personnel:

S.No	Shareholding of Directors and Key Managerial Personnel	Shareholding at the beginning of the year i.e 1/4/2019		Transaction during the year			Cumulative Shareholding during the year i.e 31/3/2020	
		No. of shares	% of total shares of the company	Date	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the company
1	Shri Gurdeep Singh	5828	0.00	01/04/2019			5828	0.00
				-	-	-	-	-
				31/03/2020			5828	0.00
2	Shri Saptarshi Roy[1]	1341	0.00	01/04/2019			1341	0.00
				-			-	-
				31/03/2020			1341	0.00
3	Shri Anand Kumar Gupta[7]	7224	0.00	01/04/2019			7224	0.00
				-	-	-	-	-
				31/03/2020			7224	0.00

S.No	Shareholding of Directors and Key Managerial Personnel	Shareholding at the beginning of the year i.e 1/4/2019		Transaction during the year			Cumulative Shareholding during the year i.e 31/3/2020	
		No. of shares	% of total shares of the company	Date	Increase/ Decrease in share holding	Reason	No. of shares	% of total shares of the company
4	Shri S.K.Roy[2]	5658	0.00	01/04/2019			5658	0.00
				-	-	-	-	-
				30.11.2019			5658	0.00
5	Shri P.K. Mohapatra[3]	6974	0.00	01/04/2019			6974	0.00
				-	-	-	-	-
				31/07/2019			6974	0.00
6	Shri Shashi Shekhar	829	0.00	01/04/2019			829	0.00
				-	-	-	-	-
				31/03/2020			829	0.00
7	Shri Vinod Kumar	4700	0.00	01/04/2019			4700	0.00
				During FY 2019-20	855	Purchase	5555	0.00
				31/03/2020			5555	0.00
8	Shri A K Gautam[6]	12370	0.00	01/08/2019			12370	0.00
				-	-	-	-	-
				31/03/2020			12370	0.00
9	Shri K.Sreekant[4]	510	0.00	1/4/2019			510	0.00
				-	-	-	-	-
				12/8/2019			510	0.00
10	Shri Sudhir Arya[5]	2000	0.00	01/04/2019			2000	0.00
				30/07/2019			2000	0.00
11	Ms. Nandini Sarkar	3034	0.00	01/04/2019			3034	0.00
				-	-	-	-	-
				31/03/2020			3034	0.00

1 Ceased to be Director w.e.f. 31st March 2020 on attaining the age of his superannuation.

2 Ceased to be Director w.e.f. 30th November 2019 on attaining the age of his superannuation.

3 Ceased to be Director w.e.f. 31st July 2019 on attaining the age of his superannuation.

4 Ceased to be Director w.e.f 12th August 2019 on completion of his Tenure as he was holding additional charge, in addition to Director (Finance), Power Grid Corporation of India Ltd.

5 Ceased to be Chief Financial Officer w.e.f. 30th July 2019.

6 Appointed as Chief Financial Officer w.e.f. 1st August 2019 and Director (Finance) w.e.f. 18th October 2019.

7 Ceased to be Director w.e.f. 31st July 2020 on attaining the age of his superannuation.

V) INDEBTEDNESS - Indebtedness of the Company including interest outstanding/accrued but not due for payment.

Amount in ₹. Crore

Particulars	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
Indebtedness at the beginning of the financial year (as at 01.04.2019)				
i) Principal Amount	34,851.80	1,07,954.77	-	1,42,806.57
ii) Interest due but not paid	-	-	-	-
iii) Interest accrued but not due	809.04	568.35	-	1,377.39
Total (i+ii+iii)	**35,660.84**	**1,08,523.12**	-	**1,44,183.96**
Change in Indebtedness during the financial year (2019-20)				
i) Addition in principal amount	7,393.86	36,117.15	-	43,511.01
ii) Reduction in principal amount	(1,785.93)	(21,300.10)	-	(23,086.03)
iii) Change in principal amount due to ERV	-	3,532.47	-	3,532.47
iv) Change due to unamortised borrowing cost	(0.05)	(20.99)	-	(21.04)
v) Change in interest accrued but not due	385.29	206.01	-	591.30
Net Change (i-ii+iii+iv+v)	**5,993.17**	**18,534.54**	-	**24,527.71**
Indebtedness at the end of the financial year (as on 31.03.2020)				
i) Principal Amount	40,459.68	1,26283.30	-	1,66,742.98
ii) Interest due but not paid	-	-	-	-
iii)Interest accrued but not due	1,194.33	774.36	-	1,968.69
Total (i+ii)	**41,654.01**	**1,27,057.66**	-	**1,68,711.67**

VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL-

A. Remuneration to Managing Director, Whole-time Directors and/or Manager

S. No.	Particulars of Remuneration	Name of MD /WTD /Manager							Total Amount (in ₹)
		CMD/CEO	WTD/CFO	WTD	WTD	WTD	WTD	WTD	
		Sh. Gurdeep Singh	Sh. Anil Kumar Gautam[5]	Sh. S. Roy[1]	Sh. A K Gupta[6]	Sh. S.K. Roy[2]	Sh. Prakash Tiwari[3]	Sh. P.K. Mohapatra[4]	
1	Gross salary								
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	92,45,198	54,42,225	1,02,52,708	59,17,004	86,11,784	53,00,401	72,23,163	**5,19,92,483**
	(b) Value of perquisites u/s 17(2) Income-tax Act, 1961	14,17,816	46,445	16,75,413	94,939	23,27,591	7,97,618	6,53,810	**70,13,632**
	(c) Profits in lieu of salary under section 17(3) Income- tax Act, 1961	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	Stock Option	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

S. No.	Particulars of Remuneration	Name of MD /WTD /Manager							Total Amount (in ₹)
		CMD/CEO	WTD/CFO	WTD	WTD	WTD	WTD	WTD	
		Sh. Gurdeep Singh	Sh. Anil Kumar Gautam[5]	Sh. S. Roy[1]	Sh. A K Gupta[6]	Sh. S.K. Roy[2]	Sh. Prakash Tiwari[3]	Sh. P.K. Mohapatra[4]	
3	Sweat Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4	Commission - as % of Profit - Others,specify	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
5	Others, please specify								
	Total (A)	**1,06,63,014**	**54,88,670**	**1,19,28,121**	**60,11,943**	**1,09,39,375**	**60,98,019**	**78,76,973**	**5,90,06,115**

Ceiling as per the Act : Not Applicable *

1 Ceased to be Director w.e.f. 31st March 2020

2. Ceased to be Director w.e.f 30th November 2019

3. Ceased to be Director w.e.f 30th April 2020

4. Ceased to be Director w.e.f 31st July 2019

5. Appointed as Chief Financial Officer (CFO) w.e.f. 1st August, 2019 and Director (Finance) w.e.f 18th October 2019, however Salary for entire period (i.e for FY 2019-20 was considered)

6. Ceased to be Director w.e.f 31st July 2020

Section 197 of Companies Act,2013 shall not apply vide MCA notification dated 5.6.2015

B. Remuneration to other directors: (Refer Corporate Governance Report for details)

S. No.	Particulars of Remuneration	Fee for attending board / committee meetings	Commission	Others, please specify- Honorarium	Total Amount (in ₹)
1.	**Independent Directors**				
	Dr.(Mrs.) Gauri Trivedi	6,60,000	-	-	6,60,000
	Shri Seethapathy Chander	1,70,000	-	-	1,70,000
	Shri M.P.Singh	9,80,000	-	-	9,80,000
	Shri P.K.Deb	15,20,000	-		15,20,000
	Shri Shashi Shekhar	6,50,000	-		6,50,000
	Shri Vinod Kumar	9,30,000	-		9,30,000
	Shri Subhash Joshi	7,40,000	-		7,40,000
	Dr K P Kylasanatha Pillay	8,80,000	-		8,80,000
	Dr Bhim Singh	8,00,000	-		8,00,000
	Total (1)	**73,30,000**	-	-	**73,30,000**
2.	**Other Non-Executive Directors**	-	-	-	-
	Total (2)	-	-	-	-
	Total (B)=(1+2)	**73,30,000**	-	-	**73,30,000**
	Total Managerial Remuneration (A+B)				**6,63,36,115**
	Ceiling as per the Act (@ 1% of profits calculated under Section 198 of the Companies Act, 2013)*				

* Section 197 of Companies Act, 2013 shall not apply vide MCA notification dated 5.6.2015

C. REMUNERATION TO KEY MANAGERIAL PERSONNEL OTHER THAN MD/MANAGER/WTD

S. No.	Particulars of Remuneration	Key Managerial Personnel		
		Company Secretary	CFO	Total
		Ms. Nandini Sarkar	Sh Sudhir Arya*	
1	Gross salary			
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	51,35,307	63,75,727	1,15,11,034
	(b) Value of perquisites u/s 17(2) Income-tax Act, 1961	73,566	3,80,996	4,54,562
	(c) Profits in lieu of salary under section 17(3) Income-tax Act, 1961	0.00	0.00	0.00
2	Stock Option	0.00	0.00	0.00
3	Sweat Equity	0.00	0.00	0.00
4	Commission	0.00	0.00	0.00
	- as % of profit	0.00	0.00	0.00
5	Others, please specify	0.00	0.00	0.00
	Total	**52,08,873**	**67,56,723**	**1,19,65,596**

* Ceased to be Chief Financial Officer (CFO) w.e.f. 30st July, 2019. Further Shri A K Gautam appointed as Chief Financial Officer (CFO) w.e.f. 1st August, 2019 and Director (Finance) w.e.f 18th October, 2019.

VII. PENALTIES / PUNISHMENT/ COMPOUNDING OF OFFENCES:

Type	Section of the Companies Act	Brief Description	Details of Penalty / Punishment/ Compounding fees imposed	Authority [RD / NCLT/ COURT]	Appeal made, if any (give Details)
There were no penalties/ punishment / compounding of offences for breach of any section of Companies Act against the Company or its Directors or other officers in default, if any, during the year.					

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

Taking Care of People in Vicinit of NTPC Stations

Annexure-VII to Directors' Report

ANNUAL REPORT ON CSR ACTIVITIES

1. **A brief outline of your Company's CSR policy, including overview of projects or programs proposed to be undertaken and a reference to the web-link to the CSR policy and projects or programs.**

   CSR has been synonymous with your Company's core business of power generation. Your Company's spirit of caring and sharing is embedded in its mission statement. Your Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter-extensive community / peripheral area development activities are taken up along with the project development. CSR Policy formulated in July 2004 and revised in 2010, 2016 and 2019 covers a wide range of activities including provision for implementation of a few key Programs through NTPC Foundation.

   CSR programs undertaken by your Company include activities specified in Schedule VII of the Companies Act 2013 & Rules made thereafter for benefit of community at large. Focus areas of your Company's CSR activities are Health, Sanitation, Safe Drinking Water and Education. However, your Company also takes up activities in the areas of capacity building of the youth, women empowerment, social infrastructure, livelihood creation through support for implementation of innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and for the activities contributing towards Environment Sustainability.

   Preference for CSR activities is being given to local areas where your Company's operations are situated, ensuring that majority CSR funds are spent for activities in local areas. However, considering inclusive growth & environment sustainability, some of the activities are also taken up in different parts of the country to supplement governmental efforts. During the year, about 500 villages and more than 450 schools have been benefitted by your Company's various CSR initiatives at different locations. Your Company's CSR initiatives have touched the lives of around 18 lakhs people generally residing at remote locations in various parts of the country in one or the other way.

   Apart from the regular CSR activities undertaken around your Company's operations, support has also been provided for some of the major CSR initiatives all across the country:

   Education

   - 4 weeks residential summer workshops for more than 1800 girl children in the age group of 10-12 years studying in Govt. schools in the vicinity of 23 NTPC Locations through its flagship program "Girl Empowerment Mission" (GEM) wherein interventions were undertaken to make the girls self-reliant and confident in all walks of life.
   - Implementation of project for improvement of learning levels in about 130 Government Schools.
   - Construction of school & hostel for tribal children near NTPC Rihand, in UP.
   - Construction of school buildings at Varanasi UP, Hoshangabad MP & Sambalpur Odisha.
   - Smart Tab labs in Government schools in vicinity of 03 NTPC Stations.
   - Quality education primarily to rural community children through 34 schools located in NTPC townships.

   Health & Sanitation

   - Creating infrastructure & support for equipment at National Cancer Institute Nagpur for cancer treatment.
   - Setting up Burn Units at AIIMS Patna, AIIMS Bhubaneswar & King George Medical University Lucknow.
   - Construction of Eye Hospital at Dadri, UP and of operating room complex at Eye hospital in Bhubaneswar.
   - Your Company operates Mobile Health Clinics at 10 locations benefitting about 80,000 persons per year
   - Revival and continuous operation of Mechanized Solid Waste Management plant at Karsada, UP.
   - 50 Nos of Sanitary Napkin Mini Manufacturing units (MMU) installed in the state of Odisha.
   - Installation of sanitary napkin vending machine and incinerators in more than 40 Govt. schools and colleges benefitting substantial no. of girl children.
   - Proactive relief measures like regular sanitization of villages, distribution of PPE kits to health professionals face masks to villagers and supply of groceries to the community.
   - Your Company is supporting the developmental & beautification works at Charminar Hyderabad, under 'Swachh Iconic places Project' of Govt. of India.

Livelihood Generation & Vocational Training

- To enhance income generation opportunities within the villages, your Company has provided vocational training to the village youth and had undertaken livestock development and crop management projects.
- To enhance employability through vocational training, skill upgradation and income generation programs, Your Company has adopted 18 Industrial Training Institutes (ITIs) and is setting up 8 new ones.
- Your Company has signed Memorandum of Understanding (MoU) with National Skill Development Corporation (NSDC) to develop the skills of 30000 youth over a period of 05 years spread in 12 states including 8,000 youth of J&K in order to make all of them self-employable.

Disaster Relief

- Substantial support in the relief activities during FANI Cyclone in Odisha.
- Support committed for Redevelopment of Kedarnath town, Uttrakhand and its surrounding areas devastated during natural calamity of 2013.

Promotion of Sports

- Promotion of Archery Sports by funding National Ranking Archery Tournaments and National Archery championships.
- Adoption & Promotion of football in the state of Chhattisgarh.

Others

- Installation of Energy Efficient Pump System in the fields of farmers residing near Your Company stations located in identified five districts of Uttar Pradesh.

  Your Company, being a member of Global Compact Network, India, confirms its contribution in various CSR activities in line with 10 principles of UN Global Compact.

Web Link to the CSR Policy & Projects or programs

https://www.ntpc.co.in/en/corporate-citizenship/corporate-social-responsibility

2. **The Composition of the CSR Committee**

   As on date, the Board Level Corporate Social Responsibility & Sustainability Committee comprises

One functional Director	:	Shri Dillip Kumar Patel, Director (HR)
Two Independent Directors	:	Shri Vinod Kumar (Chairman), Independent Director
	:	Shri Pradeep Kumar Deb, Independent Director

   The committee recommends to the Board for approval, the amount of expenditure anticipated on the CSR activities and monitors from time to time the Policy for CSR and the proposals approved by the Board.

3. Average net profit of your Company for the previous 3 financial years - ₹ 12,633.85 Crore
4. Prescribed CSR Expenditure (2% of the amount as in item 3 above) - ₹ 252.68 Crore

   Previous Year Shortfall NIL

   Total Prescribed CSR Expenditure - ₹ 252.68 Crore
5. Details of CSR spent during the financial year

(a) Total amount to be spent for the financial year	- ₹ 252.68 Crore
Amount spent	- ₹ 304.92 Crore (2.41%)
Amount exceeding prescribed CSR Exp	- ₹ 52.24 Crore
(b) Amount unspent, if any	- NIL
(c) Manner in which the amount spent during the financial year is detailed below:	(Table enclosed)

Amount (₹ Crore)

5(c) Manner in which the amount spent during the financial year 2019-20 is detailed below :							
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
S. No	**CSR project or activity identified**	**Sector in which the Project is covered./ Relevant Section of Schedule VII in which the project is covered (Note)**	**Project or programs (1) Local area or other (2) Specify the State and district where projects or programs was undertaken**	**Amount outlay (budget) project or programs wise**	**Amount spent on the projects or programs Sub-heads*: (1) Direct expenditure on projects or programs (2) Overheads**	**Cumulative expenditure upto to the reporting period***	**Amount spent: Direct or through implementing agency**
1	Eradicating Hunger and Poverty, Health Care and Sanitation	(i)	CSR initiatives during the Financial Year 2019-20 have been taken up on PAN India basis around NTPC operations primarily in 19 states mentioned below: Andhra Pradesh, Assam, Bihar,Chhattisgarh, Delhi, Gujarat , Haryana, Himachal Pradesh, J&K , Jharkhand, Kerala, Madhya Pradesh, Maharashtra, Odisha,Rajasthan, Telangana, Uttar Pradesh, Uttarakhand, West Bengal	82.26	47.83	47.83	Through Implementing / Contracting Agency/NTPC Foundation/ Trusts/ societies
2	Education and Skill Development	(ii)		88.46	124.57	124.57	
3	Empowerment of Women and other Economically Backward Sections	(iii)		0.78	1.53	1.53	
4	Environmental Sustainability	(iv)		83.38	73.20	73.20	
5	Art & Culture	(v)		1.13	2.36	2.36	
6	Sports	(vii)		6.41	2.51	2.51	
7	Rural Development	(x)		45.37	40.02	40.02	
8	Disaster management, including relief, rehabilitation and reconstruction activities	(xii)		0.00	12.90	12.90	
	Total			**307.79**	**304.92**	**304.92**	

Note * Including expenditure on activities carried forward from previous years , which have been completed during 2019-20

6. In case the company has failed to spend the two percent of the average net profit of the last three financial years or any part thereof, the company shall provide the reasons for not spending the amount in its Director Report.

   By spending ₹ 304.92 Crore during the financial year, the company has surpassed the prescribed two percent amount of ₹ 252.68 Crore by ₹ 52.24 Crore, thus achieving a CSR spend of 2.41%.

7. A responsibility statement of the CSR Committee that the implementation and monitoring of CSR policy, is in compliance with CSR objectives and policy of the company.

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

Annexure-VIII to Directors' Report

PROJECT-WISE ASH PRODUCED AND UTILISED

The quantity of ash produced, ash utilized and percentage of such utilization during 2019-20 from NTPC Stations is as under:

Sl. No.	Stations	Ash Produced	Ash Utilization	% Utilization
		Lakh MTs	Lakh MTs	%
1	Dadri	15.195	15.195	100.00
2	Singrauli	32.060	12.581	39.24
3	Rihand	39.017	16.849	43.18
4	Unchahar	21.654	19.569	90.37
5	Tanda	9.692	15.237*	157.21
6	Vindhyachal	88.569	28.409	32.08
7	Mouda	23.296	23.439	100.61
8	Solapur	1.516	1.768*	116.57
9	Korba	49.976	33.499	67.03
10	Sipat	49.052	24.084	49.10
11	Lara	6.935	0.019	0.27
12	Gadarwara	2.885	0.015	0.52
13	Khargone	0.950	0.063	6.63
14	Ramagundam	38.163	45.115*	118.22
15	Simhadri	26.283	44.301*	168.55
16	Kudgi	8.930	8.970*	100.45
17	Farakka	31.810	40.912*	128.61
18	Kahalgaon	48.479	37.102	76.53
19	Barauni	0.726	0.131	18.04
20	Barh	20.636	13.843	67.08
21	Talcher-Thermal	11.845	11.895*	100.42
22	Talcher-Kaniha	70.092	47.155	67.28
23	Bongaigaon	6.998	3.176	45.38
	Total	**604.76**	**443.33**	**73.31**

***Figure includes Ash utilized from ash produced during previous years**

For and on behalf of the Board of Directors

Place: New Delhi
Date: 21st August, 2020

(Gurdeep Singh)
Chairman & Managing Director

Annexure-IX to Directors' Report

Form No. AOC-2

(Pursuant to clause (h) of sub-section (3) of section 134 of the Act and Rule 8 (2) of the Companies (Accounts) Rules, 2014

Form for disclosure of particulars of contracts/arrangements entered into by the company with related parties referred to in sub-section (1) of section 188 of the Companies Act, 2013 including certain arm's length transactions under third proviso thereto

1. **Details of contracts or arrangements or transactions not at arm's length basis –**

   NTPC is assigning Jobs on contract basis, for sundry works in Plants/Station/office to Utility Powertech Limited (UPL) (a 50:50 Joint Venture between NTPC and Reliance Infrastructure Limited). UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. NTPC has entered into Power station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

   Approval of the Members of the Company was taken in the Annual General Meeting held on 18.09.2015 for transactions with UPL subject to cumulative ceiling of 2% of the annual turnover of the Company as per the Audited Annual financial statement of the preceding financial year or ₹ 1,000 crore, whichever is more, in any financial year.

   On the basis of above, NTPC has entered into Power Station and Office Maintenance Agreement with Utility Powertech Limited for a period of five years.

2. **Details of material contracts or arrangement or transactions at arm's length basis: There was no material contract or arrangement or transaction at arm's length basis during the period under review**

   a. Name(s) of the related party and nature of relationship - NA
   b. Nature of contracts/arrangements/transactions - NA
   c. Duration of the contracts / arrangements/transactions– NA
   d. Salient terms of the contracts or arrangements or transactions including the value, if any – NA
   e. Date(s) of approval by the Board, if any - NA
   f. Amount paid as advances, if any - NA

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

View of NTPC Thermal Power Plant

Annexure -X to Directors' Report

NTPC BUSINESS RESPONSIBILITY REPORT (2019-2020)

Section A : General information about the company

1. **CIN (Corporate identity number)** L40101DL1975GOI007966
2. **Name of the company** NTPC LIMITED
3. **Registered address** NTPC Bhawan, Scope Complex, 7, Institutional Area, Lodhi Road, New Delhi-110003
4. **Website** www.ntpc.co.in
5. **Email id** csntpc@ntpc.co.in
6. **FY reported** 2019-20
7. **Sector that company is engaged in:** Power
8. **Product/services that the company manufacturers /provides (as in balance sheet):**
   i. Generation of Electricity
   ii. Consultancy
   iii. Coal Mining
   iv. Energy Trading
9. **Total number of location where business activity is undertaken by the company:**

Sl. No.	Location	Nos. of Project	Remarks
01.	**National**	**55**	24 Coal, 7 combined cycle gas/liquid fuel, 2 Hydro, 1 Wind, and 11 solar projects. Further, it has 9 coal and 1 gas station, owned by joint ventures or subsidiaries.
02.	**International**	**02**	i. Trincomalee Power Project, Srilanka ii. Bangladesh- India Friendship Power Company (Pvt) Ltd. : Maitree Super Thermal Power Plant, Rampal, Bangladesh

10. **Markets served by the company: National & International**

Section B : Financial details of the company

1.	Paid up capital (₹ Crore)	9894.56 Crore
2.	Total Turnover(Gross) (₹ Crore)	97443.33 Crore
3.	Total profit after taxes (₹ Crore)	10112.81 Crore
4.	Total spending on CSR and Sustainable Development (SD) as % of PAT	2.41% (₹ 304.92 Crore) of PAT of 2019-20.
5.	List of activities in which expenditure in 4 above has been incurred	Broad areas of the activities : - Eradicating Hunger and Poverty - Education & skill development - Health care & Sanitation - Rural Development - Women Empowerment and other Economically back-ward sections - Art, Culture and Sports - Environmental Sustainability - Disaster management including relief rehabilitation and reconstruction activities

Section C: Other Details

Subsidiaries: The Company has the following nine Subsidiary Companies as on 31-03-2020:

i. NTPC Electric Supply Company Ltd. (NESCL)
ii. NTPC Vidyut Vyapar Nigam Ltd. (NVVN)
iii. Kanti Bijlee Utpadan Nigam Limited (formerly known as Vaishali Power Generating Company Limited)
iv. Bharatiya Rail Bijlee Company Limited (BRBCL)
v. Patratu Vidyut Utpadan Nigam Limited (PVUNL)
vi. Nabinagar Power Generating Co. Ltd.
vii. NTPC Mining Company Limited
viii. NEEPCO*
ix. THDC India Ltd.*

*NTPC brought 74.496% equity stake in THDC India Limited and 100% stake in NEEPCO from Government of India. Post-acquisition, these companies are now subsidiaries of NTPC.

The Business Responsibility Initiatives of the parent company are applicable to the subsidiary companies also. However, none of the entities that the Company does business with participate in the BR initiatives of the Company.

Section D: BR information

1. **Individual Directors responsible for implementation of the BR policy / policies:**

Principle No	Description	Policy / Policies	Director(s) Responsible
Principle 1 (P1)	Businesses should conduct and govern themselves with Ethics, Transparency and Accountability.	1. Code of Conduct* 2. Core Values 3. Fraud Prevention Policy 4. CDA Rules 5. Whistle Blower Policy 6. Internal code of conduct for prevention of insider trading 7. Code of Corporate Fair Disclosure Practices for prevention of insider trading 8. Related Party Transaction Policy 9. Policy for determination of materiality of events or information for disclosure 10. Policy on maintenance & preservation of documents 11. Policy for Determining Material Subsidiaries 12. Training Policy for Directors of NTPC	All Directors & Chief Vigilance Officer
Principle 2 (P2)	Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle.	1. Safety Policy 2. NTPC Policy for CSR and Sustainability 3. Ash Policy	Director (O) Director (HR)
Principle 3 (P3)	Businesses should promote the well-being of all employees.	1. Human Resource (HR) Policies 2. Placement and Transfer Policy 3. Human Rights Policy	Director (HR)
Principle 4 (P4)	Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.	1. R&R Policy 2. NTPC Policy for CSR and Sustainability 3. Initial Community Development (ICD) Policy 4. Human Rights Policy	Director (HR)
Principle 5 (P5)	Businesses should respect and promote human rights.	1. Human Rights Policy	Director (HR)
Principle 6 (P6)	Businesses should respect, protect, and make efforts to restore the environment.	1. Environment Policy 2. NTPC Policy for CSR and Sustainability 3. Biodiversity Policy 4. E-waste Policy 5. Water Policy 6. Rain water Harvesting Policy	Director (O) Director (HR)

Principle 7 (P7)	Businesses when engaged in influencing public and regulatory policy, should do so in a responsible manner.	1. Code of Conduct* 2. Core Values 3. Commercial – Systems & Procedures	All Directors
Principle 8 (P8)	Businesses should support inclusive growth and equitable development.	1. R&R Policy 2. NTPC Policy for CSR and Sustainability 3. Initial Community Development (ICD) Policy	Director (HR)
Principle 9 (P9)	Businesses should engage with and provide value to their customers and consumers in a responsible manner.	1. Commercial systems & Procedures	Director (Comml.)

* Code of Conduct for Board Members & Senior Management Personnel

2. Details of Director/Directors responsible for BR as a whole

a. Details of the Director/Directors responsible for implementation of the BR policy/policies:

S.No.	Particulars	Details
1.	DIN Number	00307037
2.	Name	Gurdeep Singh
3.	Designation	Chairman & Managing Director
4.	Telephone number	011-24360044
5.	E-mail ID	cmd@ntpc.co.in

b. Details of BR head: Same as above

3. Principle wise reply to each question on BR Policy / Policies:

S.No.	Question	P1	P2	P3	P4	P5	P6	P7	P8	P9
1.	Do you have a policy/ policies for the Principle?	Y	Y	Y	Y	Y	Y	Y	Y	N
2.	Has the policy being formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
3.	Does the policy conform to any national / international standards?	Y	Y	Y	Y	Y	Y	Y	Y	-
4.	Has the policy being approved by the Board? If yes, has it been signed by MD/owner/CEO/ appropriate Board Director?	Y	Y	Y	Y	Y	Y	Y	Y	-
5.	Does the company have a specified committee of the Board/ Director/ Official to oversee the implementation of the policy?	Y	Y	Y	Y	Y	Y	Y	Y	-
6.	Indicate the link for the policy to be viewed online?	(i)	(i)	(i)	(i)	(i)	(i)	(i)	(i)	-
7.	Has the policy been formally communicated to all relevant internal and external stakeholders?	Y	Y	Y	Y	Y	Y	Y	Y	-
8.	Does the company have in-house structure to implement the policy/ policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
9.	Does the Company have a grievance redressal mechanism related to the policy / policies to address stakeholders' grievances related to the policy / policies?	Y	Y	Y	Y	Y	Y	Y	Y	-
10.	Has the company carried out independent audit / evaluation of the working of this policy by an internal or external agency?	Y	Y	Y	Y	Y	Y	Y	Y	-

Web links for the Policies :

S. No.	Policies/Systems	Web link
Finance		
a.	Code of Conduct	http://www.ntpc.co.in/investors/code-of-conduct
b.	Fraud Prevention Policy	http://www.ntpctender.com/about/FraudPolicy.asp
c.	Whistle Blower Policy	https://www.ntpc.co.in/sites/default/files/downloads/WhistleBlowerPolicy2014.pdf
d.	Internal Code of Conduct for prevention of insider trading	http://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited
e.	Code of Corporate fair discloser practices for prevention of insider trading	http://www.ntpc.co.in/download/code-corporate-fair-disclosure-practicces-prevention-insider-trading
f.	Related Party Transaction Policy	http://www.ntpc.co.in/download/related-party-transaction-policy-ntpc
g.	Policy for determination of materiality of events or information for disclosure	http://www.ntpc.co.in/sites/default/files/downloads/NTPC%20%20Policy%20For%20Determination%20of%20Materiality%20of%20events.pdf
h.	Policy on maintenance & preservation of documents	http://www.ntpc.co.in/sites/default/files/downloads/Document%20Preservation%20Policy.pdf
i.	Policy for Determining Material Subsidiaries	http://www.ntpc.co.in/download/policy-determining-material
j.	Dividend Distribution Policy	https://www.ntpc.co.in/sites/default/files/downloads/DividendDistributionPolicyofNTPCLimited.pdf
Human Resource		
k.	CDA Rules	Policy Manual available on NTPC Intranet
l.	Training Policy for Directors of NTPC	https://www.ntpc.co.in/sites/default/files/downloads/training-policy-directors-ntpc.pdf
m.	Human Rights Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCHuman%20RightsPolicy_0.pdf
n.	Placement and Transfer Policy	Policy Manual available on NTPC Intranet
o.	R&R Policy	https://www.ntpc.co.in/sites/default/files/downloads/R%26RPolicy2017.pdf
p.	Initial Community Development Policy	http://www.ntpc.co.in/download/initialcommunity-development-policy-2009
q.	Policy for CSR & Sustainability	https://www.ntpc.co.in/sites/default/files/downloads/CSR%26Sustainability2016.pdf
r.	Career development Policy	https://www.ntpc.co.in/en/careers/career-growth-opportunities
Operations		
s.	Safety Policy	https://www.ntpc.co.in/sites/default/files/downloads/SafetyPolicy2016.pdf
t.	Environment Policy	https://www.ntpc.co.in/sites/default/files/downloads/EnvironmentPolicy2017.pdf
u.	Water Policy	https://www.ntpc.co.in/sites/default/files/downloads/WaterPolicy2017.pdf
v.	Ash Policy	https://www.ntpc.co.in/sites/default/files/downloads/AshPolicy2015.pdf
w.	E-waste Policy	https://www.ntpc.co.in/sites/default/files/downloads/e-wastePolicy2014.pdf

Technical		
x.	Biodiversity Policy	https://www.ntpc.co.in/sites/default/files/downloads/BiodiversityPolicy2018.pdf
y.	Rain Water Harvesting Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPC%20Rain%20Water%20Harvesting%20Policy%202018.pdf
Commercial		
z.	Commercial Systems & Procedures	https://www.ntpc.co.in/sites/default/files/downloads/procurementandworkspolicy.pdf

4. If answer against any principle is 'No', please explain why:

Principle 9: All the sub-principles identified under principle -9 are duly followed by NTPC through its commercial systems and procedures. However, NTPC feels that a separate Policy on Principle -9 is not required because:

- NTPC supplies power to the Bulk Customers (State Electricity Distribution companies) majority of which are owned by the respective State Govt.
- The CERC, while finalizing Tariff and other Regulations engages all Stakeholders and takes views of them. CERC Tariff Regulations and relevant orders are being displayed on CERC Website www.cercind.gov.in.
- NTPC & our bulk customers i.e. Discoms work under regulated Environment. NTPC strives for supplying cheapest power deploying all resources optimally in best possible ways resulting in wellbeing of customers & society.
- NTPC being a Government company is also subject to the various checks and balances mechanism such as audits etc.
- CERC while determining the tariff of NTPC stations does prudence check on the costs of NTPC.
- NTPC never restricts the freedom of choice and free competition in any manner while supplying bulk Power.
- Needs of the customers is taken into account and accordingly PPA are signed and Allocation of Power is made by Ministry of Power as per existing guidelines & Policy. Unallocated quota of power is allocated by MoP as per demand and requirement of different States hence customers are always kept first.
- Central Electricity Regulatory Commission governs power supply rules and regulations, performance and all other commercial parameters related to power generation. NTPC always excels in satisfying customers by adhering to these norms and disclosing all relevant information.
- Issues, if any, regarding operational issues etc. are being discussed and resolved in common forums such as Regional Power Committees.
- NTPC has developed a Customer Satisfaction Index (CSI), which is administered through a questionnaire and based on the feedbacks received, actions are taken.

NTPC regularly engages with the customers and provides value to them in a responsible manner.

5. Governance related to BR

i.	Indicate the frequency with which the Board of Directors, Committee of the Board or CEO to assess the BR performance of the Company.	Within 3-6 months
ii.	Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?	The company publishes both business Responsibility Report (as a part of annual report) and Sustainability Report annually and can be accessed from the below link. https://www.ntpc.co.in/en/sustainability/compliances-and-reports

Section E: Principle –wise performance

Principle 1: Businesses should conduct and govern themselves with Ethics, Transparency and Accountability

1. **Does the policy relating to ethics, bribery and corruption cover only the company? Does it extend to the Group/ Joint Ventures/ Suppliers/ Contractors/ NGOs / Others?**

   i Code of Conduct for Board Members & Senior Management Personnel covers all the Directors and Senior Management Personnel of the Company.

   ii Fraud Prevention Policy applies to any fraud, or suspected fraud involving employees of NTPC as well as representatives of vendors, suppliers, contractors, consultants, service providers or any outside agency(ies) doing any type of business with NTPC.

   iii However, in line with NTPC, RGPPL and NTECL, JVs of NTPC have also adopted Fraud Prevention Policy and CDA rules.

   iv CDA Rules are applicable to all employees of NTPC and employees posted in JVs/Subsidiaries.

   v Insider Trading Code is applicable to designated employee of the company.

   vi Related Party Transaction Policy is framed intended to ensure the proper approval and reporting of transactions between the Company and its Related Parties.

   vii The objective of Whistle Blower Policy is to build and strengthen a culture of transparency and trust in the organization and to provide employees with a framework / procedure for responsible and secure reporting of improper activities (whistle blowing) within the company and to protect employees wishing to raise a concern about improper activity/ serious irregularities within the Company.

   viii The Policy for determination of materiality of events or information for disclosure was framed in terms of Regulation 30 (1) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 SEBI (LODR)

   ix The Policy on maintenance & preservation of documents was framed in pursuance to Regulation 9 of the SEBI (LODR).

   x The Policy for Determining Material Subsidiaries was framed in accordance with the requirement stated under the Listing Agreement.

   xi The Training Policy aims at providing Orientation & Training programs to be offered to the Board of Directors of NTPC.

   To ensure transparency, objectivity and quality of decision making in various operations, the Company has a Vigilance Department headed by Chief Vigilance Officer. The Vigilance set up in NTPC consists of Vigilance Executives in Corporate Centre and Projects. In Projects, the Vigilance Executives report to the Project Head in administrative matters but in functional matters, they report to Chief Vigilance Officer.

   Corporate Vigilance Department consists of four Cells as under:

   - Vigilance Investigation and Processing Cell;
   - Departmental Proceedings Cell;
   - Technical Examination Cell; &
   - MIS Cell

   These cells deal with various facets of vigilance mechanism. The vigilance works have been assigned region wise to Vigilance officers at Corporate Centre (Regional Vigilance Executives) for speedier disposal. Senior officials of Vigilance

Department comprising Head of Vigilance (CC), Regional Vigilance Executives and Head of DPC/MIS Cell meet regularly to discuss common issues in order to ensure uniform working in all Regions.

Fraud Prevention Policy has been implemented in NTPC and suspected fraud cases, referred by the Nodal Officers to Vigilance Department are investigated immediately to avoid/ stop fraudulent behaviors as defined in "Fraud Prevention Policy". Whistle Blower Policy has also been in place at NTPC as per SEBI guideline to strengthen a culture of transparency and trust in the organization, providing employees with a framework/ procedure for responsible and secure reporting of improper activities (whistle blowing) within the company and to protect employees wishing to raise a concern about improper activity/serious irregularities within the Company. A complaint handling policy is also in place which is designed to provide guidance on the manner in which NTPC receives and handles complaints against its employees, suppliers / contractors etc. Integrity Pact has been implemented in NTPC since 2009. Presently tenders having estimated value of ₹ 10 Crore (excluding taxes and duties) and above are covered under the Integrity Pact. As on 31.3.2020, NTPC is having 3 Nos. of Independent External Monitor- Shri Devendra Kumar Pathak, Shri T M Bhasin and Shri M.F. Farooqui, IAS (Retd.) to oversee the implementation of Integrity Pact Programme.

2. **How many stakeholder complaints have been received in the past financial year and what percentage was satisfactorily resolved by the management? If so, provide details thereof, in about 50 words or so.**

   Regarding Investigation of Complaints, during the year 2019-20, a total 84 complaints were investigated and out of these 68 complaints have been finalized while the remaining 16 are under various stages of investigation as on 31.03.2020. During the last year a total of 54 Preventive Vigilance Workshops were conducted at various projects/ places in which 1252 employees participated.

Principle 2: Businesses should provide goods and services that are safe and contribute to sustainability throughout their life cycle

1. **List up to 3 of your products or services whose design has incorporated social or environmental concerns, risks and/or opportunities**

   i. **Generation of Electricity:** NTPC has been conventionally producing Electricity through Coal and Gas. Many design upgradations such as supercritical and ultra-supercritical based new capacity additions and process innovation such as High Concentration slurry disposal (HCSD), Real time monitoring of Pollutants and Zero Liquid discharge has been done to reduce the environment footprint. With the focus on curbing release of SO_x and other undesirable emission into the environment, NTPC is undergoing of commissioning of Flue Gas Desulphurisation (FGD) system at various stations. NTPC has also increased its solar, wind and hydro based capacities which has negligible emissions.

   ii. **Coal Mining:** Efforts have been take to reduce water use. Air cooled condensers introduced in upcoming coal plants to minimize water usage.

   iii. **E-Mobility:** NTPC is trying to promote adoption of EVs through developing charging infrastructure. This will curb the rising air pollution.

2. **For each such product, provide the following details in respect of resource use (energy, water, raw material etc.) per unit of product (optional):**

   a. Reduction during sourcing/production/distribution achieved since the previous year throughout the value chain.

   b. Reduction during usage by consumers (energy, water) has been achieved since the previous year.

Raw Material (Energy) Consumption per year:

Energy Source	2017-18		2018-19		2019-20	
	Quantity	PUC	Quantity	PUC	Quantity	PUC
Coal	168.95 MMT	0.67 kg/kWh	172.22 MMT	0.66 kg/kWh	169.38 MMT	0.63 kg/kWh
Natural Gas	5.345 MMSCMD	0.22 scm/kWh	4.65 MMSCMD	0.23 scm/kWh	3.16 MMSCMD	0.233 scm/kWh
LDO	27,557 KL	0.35 ml/kWh (LDO & HFO combined)	42,626 KL	0.38 ml/kWh (LDO & HFO combined)	79,646.2 KL	0.51 ml/kWh (LDO & HFO combined)
HFO	59,725 KL		56,254.26 KL		48,895 KL	
Naphtha	4,283 MT		5,887 MT		97.9 MT	
HSD	3,118 KL		9,561 KL		86.566 KL	

Water Withdrawal per year (in million KL): (* Water calculated on closed loop systems)

S.NO	Type of water	Quantity Consumed		
		2017-18	2018-19	2019-20
1.	Total Water withdrawal	561.01*	593.24*	559.5*
2.	Per unit withdrawal	3.06* lt/kWh	3.04* lt/kWh	3.15* lt/kWh

* Water calculated on closed loop systems

Energy saving per year:

	2017-18	2018-19	2019-20
Energy saved by the initiatives taken in NTPC power plants for energy conservation / efficiency improvement	120.5 MU	127.52 MU	130.1 MU

3. **Does the company have procedures in place for sustainable sourcing (including transportation)? If yes, what percentage of your inputs was sourced sustainably? Also, provide details thereof,**

   The Following procedures are in place for the sustainable sourcing of coal by NTPC for its different power station:

   i) **Coal Linkage:** Coal linkage for a new project is accorded by Standing Linkage Committee-Long Team (SLC-LT) under the aegis of Ministry of Coal, GOI. Accordingly, NTPC applies for coal linkage to SLC (LT) for its new projects on the direction of SLC-LT, Coal companies issue Letter of Assurance (LoA) to the Buyer valid for 24 months. On receipt of LOA, NTPC completes all the formalities enabling for signing of FSA.

   ii) **Fuel Supply Agreement (FSA):** FSA is signed between the Buyer and Coal Companies for a period of 20 years with a provision of review after every 5 years. Based on the terms & conditions of FSA, coal companies supply coal to the power stations.

   iii) **Bilateral MoUs:** Short-term coal procurements are done as per requirement through Bilateral MoUs with coal companies for the quantity, price & period mutually agreed by buyer & Coal Company.

   iv) **E-Auctions:** Coal is also procured for critical stations by participating in E-Auctions conducted by Coal companies as approved by NTPC Board.

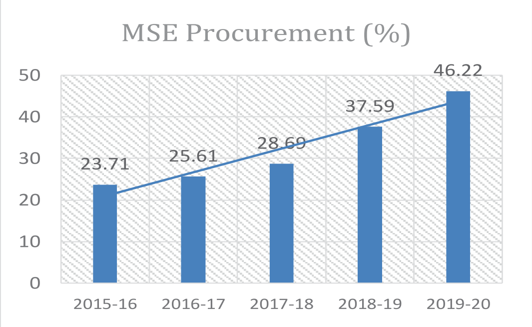
   v) **Import:** NTPC imports coal with the approval of NTPC Board. NTPC procures the coal on short-term basis and in multi-packages to enable cost benefit to NTPC.

   Total Domestic Coal Receipt (COD Stations) in FY 2019-20 was 172.0 MMT.

4. **Has the company taken any steps to procure goods and services from local & small producers, including communities surrounding their place of work? If yes, what steps have been taken to improve their capacity and capability of local and small vendors?**

The Company adopts fair, equitable and transparent tendering procedures. To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of Government of India. Company has taken various initiatives to encourage participation in tender for local & small manufacturer including SMEs.

The Company exceeded the target of 25% procurement from MSEs in FY 2019-20 as per Public Procurement Policy (PPP) 2012. Actual percentage procurement from MSEs in FY 2019-20 was 46.22 %, highest for your company. Also your Company has achieved the highest MSE procurement in FY 2019-20 amongst Maharatna PSUs. The procurement trend for the last five FYs is as below:



Further, NTPC is organizing regular vendor meet for local SMEs for development of items and services and encourage the local vendor for SME registration under Udyog Aadhaar.

There are certain economic opportunities arising out of need for goods and services by the project and its township. NTPC provides opportunities to the local communities including Project Affected Persons (PAPs) for gainful employment by formation of Co-operative Societies and Self Help Groups. The preference for award of petty contracts etc for supplying goods and services is given to Project Affected Persons (PAPs).

NTPC conducts regular capacity building programmes for local communities including PAPs for better employability. The programs are conducted based on the findings of Need Assessment Surveys and Individual requirements and after due consultation with the community. The people are trained under various training programs through training institutes engaged by NTPC/ State Govt.

5. **Does the company have a mechanism to recycle products and waste? If yes, what is the percentage of recycling of products and waste (separately as <5%, 5-10%, >10%). Also, provide details thereof, in about 50 words or so.**

Our Product viz. Electricity gets completely consumed and hence there is no scope of its recycling. Guidelines have been issued in line with National Environment Policy for disposal of hazardous wastes from NTPC power stations. The hazardous wastes generated at our power stations such as used transformer oil, used lubricants, lead acid batteries etc. are sold only to government approved recyclers or given back to the sellers for recycling under buy back arrangements, which takes care of 100% recycling of such wastes.

During FY 2019-20, approximately 60.47 million tonnes of ash was generated and 73.31 % i.e. 44.33 million tonnes of ash had been gainfully utilized in various areas such as issue to industries for cement, concrete, asbestos products, bricks/ blocks making, road embankment construction, ash dyke raising, mine filling, land development works etc. Nine NTPC stations (Dadri, Tanda, Solapur, Mouda, Farakka, Kudgi, Simhadri, Ramagundam and Talcher-Thermal) have achieved 100% ash utilization and Unchahar has achieved ash utilization >90% .

Principle 3: Businesses should promote the wellbeing of all employees

1. **Number of Employees:**

Category	2017-18	2018-19	2019-20
Executives	11,567	10,859	12,443
Non- Executives	8,317	8,154	6,722

2. **Number of Employees hired on Temporary / Contractual / Casual basis:**

   NTPC does not hire employees on temporary / casual basis. The no. of workers with Contractors are dynamic in nature and vary from time to time.

3. **Number of permanent Women Employees:** 1,255

4. **Number of permanent Employees with Disabilities:** 506

5. **Do you have an employee association that is recognized by management:**

   NTPC Limited is a multi-unit organization. Association(s) comprising of executives of NTPC need not be recognized in the absence of any statutory mandate. Workmen of various NTPC Units have formed unions. The same are accorded recognition by NTPC Limited as per applicable law / practice.

6. **What percentage of your permanent employees is members of this recognized employee association?**

   About 70 % of the permanent employees in workmen category are members of the recognized union of workmen.

7. **Please indicate the Number of complaints relating to child labour, forced labour, involuntary labour, sexual harassment in the last financial year and pending, as on the end of the financial year.**

S. No.	Category	No. of previous year pending complaints	No. of complaints filed during the FY 19-20	No. of complaints pending as on 31-03-2020
1	Child labour / forced labour / involuntary labour	NIL	NIL	NIL
2	Sexual harassment	2	2	0
3	Discriminatory employment	NIL	NIL	NIL

8. **What percentage of your under mentioned employees were given safety & skill up-gradation training in the last year? (Excluding joint venture companies)**

Category of employee	Training for safety (% covered)	Training for skill up -gradation (% covered)
Permanent Employees	32.69	86.90
Permanent Women Employees	19.06	82.87
Employees with Disabilities	23.82	80.12

Principle 4: Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.

1. **Has the company mapped its internal and external stakeholders? Yes**

2. **Out of the above, has the company identified the disadvantaged, vulnerable & marginalized stakeholders**

   The Company has a well structure R&R and CSR Policy to take care of the disadvantaged, vulnerable and marginalized people in and around the plants.

   Vulnerable category of persons has been detailed in NTPC's CSR and R&R Policies. These include old-aged, women, PCPs, SC/ST/OBC etc. They are identified through Socio Economic Survey (SES), Need Assessment Survey (NAS) and other consultations with the stakeholders etc. at the time of formulation of CSR/ R&R Plans.

3 **Are there any special initiatives taken by the company to engage with the disadvantaged, vulnerable and marginalized stakeholders? If so, provide details thereof, in about 50 words or so.**

   Yes,

   NTPC has always been sensitive to the needs of disadvantaged, vulnerable and marginalized stakeholders. As part of R&R, in addition to the entitlements and packages as envisaged for PAP's, NTPC makes special efforts for the welfare measures for this section of the society in the neighborhood community of NTPC locations. The measures include special vocational training programmes for making them self-employable, priority in engagement for suitable jobs, pension under Widow Pension Scheme, old age pension scheme etc as per provisions outlined in extant policies or as decided in Village Development Advisory Committee VDAC/ R&R plan. Furthering these efforts under CSR, NTPC regularly undertakes Skill up gradation programs for improving employability of youth/ women in the neighborhood of its operations, some of which also fall in the Aspirational Districts identified by 'NITI Aayog'. NTPC has also taken up the activities for women empowerment, construction of SC/ST multipurpose halls & hostels, relief through distribution of various articles & support to orphanages & old age homes in the vicinity of its stations. Some of the initiatives to address the needs of differently abled include Information and Communication Technology (ICT) Centres and Disability Rehabilitation Centers by NTPC Foundation and inclusive education, distribution of equipments like tricycles, wheelchairs, hearing aids, vocational training, scholarships etc.

Principle 5: Businesses should respect and promote human rights

1. **Does the policy of the company on human rights cover only the company or extend to the Group / Joint Ventures / Suppliers / Contractors / NGOs / Others?**

   The Human Rights policy of NTPC is applicable to all its employees posted in various stations, projects, offices, JVs and Subsidiaries. Human Rights provisions are also built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors.

2. **How many stakeholder complaints have been received in the past financial year and what percent was satisfactorily resolved by the management??**

   No complaint on human rights, such as child labour, forced labour, involuntary labour, sexual harassment, discrimination, rights of the disabled etc. was pending as on 31.3 2020. (Refer principle 3)

Principle 6: Business should respect, protect, and make efforts to restore the environment

1. **Does the policy relate to Principle 6 cover only the company or extends to the Group / Joint Ventures / Suppliers / Contractors / NGOs /Others?**

   All the policies of NTPC as mentioned under principle 6 and their implementation thereof covers all NTPC business units as well as its JVs and subsidiaries. However, the Suppliers / Contractors / Other stake holders are free to adopt the same voluntarily.

2. **Does the company have strategies/ initiatives to address global environmental issues such as climate change, global warming, etc? If yes, please give hyperlink for webpage etc.**

   Yes,

   NTPC is one of the premier PSU under MoP and has been doing its bit in tackling the issue of global warming & climate change. NTPC, as a responsible global citizen, has taken various steps i.e readjustment of NTPC's fuel / power generation mix by adopting more renewables, introduction of clean coal technologies etc. in line with various GoI missions under National Action Plan on Climate Change (NAPCC).

   NTPC low carbon initiatives can be categorized into following broad categories:

   i) Re-adjustment of NTPC's fuel/ power generation mix

   ii) Introduction of Thermo dynamically Efficient Technologies

   iii) Renovation & Modernization of old power stations

   iv) Induction of advanced clean coal technologies for power generation

   v) Establishment of NETRA for addressing climate change concerns

3. **Does the company identify and assess potential environmental risks?**

   NTPC has an elaborate and structured methodology for identifying and assessing potential environmental risks through an institutionalized "Enterprise Risk Management (ERM)" framework. ERM comprises of a functional Director level committee, which meets every quarter to review and mitigate risks. NTPC's risk portfolio includes "Compliance of emission, ash utilization and regulatory norms" risk, under which environmental risks are regularly identified, assessed & reviewed and steps for mitigation are evolved.

4. **Does the company have any project related to Clean Development Mechanism? If so, provide details thereof, in about 50 words or so. Also, if yes, whether any environmental compliance report is filed?**

   NTPC is pioneer in undertaking climate change issues proactively. The company has taken several initiatives in CDM Projects in Power Sector.

   Six of its renewable energy projects viz. 5 MW Solar PV Power Project at NTPC-Dadri, 5 MW Solar PV Power Project at Port Blair (A&N), 5 MW Solar PV Power Project at NTPC-Faridabad and 8 MW small hydro power project at NTPC-Singrauli, 50

MW Solar PV Plant at Rajgarh (MP) and 10 MW Solar PV Project at NTPC Unchahar has already been registered with United Nations Frame Work Convention on Climate Change (UNFCCC) CDM Executive Board.

Coordinating / Managing Entity (CME) has been appointed for 15 MW Solar PV Power project at NTPC-Singrauli and 10 MW Solar PV project at NTPC Talcher and is in process to include the same in registered UNFCCC CDM Programme of Activities (PoA).

The methodology prepared by NTPC viz. “Consolidated base line and monitoring methodology for new grid connected fossil fuel fired power plants using less GHG intensive technology” for Super Critical technology has been approved by “United Nations Frame Work Convention on Climate Change (UNFCCC)” under ‘Approved Consolidated Methodology 13 (ACM0013)’.

Further Registration of new projects 250 MW Solar PV power project at Anantpur, 260 MW Solar PV power project at Bhadla, 250 MW Solar PV power project at Mandsaur and 50 MW Wind power project at Rojmal in Verified Carbon Standard (VCS) program has been initiated and will earn Voluntary Emission Reduction (VERs) in due course of time.”

5. **Has the company undertaken any other initiatives on – clean technology, energy efficiency, renewable energy, etc? Y/N. If yes, please give hyperlink for web page or write up.**

Yes, the company has taken up several initiatives for clean technology, energy efficiency and renewable energy. Details are as follows:

R&D Activities:

NTPC as the leading power utility of the country has assigned 1% of PAT for R&D activities. Company has focused its research efforts to address the major concerns of the sector as well as the futuristic technology requirements of the sector.

NETRA has taken up major projects for addressing concerns such as environment and climate change, reliability and efficiency improvement, new and renewable energy etc. NETRA has taken projects for reducing carbon footprints by means of carbon capture and utilization. Continuous work is going on for the development of new products and processes for bulk Ash utilization and as a result novel technologies & products such as Geo Polymeric (GPC) Road, Geo polymeric Pavers & Tetrapod and GPC Mortar have been successfully developed and implemented.

NETRA has successfully commissioned 120 TPD sea water desalination plant at Vallur and is working on projects such as Electro-Coagulation & Dissolved Air Floatation (EC-DAF) System at Mauda and Forward osmosis system. These projects are aimed at reducing water intensity.

Various developments such as in house floaters for PV plant, Fiber grating sensors for vibration monitoring in generator windings and temperature monitoring in APH have led to significant cost reduction.

Working in the area of new and renewable energy, NETRA has commissioned Solar Thermal Hybrid at Dadri, 1MW floating solar plant at Kawas and Solar thermal sea water desalination plant. For tackling problems such as Flexibilization of units for reducing technical minimum and energy storage, projects have been initiated. Projects have been taken for hydrogen production through various means such as sea water electrolysis, municipal solid waste etc.

Through advance scientific services like Non Destructive Evaluation and Imaging, CFD analysis and Metallurgy & Failure Analysis, etc., NETRA is working constantly for improvement in reliability & efficiency and reduction in auxiliary power consumption and O&M cost by the diagnosis of faults. NETRA is also working on cutting edge technologies for the development of robotics for visual inspection of boiler headers, Asset Digitization & Monitoring through Drones, development of novel sensors to increase reliability, safety and to reduce inspection & monitoring time.

NETRA activities have helped the stations in the analysis of failures and their prevention. Techniques developed by NETRA are implemented at stations wherever required. Regeneration treatments of resins, chemical cleaning/treatment and corrosion control measures supported the stations in improving the efficiency and availability of boilers and various heat exchangers/cooling towers, etc.

Renewable Energy:

Renewable energy is one central focus for NTPC. To be in step with ambitious targets the company is attempting all avenues for setting up large scale solar projects and wind projects. NTPC is also utilizing roofs of power plant buildings for Solar power generation and integrating to the existing plant infrastructure. NTPC is also going ahead with Floating Solar at reservoirs of Projects which is a step towards saving of land and water conservation by reducing water surface evaporation. NTPC's Corporate Plan envisages a target of 32 GW of RE power comprising 25% of the overall installed capacity of 130 GW by 2032.

NTPC contributes to RE capacity addition in a two pronged approach:

i. **Under EPC Mode:**

EPC Mode projects are NTPC's own projects with Investment from NTPC. The offtake is tied up either through direct PPA with state utilities or by winning through tariff based competitive bidding (TBCB). There are some projects in this mode which are set up through Non PPA (Merchant route) also.

NTPC has a commissioned capacity of 920 MW under own capacity addition mode comprising of 870 MW Solar and 50 MW wind projects. The NTPC owned solar projects of 870 MW capacity include three large capacity projects of approx. 250 MW each and located in solar parks in Anantpur (AP), Bhadla (Rajasthan) and Mandsaur (MP).

NTPC has participated in the tariff based competitive biddings conducted by States/ SECI and has won 545 MW solar projects at the most competitive tariffs. Further, NTPC has also won 1,692 MW under CPSU Scheme. Under CPSU scheme of MNRE, it is envisaged to set up solar projects using domestically manufactured cells and modules with VGF support from MNRE. Under this scheme NTPC has won 1,692 MW under competitive bidding of SECI. Out of 1,692 MW, award has been placed on EPC agency for 1,636 MW and balance 56 MW capacities are under tendering.

A total of 2,298 MW RE projects are under implementation at present. These projects are spread across the States of UP, Rajasthan, AP, Telangana and Kerala. Out of the RE projects under implementation, 237 MW are floating solar projects located in reservoirs in NTPC's existing thermal stations. Ramagundam 100 MW floating solar being set up under non PPA mode is the largest in the country. A pilot project of 1 MW capacity is already under operation at Kawas.

In addition, NTPC has already installed Roof Top Solar projects and also planning to further install on some of its TG building Roofs, townships and office buildings wherever adequate shadow free area is available.

ii. **Under Developer Mode:**

Under Developer Mode, NTPC acts as an intermediary procurer and calls for tenders from developers under tariff based bidding mode in accordance with the targets set by MNRE from time to time. NTPC purchases power from the developers shortlisted in the bidding and sells it to the Discoms with a margin. There is no investment from NTPC. In this mode around 3983 MW of RE projects have been commissioned and 1,650 MW of RE projects are under construction. These projects are spread across India.

Further MNRE has accorded its approval to NTPC to act as a designated agency for issue of tenders under Developer Mode for setting up of Renewable Power Projects including wind and solar power projects.

6. **Are the Emissions / Waste generated by the company within the permissible limits given by CPCB/SPCB for the financial year being reported?**

All the legal parameters including emission norms and effluent (wastes) norms are being adhered to by NTPC stations. Change of Law in certain cases, has necessitated up-gradation of pollution control equipments which are being addressed through R&M Schemes for which actions plans have been submitted to the Regulators.

7. **Number of show cause/ legal notices received from CPCB/ SPCB which are pending (i.e. not resolved to satisfaction) as on end of Financial Year.**

All the complaints / notices are addressed timely.

Principle 7: Businesses, when engaged in influencing public and regulatory policy, should do so in a responsible manner

1. Is your company a member of any trade and chamber or association? If Yes, Name only those major ones that your business deals with.

Yes. The detail of major corporate membership with which Company had a business dealing are as under:

SCOPE, FICCI, CII, TERI, WEC, CBIP, IERE, POWER SECTOR SKILL COUNCIL, EPRI, ICSI, POWER HR FORUM, ICC, IFC etc.

2. Have you advocated / lobbied through above associations for the advancement or improvement of public good? if yes specify the broad areas (drop box: Governance and Administration, Economic Reforms, Inclusive Development Policies, Energy security, Water, Food Security, Sustainable Business Principles, Others).

NTPC is a member of World Energy Council. Chairman and Managing Director of NTPC is also an ex-officio Member Secretary WEC India and its international counterpart WEC work towards sustainable use and supply of energy. Their work enables promoting policies which balance Energy Security, Energy Equity (Energy access/inclusive growth) and Environmental Sustainability.

Principle 8: Businesses should support inclusive growth and equitable development

1. Does the company have specified programmes / initiatives / projects in pursuit of the policy related to Principle 8? If yes details thereof. Yes,

To achieve the aim of inclusive growth and equitable development, the Company has a comprehensive Resettlement & Rehabilitation (R&R) policy covering community development (CD) activities, which has been revised and updated from time to time. CD activities in green field area are initiated as soon as project is conceived and thereafter extensive community / peripheral development activities are taken up along with the project development. Separate CSR & Community Development Policy, formulated in July 2004 and Sustainability Policy formulated in Nov 2012 have been combined in 2015 and revised in 2016 as “NTPC Policy for CSR & Sustainability” in line with Companies Act 2013 and DPE Guidelines for CSR . It covers a wide range of activities for inclusive growth including implementation of key programmes through NTPC Foundation. Focus areas of NTPC CSR & Sustainability activities are Health, Sanitation, Drinking Water, Education, Capacity Building, Women Empowerment, Social Infrastructure Development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability.

2. Are the programmes/projects undertaken through in-house team/own foundation/external NGO/government structures/ any other organization?

Programmes are undertaken by well-defined in – house team through specialized agencies, NGO’s, government agencies/ bodies etc. Some of the activities are carried by NTPC Foundation.

3. Have you done any impact assessment of your initiative? Yes

Effectiveness of CSR and Sustainability programme assessed through both internal and external evaluations. Internal audits carried out to verify effectiveness of implementation. Social Impact Evaluation (SIE) done through credible external agencies for gauging impact of CSR & Sustainability initiatives. Findings of SIE form the basis for initiating corrective actions and formulating future schemes/plans. Every two years, NTPC conducts a third-party Social Impact assessment for all its major CSR activities at various operating stations. During the Year 2019-20, NTPC has taken up Impact Evaluation at 06 stations. NTPC’s flexible and open approach in this regard coupled with community participation along with local administration & village Panchayats leads to successful adoption and acceptability of initiatives by community.

4. What is your company’s direct contribution to community development projects- Amount in INR and the details of the projects undertaken?

Yes, Your Company has specified programmes for inclusive growth & equitable development not only at station level but also at National level.

Total spending on CSR is ₹ 304.92 Crore for FY 2019-20. The details of major projects for community are given in Annexure-VII of the Director Report

Preference for CSR activities is being given to local areas around Company’s operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth & Environment Sustainability and to supplement Government effort, activities are also taken up anywhere in the country. During the year, about 500 villages and more than 450 schools have been benefitted by NTPC’s various CSR initiatives at different locations. NTPC’s CSR initiatives have touched, in one way or the other, the lives of around 18 lakhs people, residing at remote locations.

Apart from the CSR activities undertaken around operations, support has also been provided for some of the following major CSR initiatives all across the country:

- 04 weeks residential summer workshops for more than 1800 girl children in the age group of 10-12 years studying in Govt. schools in the vicinity of 23 NTPC Locations through its flagship program “Girl Empowerment Mission” (GEM) wherein interventions were taken to make the girls self-reliant and confident in all walks of life.
- Installation of Sanitary napkin Vending machine and incinerators in more than 40 Govt schools and colleges with substantial nos. of girl children.
- Construction of school & hostel for tribal children near NTPC Rihand, in UP.
- Construction of school buildings at Varanasi UP, Hoshangabad MP & Sambalpur Odisha.
- Implementation of project for improvement of learning levels in 137 Government Schools.
- Smart Tab labs in Government schools in vicinity of 03 NTPC Stations.
- Quality education primarily to rural community children through 34 schools located in NTPC townships.
- 50 Nos of Sanitary Napkin Mini Manufacturing units (MMU) installed in the state of Odisha.
- Creating infrastructure & support for equipment at National Cancer Institute Nagpur for cancer treatment.
- Substantial Support to PM cares Fund for COVID-19.
- Proactive relief measures like regular sanitization of villages, distribution of PPE kits to health professionals face masks to villagers and supply of groceries to the community.
- Setting up Burn Units at AIIMS Patna, AIIMS Bhubaneswar & King George Medical University Lucknow.
- Construction of Eye Hospital at Dadri, UP and of operating room complex at Eye hospital in Bhubaneswar.
- Revival and operation of Mechanized Solid Waste Management plant at Karsada, UP.
- Installation of Energy Efficient Pump System in the fields of farmers residing near NTPC stations located in five districts of Uttar Pradesh.
- To enhance income generation opportunities within the villages, the company has provided vocational training to the village youth and had taken livestock development and crop management projects.

To enhance employability through vocational training, skill upgradation and income generation programs. NTPC has adopted 18 Industrial Training Institutes (ITIs) and is setting up 8 new ones. NTPC has signed Memorandum of Understanding (MoU) with National Skill Development Corporation (NSDC) to develop the skills of 30,000 youth over a period of 05 years spread in 12 states in order to make them self-employable by NTPC.

5. Have you taken steps to ensure that this community development initiative is successfully adopted by the community? Please explain in 50 words or so.

Community Development initiatives in NTPC are taken in a planned way. The community is engaged in all steps of activities from planning to completion.

Bottom up approach is adopted for taking up these activities. CSR activities/ CD plans are identified after consultations with relevant stakeholders like community, village panchayats, local/ district administration & Village Development Advisory Committee based on Need Assessment Surveys.

Stakeholders participate at each stage of the activity and also execution of some of the activities is supervised by the local authorities. People’s involvement is also ensured during implementation and monitoring.

NTPC's flexible & open approach in this regard coupled with community participation along with local administration & village Panchayats leads to successful adoption & acceptability of initiatives by community. Assets are handed over to local authorities and gram panchayats for maintenance.

Social Impact Evaluation (SIE) study/ survey are conducted through external agencies on completion of developmental initiatives. Social audit is done from time to time to evaluate whether all activities have been completed satisfactorily that gives recommendation for necessary modification/ corrective measures, if any, for the future projects.

Principle 9: Businesses should engage with and provide value to their customers and consumers in a responsible manner

1 **Customer complaints / consumer cases are pending as on the end of financial year:** There are no complaints as such from customers. However, as part of the tariff determination process under the overall regulatory system, different cases have been filed by NTPC against CERC/ Customers or filed at the Appellate Tribunal/ Courts by different Beneficiaries against NTPC/ CERC.

APTEL: 64 Cases

Supreme Court and Other courts: 25 Cases

Total: 89 Cases

2 **Does the company display product information on the product label, over and above what is mandated as per local laws?**

Not Applicable

3 **Is there any case filed by any stakeholder against the company regarding unfair trade practices, irresponsible advertising and / or anti-competitive behaviour during the last five years and pending as on end of financial year? If so, provide details thereof, in about 50 words or so.**

Nil

4 **Did your company carry out any consumer survey/ consumer satisfaction trends?**

Yes.

As part of the Customer Relationship Management programme, NTPC conducts a Customer Satisfaction Survey to assess the satisfaction level of the customers, captured through an Index and to get feedback from the customers.

Customer satisfaction surveys conducted in the past five years and targets for next 5 years are tabulated below:

Particulars	2016	2017	2018	2019	2020	2021	2022	2023	2024
% of satisfied customers	94.00	94.90	95.20	96.10	95.50	100	100	100	100
Coverage %	100	100	100	100	100	100	100	100	100

For and on behalf of the Board of Directors

(Gurdeep Singh)
Chairman & Managing Director

Place: New Delhi
Date: 21st August, 2020

Panorama View of NTPC Kayamkulam

Form No. MR-3

SECRETARIAL AUDIT REPORT

FOR THE FINANCIAL YEAR ENDED 31st March 2020

[Pursuant to section 204(1) of the Companies Act, 2013 and rule No.9 of the Companies (Appointment and Remuneration Personnel) Rules, 2014]

To,

The Members,
NTPC Limited
NTPC Bhawan, Scope Complex,
7, Institutional Area Lodhi Road,
New Delhi -110003

We have conducted the secretarial audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by NTPC Limited (hereinafter called the Company). Secretarial Audit was conducted in a manner that provided us a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing my opinion thereon.

Based on our verification of the Company's books, papers, minute books, forms and returns filed and other records maintained by the company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, we hereby report that in our opinion, the company has, during the audit period covering the financial year ended on 31st March, 2020 complied with the statutory provisions listed hereunder and also that the Company has proper Board-processes and compliance-mechanism in place to the extent, in the manner and subject to the reporting made hereinafter:

We have examined the books, papers, minute books, forms and returns filed and other records maintained by the Company for the financial year ended on 31st March, 2020 according to the provisions of:

(i) The Companies Act, 2013 (the Act) and the rules made there under;

(ii) The Securities Contracts (Regulations) Act, 1956 and the rules made thereunder

(iii) The Foreign Exchange Management Act, 1999 and the rules and regulations made thereunder to the extent of Foreign Direct Investment, Overseas Direct Investment and External Commercial Borrowings. **Not Applicable**

(iv) The Depositories Act, 1996 and the Regulations and Bye-laws framed there under.

(v) The following Regulations and Guidelines prescribed under the Securities and Exchange Board of India Act, 1992 (SEBI Act):-

  (a) The Securities and Exchange Board of India (Substantial Acquisition of shares and Takeovers) Regulations, 2011;

  (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 2015;

  (c) The Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and The Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) (Amendment) Regulations, 2018 and any amendment thereto (hereinafter collectively referred to as "Listing Regulations");

  (d) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2018;

  (e) The Securities and Exchange Board of India (Share Based Employee Benefits) Regulations, 2014 (Not applicable to the Company during the period under review);

  (f) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008;

  (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009 (Not applicable to the Company during the period under review);

  (h) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agent) Regulations, 1993 regarding the Companies Act and dealing with client to the extent of securities issued;

  (i) The Securities and Exchange Board of India (Buy back of Securities) Regulations, 1998/2018 (Not applicable to the Company during the period under review);

  (j) The Securities and Exchange Board of India (Depositories and Participants) Regulations, 2018; and

  (k) The Securities and Exchange Board of India (Issue and Listing of Non-Convertible and Redeemable Preferences Shares) Regulations, 2013 (Not applicable to the company during the period under review).

(vi) We have also examined compliance with the applicable clauses/regulations of the following:

  i.) Secretarial Standards issued by the Institute of Company Secretaries of India:

(vii) Other applicable Laws, rules and Guidelines as mentioned here-in-below:

a. DPE guidelines on Corporate Governance for Central Public Sector Enterprises issued by the 'Department of Public Enterprises', Ministry of Heavy Industries and Public Enterprises, Government of India.

b. Right to Information Act, 2005

c. Micro, Small & Medium Enterprises Development (MSMED) Act, 2006

d. Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013

e. Labour Laws and Environmental Protection laws as applicable

f. Legal and Metrology Act

g. Shops and Establishment Act

h. Explosive Act, 1884

i. Mines Act, 1952

j. The Mines and Minerals (Development and Regulation) Act, 1957

k. Electricity Act, 2003

We further report that the Board is duly constituted with proper balance of Executive Directors, Non-Executive Directors and Independent Directors. The changes in the composition of the Board of Directors that took place during the period under review were carried out in compliance with the provisions of the Act except:

i. There has been no Independent women director w.e.f. 16/11/2019.

ii. As required under Regulation 17(10) of The Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, evaluation of Independent directors has not been done by the entire Board of Directors.

ii. As required under Regulation 19(4) read with Schedule II Part D (A) of the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 the required policies/criteria were not formulated.

iv. The Registered office of the Company at Scope Complex, 7, Institutional Area Lodi Road, New Delhi – 110003 has not been registered under the Shops and Establishment Act.

Adequate notice is given to all directors to schedule the Board Meetings, agenda and detailed notes on agenda were sent at least seven days in advance and a system exists for seeking and obtaining further information and clarifications on the agenda items before the meeting and for meaningful participation at the meeting.

All decisions at Board Meetings and Committee Meetings are carried out unanimously as recorded in the Minutes of the Meetings of the Board of Directors or Committees of the Board, as the case may be.

We further report that there are adequate systems and processes in the company commensurate with the size and operations of the company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines.

For **AKHIL ROHATGI & CO.**
Company Secretaries

AKHIL ROHATGI
Partner

FCS No. 1600
C P No.: 2317
UDIN: F001600B000556264

Place: New Delhi
Date: 06.08.2020

To,

The Members
NTPC Limited

NTPC Bhawan, Scope Complex, 7,
Institutional Area, Lodhi Road, New Delhi-110003

Our report of even date is to be read along with this letter.

1. Maintenance of secretarial record is the responsibility of the management of the Company. Our responsibility is to express an opinion on these secretarial records based on our audit.
2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of the secretarial records. The verification was done on test basis to ensure that correct facts are reflected in the secretarial records. We believe that the processes and practices, we follow provide a reasonable basis for our opinion.
3. We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company
4. Where ever required, we have obtained the Management representation about the compliance of laws, rules and regulations and happening of the events etc.
5. The compliance of the provisions of Corporate and other applicable law, rules, regulations, standards is the responsibility of management. Our examination was limited to the verification of procedures on test basis.
6. The Secretarial Audit Report is neither an assurance as to the future viability of the company nor of the efficacy or effectiveness with which the management has conducted the affairs of the company.

For **AKHIL ROHATGI & CO.**
Company Secretaries

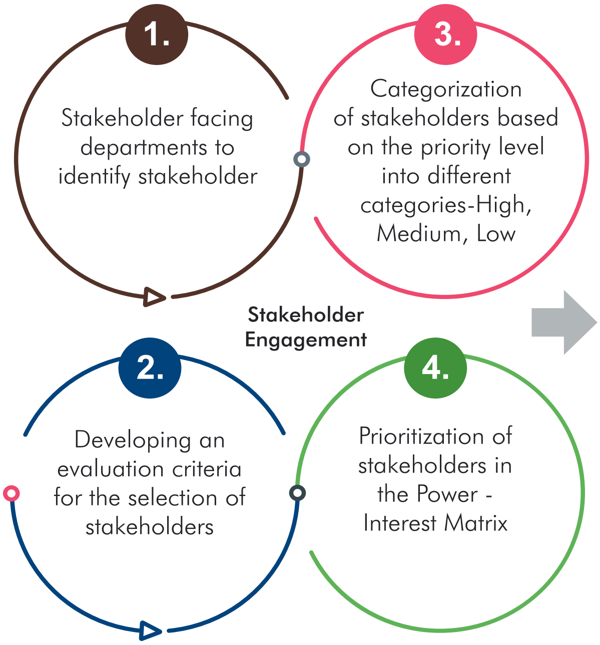
AKHIL ROHATGI
Partner

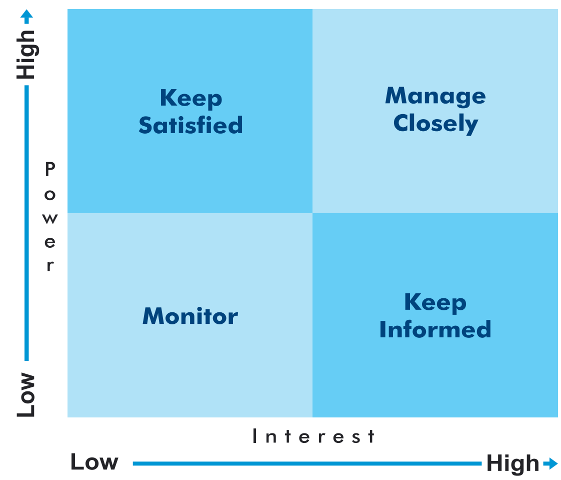
FCS No. 1600
C P No.: 2317
UDIN: F001600B000556264

Place: New Delhi
Date: 06.08.2020

Solar Lights for Remote Villages

Stakeholder Engagement and Materiality Assessment





Categorisation of Stakeholder

Creating value for all our stakeholders is at the core of our value chain. We align our operations and business processes to cater to the expectations of our stakeholders, and design our strategy to respond to the priorities of our people – including employees, communities, contractors, customers and vendors. It is our endeavour to engage with them in a continuous, consultative, and constructive manner to be able to seek insights for designing our sustainable business strategy.

Stakeholder Engagement

Stakeholder engagement at NTPC is an ongoing journey where the company interacts with its various stakeholders at different management levels through various interaction platforms. In about 45 years of existence, NTPC has built a constructive relationship with its stakeholders with mutual trust, transparency, ethics and accountability. The continual dialogue process with stakeholders and their feedbacks on issues concerning the company's operations has enabled much of its growth and achievements.

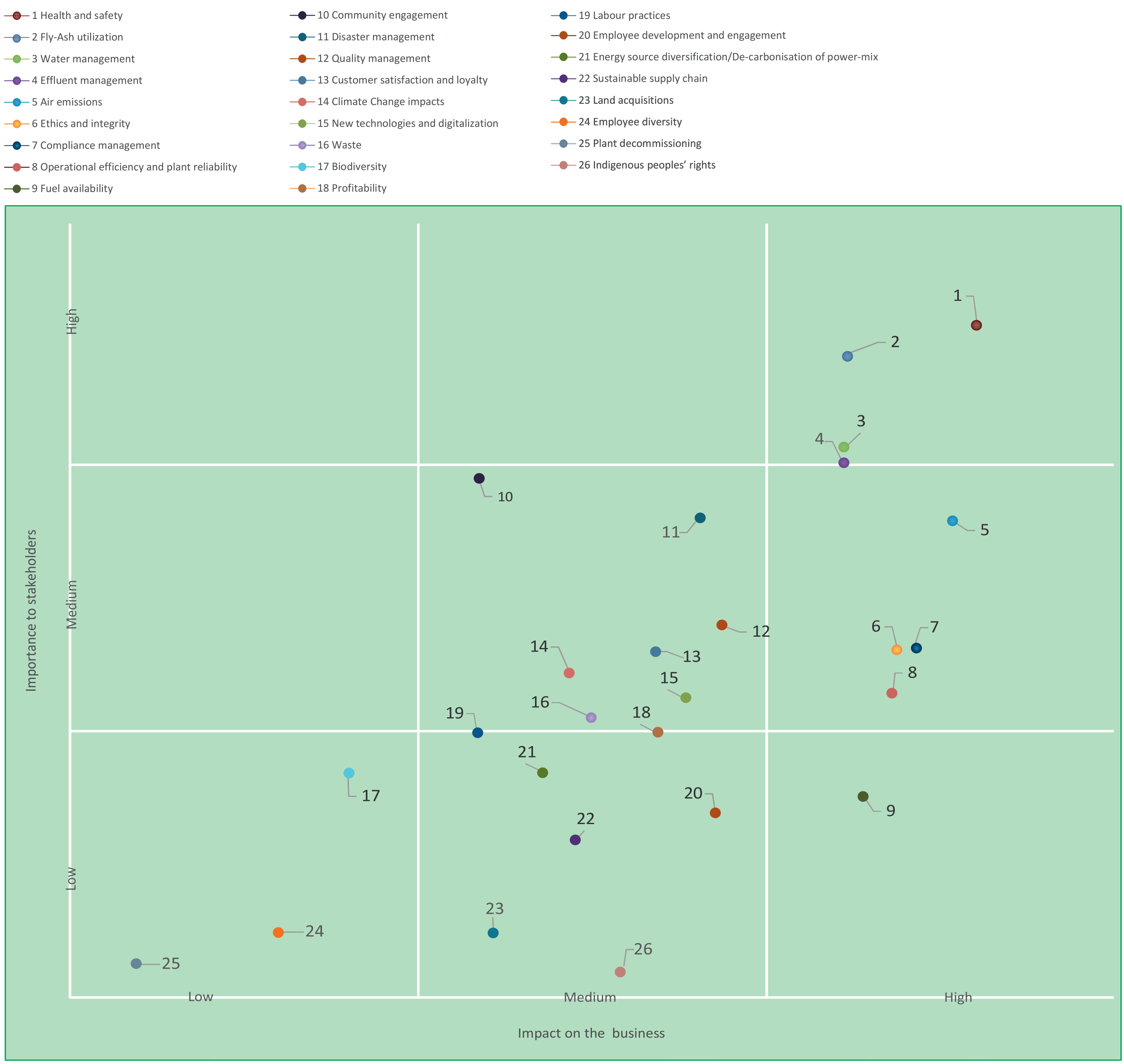
WR 2 HQs, Raipur

Stakeholder Group	Modes of Engagements	Frequency of Engagement	Key Concerns	Materiality Topics Linkage
Government of India	• Secretary level review • Meeting with MoP, DPE, Parliamentary committees, CEA, etc.	• Quarterly • Need based	• 24x7 affordable power to all • Maximizing infrastructure utilization • Social development • Environment conservation • Promote Govt. schemes (viz. Make in India, Skill India, Swachh Bharat Mission, etc.)	All
Regulators	• Public hearing • Statutory audits & inspection, Meeting for clearances, consents and compliances	• Need based • As per statutory provisions	• Optimum electricity tariff • Compliance with changing business environment	
Communities & NGO	• Public hearings • Village Development Advisory Committee (VDAC) • Public information centers • Project-based stakeholder meets	• Need based • Annually	• Infrastructure development • Quality of life • Employment opportunities • Land acquisition and R&R issues • Increased community involvement	10, 16, 2, 3, 4, 5, 16, 17, 23
Investors & Lenders	• Analyst and investors meeting • Annual general meeting • Review meets with bankers (Domestic and Foreign)	• Quarterly • Annual • Regular	• Improving RoI • Climate change & Business sustainability • Risk and governance compliance • Increased disclosure on Environment, Social and Governance (ESG) aspects	18, 21, 14, 15, 12
Employees	• Participative forums • Communication meetings • Employee surveys • Intranet and website • Trainings and workshops • Internal magazines	• As per defined frequency • Need based	• Professional growth • Work life balance • Health, safety and security • Timely resolution of grievances • Transparent appraisal and promotion cycle	1, 5, 3, 6, 7, 8, 18, 19, 20, 24
Customers	• Regional customer meets • Regional power committees (RPCs) • Commercial meetings/interactions • Technical coordination committee • Operation coordination committee • Business partner meet • Customer support services	• Quarterly • Monthly • Yearly • As per requirement	• Resolving commercial issues • Resolving technical issues	2, 3, 5, 6, 13
Suppliers	• Pre-bid conference • Suppliers meet, Vendor enlisting • NTPC website	• Before tendering • Need based	• Transparent dealings • Timely payments • Fair opportunities • Increased awareness for partnering in green initiatives	6, 15, 22
Media	• Press releases • Press conferences	• Need based • Event based	• Information sharing • Increased transparency	6
Indian Citizens	• Right to information (RTI) Act queries • NTPC website	• Continuous	• Community development • Environmental issues • Progessive organization	6, 7, 26

Our Materiality Assessment

Materiality assessment is a foundational and integral aspect of our Integrated Report, enabling us to gather insights on the relative importance of specific Environmental, Social and Economic issues and their impact on value creation. We conduct this exercise on regular time intervals (gap of 3-4 years) owing to significant change in business processes, external environment, geographical expansion, global trends etc. A structured methodology has been adopted for materiality assessment with engagement with both internal and external stakeholders. The details about methodology and engagements undertaken can be accessed from NTPC's website.

We undertook a new materiality assessment methodology in FY19 in accordance with the IIRC Framework and GRI Standards through a credible third party. This exercise was helpful in prioritising inputs from relevant stakeholders, as mentioned in above section, through continuous interactions, into NTPC's decision making process. Our material topics also provide further insights into the challenges, risks and opportunities our Company might face as described in the risk chapter of this report. The effective management of material issues is critical to our business sustainability as it direct our strategic planning and management priorities towards achieving the end goal of long-term sustainable value for our stakeholders.



SUSTAINABILITY REPORTING

Our approach to materiality topics

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
1.	Health and safety I	• Safety is inculcated in the core values of NTPC • Target of zero incidents by establishment of robust safety culture and policy • Upgradation of operating procedures to make the work environment safer • Addressal of potential safety hazards owing to inclusion of new technologies and business areas • NTPC Unchahar Safety Academy has been establish to provide hands-on training on safety and emergencies • Mandatory Periodic Occupational health check-ups for all employees and contract labours • Recording of medical history of employees and their family through online centralized HMS framework "Jeevan Rekha"	3	
2.	Fly-Ash utilization I E	• Implementation of Ash Policy for ash utilization in an integrated way from generation to end product • Dry fly ash is issued to cement industries and ash brick manufacturers, NHAI and SHA • Pond ash is given for road-construction in considerable quantity • Utilisation for development of value products such as geopolymer roads, light weight aggregate, building material etc	9 11 12	
3. & 4	Water and effluent management I E	• Water use optimisation through advanced technologies and process reengineering • Implementation of "Water Policy" and "Rain Water Harvesting Policy" • Transformation of all stations as "Zero Liquid Discharge (ZLD)" with increased use of waste water • Ensuring good quality fresh water availability in and around our plant locations through community investments and capacity building • Air Cooled Condensers in future stations, having potential to save 75% of water • Cycles of Concentration (CoC) is being increased at all stations for reducing fresh water intake	6 13 14	 
5.	Air emissions I E	• Installation of Flue gas desulphurisation (FGD) system for SO_x control at 55+ GW capacity • combustion modifications for De-NOx at 18+ GW capacity • Retrofitting of ESP to curb particulate emissions at all stations • Continuous Emission Monitoring System (CEMS) of all stacks • Ambient air quality monitoring through an online Ambient Air Quality Monitoring System (AAQMS)	11 13 3 7 15	

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
6.	Ethics and integrity I E	• All business processes aligned to principles of ethics and integrity as part of our core values • Policies of code of conduct, whistle blower, complaint handling and banning of business dealings in place • 100% compliance with laws and regulations ensuring a transparent and corruption free work environment • Displays board at all offices exhorting any visitor not to succumb to pressure and report any case of corrupt practices directly to Chief Vigilance Officer		
7.	Compliance management and contractual disputes I E	• Robust internal systems and processes in place for smooth and efficient conduct of business • Our systems are designed to ensure regulatory compliances and maintain highest level of corporate governance • Internal environmental audits of the stations are conducted by expert teams comprising internal and external members • 19 NTPC stations are ISO14001:2015 certified and therefore periodical external audit of the environmental systems are done by the certification agencies		
8.	Operational efficiency and plant reliability I	• Improvement of operational efficiency through process innovations and adoption of advanced technologies • Adopting best operation and maintenance (O&M) practices, periodic review • Improvement of current systems, secure and consistent access of information to all enables us to increase our productivity. • Increasing plant reliability through improved scheduling & maintenance, data analytics, ensuring fuel availability and providing job specific trainings to our workforce • Unique voluntary program of GHG emission reduction by establishing 'Center for Power Efficiency and Environmental Protection (CenPEEP)' for CO2 reductions through sustained efficiency improvements		
9.	Fuel availability I	• Long term fuel supply agreement with major domestic fuel suppliers • Supplementary agreement has also been signed at subsidiary level under rationalisation of coal linkages • Importing coal to fulfil the short term fuel requirements • Strategically ventured into coal mining to ensure the long term fuel security		
10.	Community engagement I E	• Dedicated CSR policy in line with Companies Act, 2013 and Department of Public Enterprises (DPE) Guidelines for CSR, • Key community based programmes through NTPC Foundation. • Our focus areas includes Health, Sanitation, Water, and Education. • One of top CSR spenders corporates in country through expenditure of Rs. 304.92 Cr in FY20		

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
11.	Disaster Management I E	• Periodic review and monitor of safety and security system to identify and address new kind of hazards • Design upgradation of the plant structure to ensure resistance to natural calamities • Developed location wise specific Disaster Management Plan (DMP) • Appropriate mock drills periodically to build awareness and capabilities of our employees		
12.	Quality Management I	• Quality Assurance in place to ensure strong performance and quality on all our operational parameters • Ensure quality starting from raw materials up to erection and commissioning till the electricity we generate • Each item secured for construction is subject to rigorous tests and inspection at the appropriate stages to ensure conformity • Committed adequate resources to maintain effective Quality Management System in our business operations • Dedicated Corporate level Quality Assurance team and Inspection Engineers at various demanding locations and projects		
13.	Customer satisfaction and loyalty E	• Ensuring timely response to customers' changing energy needs and grievances • Periodic meets of the NTPC management with beneficiaries from state transmissions and distribution utilities to understand and resolve issues		
14. & 21.	Climate Change impacts & De-carbonisation of power-mix E	• Enhanced geographical and technology diversification. inherently reducing our risks to any individual location specific natural catastrophe • Power plants and associated infrastructures are designed to withstand cyclones, heatwaves and increase in water temperatures • Substantial progress towards decarbonised energy transition through 4.5 GW of non-fossil based generation capacity till date and target of 37 GW of same by 2032		
15.	New technologies and digitalization I	• Delivering sustainable technology solutions through applied research and providing advanced scientific services through dedicated R&D centre (NETRA) • Independently developing patented technology • Launched notable digital platforms for business approvals and Suppliers /Labours bill payments • CPM & BI tool for data monitoring and reporting		
16.	Waste Management I E	• Waste generated such as lubricating oil, transformer oil, metal and non-metal scraps etc. are properly disposed with approved agencies • Specific guidelines and systems instituted for handling domestic waste and bio-medical waste • The scrap and recyclable waste is managed through auction on MSTC e-platform and other solid waste in managed according to our waste policy & applicable govt. regulations		
17.	Biodiversity E	• Implementation of Dedicated Biodiversity Conservation Policy • 35 Million trees has been planted • Currently implementing 10 Wildlife and habitat restoration projects		

Sr. No.	Topics with Boundary	Key Actions	SDGs Linkage	Capital Linkage
18.	Profitability (I)	• Target to have 25% market share of electricity generation of India • Diversified into coal mining, EV ecosystem, consultancy to ensure future cashflows	8, 9	Financial
19.	Labour practice (I) (E)	• Uphold the best Global and Indian labour standards pertaining to wage determination, allocation of tasks, shifts & working hours, provision of training, incentive & reward schemes and occupational health & safety standards • Dedicated Human Rights Policy in place to promote all kind of organizational rights • Operating bipartite collective bargaining forum (NTPC Bipartite Council) since 1982 • Implemented CLIMS for online labour payments	10, 3, 16, 8	Social
20. & 24.	Employee development, & Engagement and Employee diversity (I)	• Continuously reengineering HR systems to strengthen the relationship between business growth and systematic employee development • Continuous engagement activities and training programmes • Systematic job rotation and career development scheme to aid employee in their horizontal and vertical growth	3, 8	Human
22.	Sustainable Supply Chain (E)	• Implementation of sustainable supply chain guideline • Capacity building programmes for suppliers on environment social and economic fronts to create shared value	8, 11	Social
23. & 26.	Land acquisitions & Indigenous peoples' rights (E)	• Taking measures to improve the Socio-economic status of the Project Affected Families (PAFs) • R&R (Rehabilitation and Resettlement) policy in place in line with 'The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013' (RFCT LARR Act)	11	Social
25	Plant decommissioning (I)	• Decommissioning of plants are governed by the norms of Ministry of power (MoP) • Ensuring safety and security of people and environmental impact during decommissioning	9, 11	Manufactured

Capitals

Human

Natural

Social

Intellectual

Financial

Manufactured

Boundary

(I) Internal

(E) External

Risk Management at NTPC

We constantly identify business risks and opportunities to ensure that our business strategy is always aligned with the internal and external environment. To effectively manage the risks associated with the business, NTPC has taken adequate measures to institutionalize risk management process by implementing a companywide elaborate Enterprise Risk Management (ERM) framework.

As part of implementation of the ERM framework, a Director Level Committee called Risk Management Committee (RMC) have been constituted. RMC, as owner of Enterprise Risk Management framework have been entrusted with the responsibility to identify and review the risks and formulate strategies and action plans for risk mitigation on short-term as well as long-term basis. The objective of the process is to improve risk awareness and manage the Company's risk exposure. The details about members of Risk Management Committee can be found at in the corporate governance chapter.

Our risk assessment method is based on a sustainable business model analysing risks in a broader framework and incorporating social and environmental issues with economic considerations. The identified risks are then mapped with concerned stakeholders and organisation's priority. These risks are then prioritised and action plans are developed at different levels.

The company endeavours to address these risks in a timely manner and converting them selectively into opportunities, thereby enhancing Company's competitive advantage. We constantly leverage opportunities and minimise risks in time bound manner with defined responsibility at apex level. We build our business strategies based on identified risks and opportunities to meet the needs of diverse stakeholders and remain competitive.

Roles and responsibilities of the Risk Management Committee

- Assessment of risks and formulate action plan/ strategies to mitigate them
- Implementation of risk management plan
- Monitor and review risk management plan
- Informing the Board about the risk assessed and action required on quarterly basis
- Take up any other matter as directed by the Board from time to time.

The process of risk identification is guided by the Company's objectives, external environment, industry reports, internal stakeholders etc. The risk identification process covers the whole gamut of risks, including strategic, tactical and operational.

NTPC Dulanga, Coal mine

Risks	NTPC's Initiatives
Operational Risks	
Regulatory and compliance risks	
Revised GoI environmental norms for thermal power plants require substantial investment in power plants to contain SPM, SOx, NOx emissions. Also, stricter water consumption limits and 100% ash utilisation by thermal plants are another risk areas.	NTPC is spearheading the adoption of Flue Gas Desulphurisation at a massive scale for sox control and combustion modification for de-NOx. ESPs have been modified for SPM control. Many new avenues of ash utilisation such as roads and building construction, mine filling and long term off taking agreements have been signed.
Succession Planning	
The rapid expansion of the company geographically and its business diversification into other streams has created the need for new business leaders across the various verticals. The development of right talent and their timely appointment is an important aspect.	NTPC has instituted various systems and interventions in place for the talent mapping and overall development of all the categories of employees. For junior and middle management levels, 10X programme has been set up. For senior management level Harvard ManageMentor (HMM), Design Thinking program, etc. have been initiated.
Contractual disputes	
With changing legal and regulatory landscape in the country many legal issues are emerging with the growth in the business. As dispute take longer time to settle, there is a risk of contracts not being closed in a time bound manner.	Various committees have been formed at sites, Regions and Corporate level for speedy settlement of pending and new contractual cases. A Dedicated Arbitration cell has also been formulated to work in close coordination with best legal advisors and industry partnership to clear cases on priority.
Tactical Risks	
Fuel Security	
It has become an area of concern owing to reduction in coal supplies and gradual increase in our fleet size.	NTPC is ensuring fuel security through long-term coal supply agreements. The company has been allocated 10 coal blocks for captive mining, which would be able to meet 12% of its coal requirement by 2025. Also, we are increasing use of bio-fuels to proportionally off-set coal requirement. Our strategic plan to increase renewable capacity would reduce our dependence on fossil fuels proportionally.
Commercial and financial risk	
Availability of cost-effective capital is a critical issue. Availability of debt at cheaper rate has become difficult in terms of current level of exposure of the banking sector to stressed asset.	NTPC has diversified the lenders base by reaching out to lenders who have not breached exposure limit and has also done diversification to overseas borrowing, ECBs etc.
Market driven energy pricing	
The power sector is slowly shifting from a regulatory regime to a market driven regime. The tariffs of new projects are being explored through competitive bidding. Being an asset heavy business model, shifting from a fixed RoI to market-based earning leads to uncertainties and risks.	NTPC is well poised to perform in this new era of energy sector - with talented pool of workforce, more than four decades of leadership experience, rich industry association and public advocacy mechanisms. Till date based on competitive bidding NTPC has won 2237 MW of solar power plants.

Strategic Risks	
Climate Change: Physical and Transition risk	
Climate change is posing both physical and transition risks to all business entities including NTPC. The risks associated with the increase in sea levels, water stress situations, increased heat waves, erratic rainfall and frequent natural disasters may impact the business. Rising climate change concerns and threats may bring future policy and regulatory risks in terms of carbon tax and cess.	NTPC has an enhanced geographical and technology diversification. We operate across more than 70 locations in India and abroad, inherently reducing our risks to any individual location specific natural catastrophe. As part of our preparedness against such situations, our power plants and infrastructure is designed to withstand cyclones, cooling systems to withstand the increase in water temperatures brought forth by climate change. To de-risk our business from transition risk, we are making substantial progress towards decarbonised energy transition through increase penetration of renewables in our portfolio. We have installed 4.5 GW of non-fossil based generation capacity till date and strive to achieve 37 GW of same by 2032.
Water Availability	
Water has become a significant risk area due to the increasing pressure on the already stressed available water resources. Reducing water availability, its increasing costs and stricter regulatory regime is posing risks to our operations.	Various water conservation initiatives with process improvements and technology adoption have been taken up by us including optimisation of cycles of concentration (COC) and implementation of ZLD at all stations to reduce fresh water consumption. Air Cooled Condenser (ACC) based cooling is being adopted in projects located in water stressed locations.
Business growth and diversification	
With the rising economic growth attributed to rapid urbanisation and increased industry production, the electricity demand is poised to keep growing. Power generating units needs to ramp up their production to meet the increasing demand. Also, to ensure the profitability and future cash flows, power companies need to diversify their business and increase global footprint.	NTPC is looking for opportunities for acquisition of power plants including efficient low carbon technologies and renewable plants. The company has recently won the bid for a 600 MW thermal plant and has already diversified into renewables, consultancy services, EV ecosystem and waste to energy services.

NTPC, Kudgi

Opportunities	NTPC's Initiatives
Climate Change	
Increased renewable penetration into grid owing to rising climate change concerns has opened many avenues for energy sector players. Influx of more variable renewable energy sources in the grid would require greater support of flexible operation of coal stations, energy storage and ancillary services.	NTPC have developed internal systems and practices to deal with issues of flexible operation enabling its coal plants to operate at minimum technical PLF. Development of Energy storage through the Pumped Storage Plant (PSP) of 1GW is already in advanced stage. Battery storage, green hydrogen and Methanol are other areas, where NTPC is leading the front.
Digitalisation	
The dynamic business landscape is being driven through AI and Digitalisation. In this highly competitive era, digitalisation is enabling faster decision making, reducing costs through automation and rendering long term competitive advantage.	NTPC is taking all measures for faster adoption of digitalisation across company functions and verticals. A dedicated digitalisation team has been constituted with experts from various business domains of NTPC. NTPC has launched notable digital platforms such as PRADIP for business approvals and Suppliers bill payment, CLIMS for online labour payments, CPM & BI for data monitoring and reporting etc.
Increased Geo-strategic presence	
Electricity demand is rising in neighbouring countries and also in few parts of world having low energy consumption per capita. Lots of opportunities in terms of project construction, consultancy etc. are coming on NTPC way.	NTPC, by virtue of our growing project management and O&M experience with an expanding power generation portfolio, is looking at overseas opportunities. We are already present in Bangladesh, Sri Lanka, Myanmar, Togo and Mali.

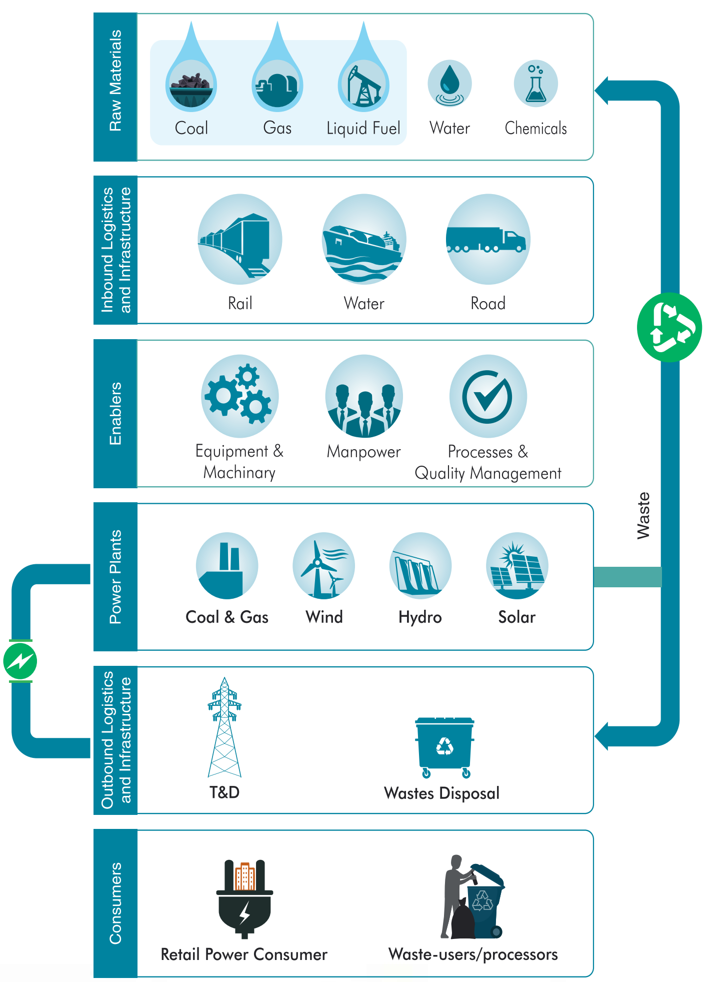
NTPC Rojmal

NTPC, Gandhar

Our value chain

Our business model consists of procuring physical assets, raw materials and services for our production processes and subsequent evacuation of power through our intermediate consumer to the end-user. The wastes generated from our processes are either recycled into useful materials, used as raw material for another industry or are disposed / processed as per regulations. We are in the process of forward and backward integration of our core business of power generation through coal mines for captive use, and acquisition of companies involved in power generation business. No disruptive changes took place in our supply chain during the reporting year. Incremental changes in our overall business processes are reported in the relevant sections. We are continuously evolving our business model to broaden value creation for our various stakeholders. Integrated planning and execution is at the core of this evolution from business model to a 'value creation' model. We base our 'value creation' model on six 'capitals' which serve as a stock for our inputs.

For each of the inputs withdrawn, we add elements of value for our stakeholders through our business processes & functions in tandem with the external environment and our mission, vision and core values. This is enabled through strategy formulation, risk identification, resource allocation and periodic performance monitoring.



FINANCIAL CAPITAL

This capital refers to the pool of funds available for use by us for asset creation, production processes, and conducting our related operations. This also covers funds generated through operations. Financial Capital covers KPIs like Turnover, Revenue, Profit After Tax amongst others.

MANUFACTURING CAPITAL

This capital is an aggregation of all our physical assets including our power generation stations our mines, equipment, machinery, raw materials and logistical infrastructure.

INTELLECTUAL CAPITAL

This capital represents our intangible knowledge base manifested through our R&D efforts (including our processes, patents, trademarks, copyrights etc), consultancy services, our learning centers, and our process innovation efforts.

HUMAN CAPITAL

This capital refers to our human resources and their compensation, benefits, capabilities, diversity, career progression safety and well- being.

SOCIAL CAPITAL

This covers our efforts towards establishing, nurturing and maintaining our relationship with our stakeholders, such as vendors & suppliers, customers and communities etc.

NATURAL CAPITAL

This refers to our interactions with the nature and environmental resources during our operations including our management of water, energy and wastes; and the impact of our operations on water, air, soil and biodiversity

Our Value Creation Model

Our contribution towards the nation is being pursued in response to continuing economic growth in India combined with increasing decarbonisation efforts, speedier diffusion of digitization and decentralization. NTPC's integrated framework is designed to steer action in pursuit of its core values, vision and mission in the face of changing external and internal operating environment. For this, NTPC has adopted the six capitals approach proposed as part of the International Integrated Reporting Council's <IR> Framework. This integrated framework is designed to determine and pursue action by each function and business to contribute to our transformation and value creation and thereby represent our commitment towards a sustainable future. NTPC conducts continuous monitoring and analysis of its external environment to identify threats and opportunities that may pose any risk to the organization, its strategy and its business model. There are several steps being taken to mitigate or manage key risks or to create value from key opportunities, including the identification of the associated strategic objectives, strategies, policies, targets and KPI. Based on the regular review of our business activities and outcome with a focus on the organization's outlook we strategize our approach in terms of MOU with government, internal management agenda to mitigate or manage our risks and maximize our opportunities.

Floating Solar at NTPC Kayamkulam

Value Creation Model

INPUTS — Components of value creation

Activities — VALUE ADDING ELEMENTS

Financial Capital

- Net worth ₹ 1,18,237 Crore
- Debt of ₹ 1,84,073 Crore
- Capital Expenditure of ₹ 47,122.93 Crore

Activities:

- 9 Subsidiaries & 19 Joint Ventures as on 31.03.2020
- Acquisition of NEEPCO & THDC
- Business lines - Consultancy Services, Power Trading, Mining, RE and EV

Manufacturing Capital

- 33 coal-based, 11 gas-based, 12 solar, 11 hydro, 3 wind based power plants
- 62,110 MW of installed capacity
- 7.3 Billion MT of mining reserves

Activities:

- Power generation
- R&M of existing generation assets
- Acquisition of assets having good potential
- Forward/ backward integration in energy value chain
- Taking efforts to increase geo-strategic reach

Intellectual Capital

- Spent ₹183.33 Crore towards NETRA (more than 1% PAT)
- 63 R&D personnel at NETRA
- 10 NABL & ISO 17025 accredited Labs
- Apex learning and development (L&D) centre, PMI
- Dedicated consultancy wing
- Digitalization strategy

Activities:

- MoUs with international institutions
- R&D in Advanced Scientific Services, Availability & Reliability, Efficiency Improvement, Renewables, Climate Change, Ash Utilization, etc.
- Training Programs on technology, business acumen and leadership
- Consultancy and turnkey project contracts for Engineering, Project Management, R&M, O&M and due diligence of stressed assets
- Projects launched to increase digitalization across functions and improved data security

Human Capital

- 19165 permanent employees
- 99506+ Contractual employees
- ₹ 5830 Crore spent on Employee Benefits
- ₹ 42.65 Crore spent on Training & development
- 6 Regional Learning Institutes & PMI dedicated to train power professionals
- 1.16 Million man-hours of safety training

Activities:

- Training Need Analysis, Employee engagement & Training ,Performance appraisals, rewards and recognition
- Collaboration with world class universities
- Focus on employee satisfaction, physical and mental well being
- Hazard Identification and Risk Analysis
- Strategic Leadership Development Program

Natural Capital

- 187 MMT of coal consumption
- 8494 lakh kl of freshwater consumption
- ISO 14001 certification in 19 stations

Activities:

- Energy Efficiency Management System
- R&D on Water optimisation, Ash Utilization, emission control
- Collaboration with state governments, Forest Department for green cover and biodiversity conservation
- Implementation of FGD for SOx, combustion modification for NOx, ESP modifications for SPM Control

Social Capital

- 17364 no. of suppliers across diff SBUs, 378 new vendors enlisted
- 17 vendor development programmes for MSEs
- 51 Discoms / beneficiaries purchasing bulk power
- ₹ 304.92 Crore spent on CSR
- ₹ 1625 Crore spent on community development for R&R

Activities:

- Mitigating supply chain risks through Sustainable Supply Chain integration
- Indigenous focus : Preferential procurement mechanism for local suppliers
- Extensive Customer engagement and feedback mechanism
- CSR focus: Education, Water, Health & sanitation
- Community Need Assessment & Social Impact Evaluation
- Resettlement & Rehabilitation (R&R): Community Development initiatives

Outputs — Key impacts	Outcomes — IMPACT ON STAKEHOLDERS
• ₹ 1,12,372 Crore revenue • ₹ 11,902 Crore PAT • ₹ 83,312 of Market Capitalisation • 12.64 % of Foreign shareholding in the business • ₹ 11.72 of earning per share	• Sustainable cash flows and Strong earning per share • Excellent MOU rating by Government of India for the year 2018-19 • Best industry credit ratings e.g. CRISIL AAA/ Stable, ICRA AAA/ Stable and CARE AAA/ Stable • Cash contribution of ₹ 5500.89 crore to Government of India's exchequer through dividend and income tax
• 290 Billion Units of Power Generation • 11.15 MMT of coal production from the captive mines • 68.20% PLF at coal stations* • 8 Stations (including JVs) were in the top25 in the country in terms of PLF • 8260 MW of commercial capacity addition	• De-linking business risks with diversified generation portfolio • Enhanced fuel security with negligible reliance on imported coal, reduced costs • 4495 MW of non-fossil generation capacity • 90 EV charging stations across India • Operations in 2 foreign countries, office in Myanmar opened • 785 MW of Consultancy project in Republic of Mali and Republic of Togo
• 19 patents granted, 29 patents under process • 7 copyrights granted, 2 under process • e-library of 25,000 e-books, 1,000,000 articles, reports and journals • ₹ 285.79 Crore business done by Consultancy • ₹ 200 Crore of expenditure on IT	• Increased availability and improved efficiency of generating units • Improved Water Conservation and better ash utilisation by R&D efforts • state-of-the-art physical and digital infrastructure to impart learning • Increasing share of revenue from consultancy and foreign presence • Increased digitalization saving tons of paper, faster decision making, improved efficiency, transparency and security
• 0.33 of Man-MW ratio • 15.14 of MU generation per employee • 0.82 % of attrition rate • 35 hrs of Learning opportunities per employee per year • Reduction in safety hazards and incidents	• Improved productivity of employees • Improved employee retention and lowest attrition rate • Direct and indirect employment generated • ATD award in 4th successive year for 2019-20 • Best Workplaces (19) in Asia 2019 by the Great Place to Work Institute. • Healthier and safer working environment
• 76% Ash utilised • 2.93 l/kwh of specific water consumption • 1622 TJ of energy saved • 35 million trees/sapling planted since inception • 8.76 lakh KL of rain water harvested	• Ensuring resource efficiency and circular economy • Less emission through energy efficiency • ZLD at 13 stations • Improved fresh water availability through water usage optimization and sustainable measures • Mitigating climate change impacts • Reduction in specific quantity of majority of air emissions including mercury and ODS
• ₹ 4895 Crore worth of goods and services from indigenous suppliers • 46% of procurement from MSEs • 9.55 customer satisfaction index • 1 Million lives touched in FY 20 • 500+villages benefitted • 450+ schools benefitted	• Strong Supply chain • Effective Stakeholder engagement • Increased number of satisfied customers • 100% realization of current bills • Enhanced inclusive growth and sustainable livelihoods through increased community engagement • Reduction in socio-economic vulnerability of communities

Financial Capital

Major Highlights of FY20

- ₹ 112372.58 crore of revenues (consolidated)
- Economic value retained worth ₹15931 crore
- ₹ 305 crore of community investments
- 9 % revenue from Zero-carbon based businesses

Material Topic(s): [18] [21] [14]

Target SDG(s): [13] [8] [12] [9]

NVGSEE Principles: [1] [8]

Continuing with our growth momentum, we have been allocating significant proportion of our financial resources to capex and also maintaining the diversity of deployment. Our focus on high capital productivity is unwavering and for that efficient operation and maintenance through intense deployment of digitalization, has been an important element of our strategy.

Control Room, NTPC Sipat

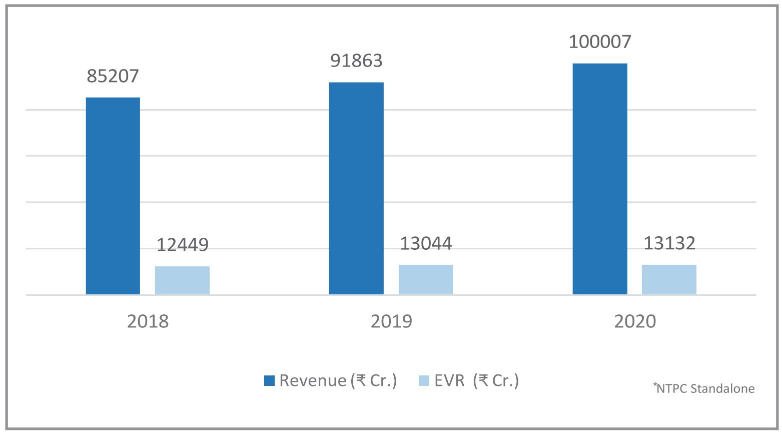
FINANCIAL CAPITAL

Related Sustainability Topics

- Compliance Management
- Operational Efficiency and Plant Reliability
- Profitability
- Fuel availability
- Climate Change impacts
- Energy source diversification/ De-carbonization of power mix

Risks Mapping:

- Fuel Supply
- Delay in execution of projects
- Sustaining efficient plant operations
- New business avenues



Reference to other frameworks:

- IPIECA: SE11, SE12, SE13, E2, E1
- UNGC Principle: 10
- TCFD
- WBCSD

Relevant GRI indicators:

- 201-1
- 201-2
- 201-3
- 201-4

Relevant SDGs:

SUSTAINABILITY REPORTING

NTPC is committed to the highest standards of corporate governance along with increasing growth and performance excellence. NTPC's strong financial footing and the robust corporate image is attributed to the strong ethical and fair corporate governance system and policies in place.

FY20 has been yet another year of achievements for us recording with a net profit (PAT) of Rs. 11902 Crore and Rs. 10113 Crore on consolidated and standalone basis respectively. A robust payment security mechanism let to 100% realization of bills from customers.

NTPC has a strong financial systems in place. We believes in prudent management of our financial resources and strives to reduce the cost of capital. NTPC enjoys highest credit - rating assigned by CRISIL, ICRA and CARE. The foreign rating by Fitch, S&P and Moody's are at par with sovereign ratings. We are exploring domestic as well as international borrowing Options. In line with our business diversification Philosophy, we are envisaging to provide complete e-mobility solutions. Our Consultancy Wing is executing assignments for various clients and has received orders of Rs. 285.79 Crore. NTPC is investing both in backward and forward integration across power value chain.

While ensuring strong financial growth we are also committed to inclusive growth. An amount of Rs. 305 Crore was spent towards CSR initiatives, achieving a CSR spend of 2.41%. Along with enriching the lives of people under CSR, we also undertakes many activities for ensuring environment sustainability. Major activities carried out includes massive plantation of trees and its maintenance, installation of rooftop Solar PV around power stations on public utilities buildings and on schools, vermicomposting/ Bio-Methanation plant/ Paper re-cycling machines. An expenditure of Rs. 73.20 Crore was incurred on these SD projects during FY 20. Around 15% of NTPC's project cost comprised of environment pollution control system.

Sustainability at NTPC is driven by two motives – Firstly, to make fundamental changes in the way we operate our businesses to transform ourselves as the most sustainable power producer and secondly to become more transparent in timely disclosure of our social, environmental and economic performances. To achieve these objectives, we have identified Decarbonization, Water & Biodiversity, Circular Economy, Health & Safety, Sustainable Supply chain and Business Ethics & strong finance as high priority strategic areas and strategizing on them to ensure our business sustainability. We are developing short-term and long-term measurable goals and objectives pertaining to these areas which is also aligned to our Corporate Plan 2032.

Direct Economic Value Generated and Distribution

NTPC's operational performance during the FY 20 has resulted in a direct economic value generated of Rs. 15931.64 Cr.

Economic Value Generated & Distributed (₹ Crores)

Particulars	Standalone		Group
	2018-19	**2019-20**	**2019-20**
A: Direct Economic Value Generated			
Revenue	91,863.34	1,00,007.37	1,11,888.52
Sub Total (A)	**91,863.34**	**1,00,007.37**	**1,11,888.52**
B. Direct Economic Value Distributed			
Operating Costs	61,221.33	64,986.62	71,203.04
Employee Wages & Benefits	4,779.89	4,925.60	5,830.48
Payments to Providers of Capital	9,639.29	9,750.34	11,250.22
Payments to Government	2,889.28	6,901.50	7,324.02
Community Investments	289.45	311.79	349.12
Sub Total (B)	**78,819.24**	**86,875.85**	**95,956.88**
Economic Value retained (A-B)	13,044.10	13,131.52	15,931.64

Policy and practices adopted for Suppliers and Local Sourcing

Under the Procurement and Works Policy of NTPC, transparent tendering procedures are adopted for all procurements. In order to encourage Indian suppliers, provisions regarding price preference and deemed export benefits (Customs & Excise Duty benefits) are stipulated in the bidding documents as per the extant policy of Government of India. The mandatory provision in respect of labour, welfare, safety, etc. are being incorporated in the bidding documents for supply cum erection packages, invited on international competitive bidding and domestic competitive bidding basis.

There are economic opportunities for the local suppliers arising out of the need for goods and services by NTPC projects. Many indirect benefits are available to project affected families as additional facilities, over and above the the stipulated entitlements as per government policies.

Financial Assistance from Government

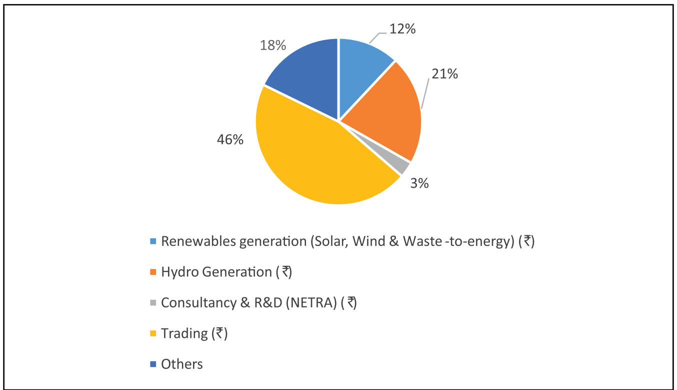
NTPC is running on self-sustained bases and is giving regular dividend to the Government of India on its equity. No capital has been invested by the Government of India in NTPC since the year 1999-2000. The Company did not receive any direct government benefit by way of subsidies, grants or royalties.

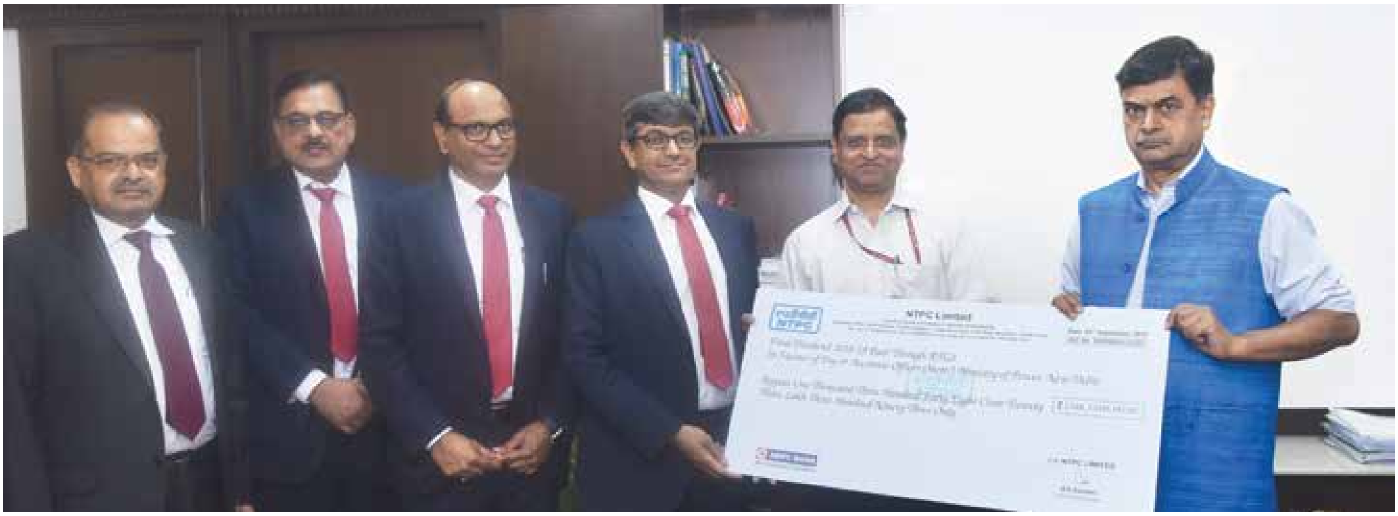
Financial implications due to climate change

Climate change concerns has been the key driver for the new stringent norms and the aggressive push for renewables. As an environmentally responsible company, NTPC has not only initiated actions to mitigate climate change risks but also have taken a lead in converting these into opportunities.

In FY20, the company generated 9.28 % of revenue from non-fossil based business at standalone basis. The break-up among various sources has been shown below:

Breakup of revenue from non-fossil sources





CMD and Directors presenting dividend payment to Hon'ble MoSP, Sh. R. K. Singh, GoI

Manufacturing Capital

Major Highlights of FY 19-20

- Consistently maintained PLF (Coal stations) more than the National average by 12 %
- 8260 MW, highest ever, added to commercial capacity during FY20
- 290.19 of Billion units of gross generation
- Ranked 497 in Forbes Global 2000 – The world's largest public companies list during FY20

Material Topic(s): [21] [3] [4] [9] [8] [15]

'Our commitment towards performance excellence drives our efforts towards our triple objectives of producing electricity with Low Cost, Low Emission and Highest Safety. Our efforts for innovation in reducing costs, enhancing operational flexibility and in addressing changing customer needs are driven by our organizational priorities.'

Target SDG(s): [13] [7] [9] [12]

NTPC Jhajjar

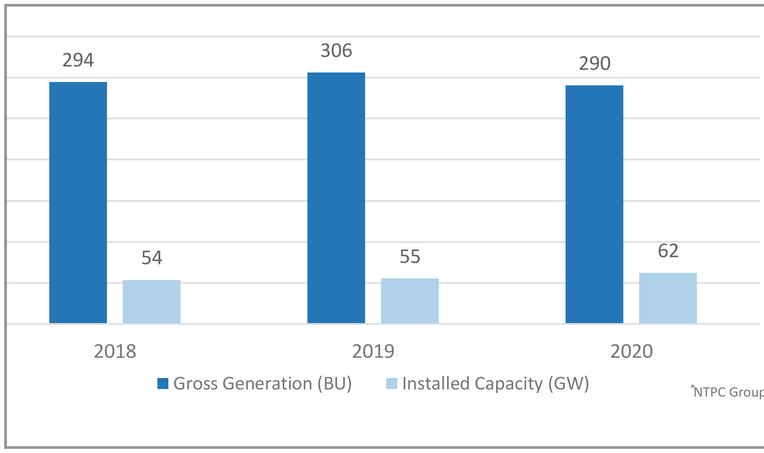
MANUFACTURING CAPITAL

Related Sustainability Topics

- Operational Efficiency and Plant Reliability
- Disaster Management
- New technologies and digitalization
- Land acquisition

Risks Mapping:

- Acquisition of land
- Sustaining efficient plant operations
- Natural / Manmade disasters
- Coal mining



Reference to other frameworks:

- IPIECA: EII

Relevant GRI indicators:

- 102-4
- G4-EU1
- G4-EU2
- G4-EU3
- G4-EU10
- G4-EU11

Relevant SDGs:

Power Generation

Power generation is our core business activity, and we look to expand our manufacturing assets with a view to creating sustained value for our shareholders. We have shown all-round performance and strengthened our fundamentals further during the reporting period. Along with our JVs and subsidiaries, we have, at present, 70 power stations located in various states of India.

In FY20, NTPC has recorded the highest ever commercial capacity addition of 8260 MW which includes acquisition of 2970 MW capacity of THDC and NEEPCO from Government of India.

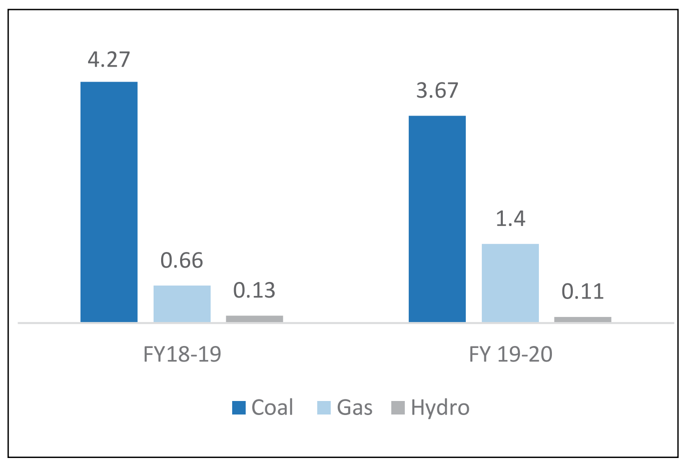
The commercial capacity addition includes one unit of 800 MW at Gadarwar, one unit of 800 MW at Lara, one unit of 800 MW at Darlipalli, one unit of 660 MW at Tanda, one unit of 660 MW of Khargone, one unit of 250 MW at Barauni, one unit of 660 MW at Meja, one unit of 660 MW at NPGCL, 1457 MW through acquisition of NEEPCO and 1513 MW through acquisition of THDC.

With this, our installed capacity (including Joint Ventures) reached **62,110 MW** as on **31st March 2020**, which is around 17 % of the total installed capacity of India. Also, we participated in bidding of acquisition of stressed assets admitted through NCLT and we have emerged as winner in 600 MW Jhabua Power Plant bid in Chhattisgarh.The gross generation of NTPC Group for FY20 was 290.19 Billion units as against 305.90 Billion units during the previous year. The marginal variation was due to low power demand in the country. The energy sold was 259418.47 MU at group level. In addition, the gross generation of THDC & NEEPCO was 10.91 Billion Units. On Standalone basis, the gross generation of NTPC for FY20 was 259.62 Billion units as against 274.45 Billion units in the previous year. Coal stations with an availability factor of 89.67% achieved a Plant Load Factor of 68.20% as against National Average of 55.99%.

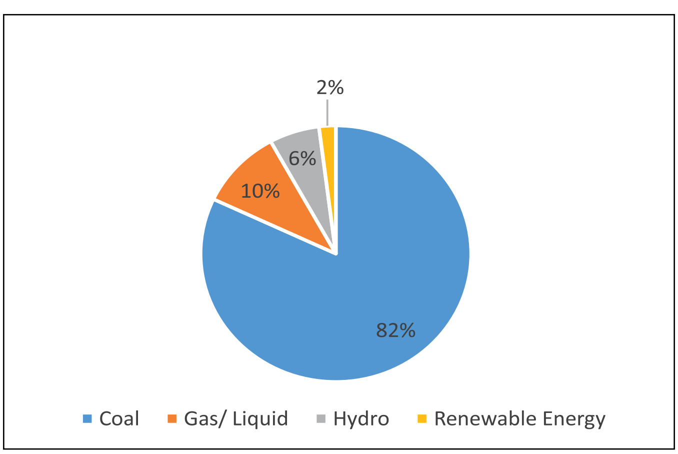
Our total power generated including our JV companies was around 22.31 % of the total electricity generated in the country during FY 20.

Further, the forced outages for all three sources i.e. coal, gas and hydro generation has reduced over the previous year as a result of focused maintenance and increased digitalisation of infrastructure.

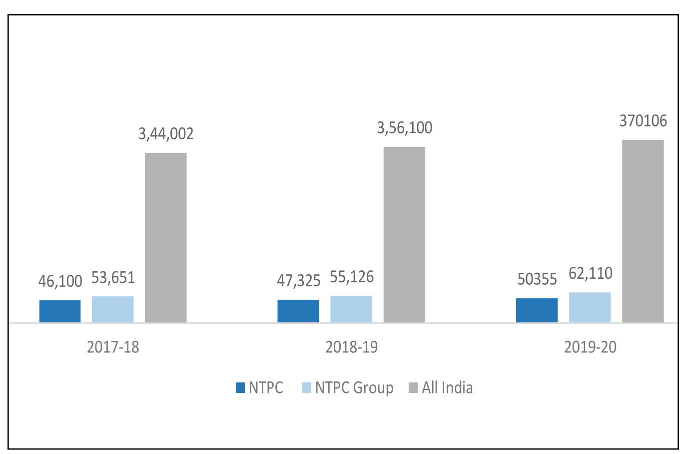
Forced Outage (%)



Installed Capacity Break-up (62,110 MW)

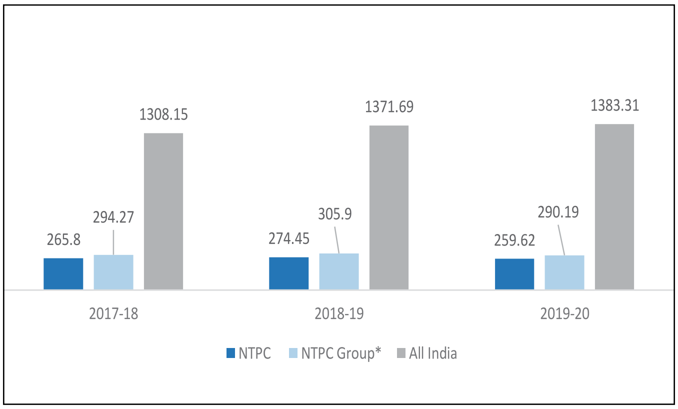


Growth in installed capacity



*For more details on capacity, please refer NTPC's website **www.ntpc.co.in**

Growth in generation (BU)



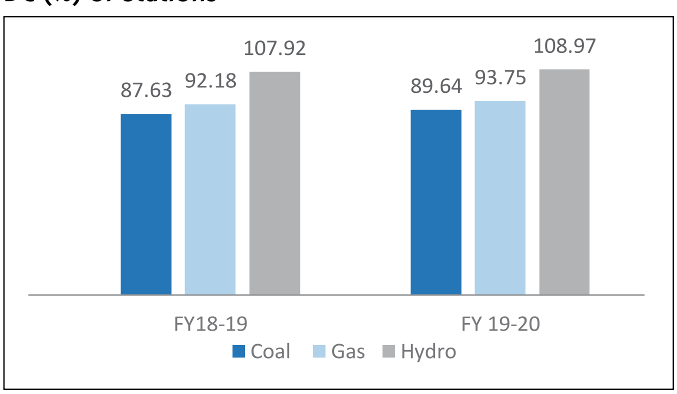
Four NTPC coal-based stations figured in the top ten stations list of the country in terms of PLF with five of them achieving PLF more than 85% as listed below. Rihand Thermal Power Station with a PLF of 88.64% was ranked 5th in the country.

PLF greater than 85%

Station/ Year	PLF (%)
Rihand	88.64
Singrauli	87.28
Korba	86.67
Sipat	86.07
Vindhyachal	85.29

The Declared Capacity (DC) of coal stations and gas stations was 89.64 % and 93.75 % respectively for FY 20. .

DC (%) of Stations



We are committed to increase our renewable energy portfolio. With 1070 MW of renewable installed capacity, we have ventured into large-scale deployment of RE assets and is looking forward to add 32 GW of renewable power capacity by 2032. To be in step with ambitious targets, we are attempting all avenues for renewable capacity addition to look beyond conventional large-scale solar and wind parks. We have placed contracts for over 2 GW of solar capacity, taking the total renewable capacity under construction to 2348 MW at group level. During the reporting year, our renewable electricity generation (including solar, hydro, wind & small hydropower) was 4.93 BU. Along with our own projects, NTPC has been facilitating development of solar projects in Developer Mode and acting as an intermediary procurer to procure power from the Developers and sells to DISCOMs with a trading margin. Till date 3983 MW of RE projects has been commissioned under Developer mode.

We have signed a Memorandum of Understanding (MoU) with Oil and Natural Gas Corporation Limited (ONGC) to set up a Joint Venture Company for setting up of offshore wind and other Renewable Energy Projects in India and overseas.

We are utilizing roofs of our power plant buildings for solar power generation and integrating it into the existing plant infrastructure. We are also installing floating solar panels at reservoirs in our projects serving triple purpose of renewable energy generation, saving land and water evaporation. As on date, a total of 9.215 MW of such solar projects have been developed.

Waste to Energy

We have commissioned a 24 TPD thermal gasification based demonstration scale Waste to Energy (WtE) plant at Varanasi. The plant generated approximately 200 kW of electric power. Furthering this initiative, we have signed in-principle MoU with Surat and East Delhi Municipal Corporations for setting up state of art WtE plant.

We have signed another MoU with Indian Oil Corporation (IOCL) and the South Delhi Municipal Corporation (SDMC) develop waste-to-energy plant at Okhla, Delhi. This will not only result in less emission, but also provide usable residues. It will be a demonstration waste-to-energy plant at Okhla landfill site in Delhi, using gasification technology. The plant will process 17,500 tpa of Refuse Derived Fuel (RDF) produced from combustible components of Municipal Waste to generate syngas which will in turn be used to generate electricity. There is an existing model of providing off-take guarantee, under the SATAT scheme for compressed biogas production plants.

Installed Capacity (MW) and Generation (MU)* – Station-wise

STATION - WISE GENERATION 2019-20			
Station	Fuel Type	*Gross Capacity (MW)	*Gross Generation (MU)
JVs & Subsidiaries			
NSPCL-Durgapur (CPP-II)	Coal	120	932.51
NSPCL-Rourkela (CPP-II)	Coal	120	980.4164
NSPCL-Bhilai (PP-II)	Coal	74	506.495
NSPCL-Bhilai (PP-III)	Coal	500	2745.98
Kanti	Coal	610	2904.641
Jhajjar	Coal	1500	3842.794
Vallur	Coal	1500	5674.72
BRBCL-Nabi Nagar	Coal	750	4887.1
NPGCL-Nabi Nagar	Coal	660	2783.774
Meja	Coal	660	1050.674
RGPPL-Ratnagiri	Gas	1967.08	4263.667
TOTAL		8461.08	30572.77

SUSTAINABILITY REPORTING

STATION - WISE GENERATION 2019-20			
Station	Fuel Type	*Gross Capacity (MW)	*Gross Generation (MU)
Northern Region		**14393**	**88582.5**
Singrauli	Coal	2000	15332.8
Rihand	Coal	3000	23359.3
Unchahar	Coal	1550	8526.6
Tanda	Coal	1100	4037.1
Vindhyachal	Coal	4760	35659.4
Auraiya	Gas	663	444.8
Khargaon	Coal	1320	1222.5
Eastern Region		**11240**	**65269.08**
Farakka	Coal	2100	13132.6
Kahalgaon	Coal	2340	16504.4
Barh	Coal	1320	8219.1
Barauni	Coal	470	236.1
Talcher Kaniha	Coal	3000	19261.2
Talcher Thermal	Coal	460	3378.3
Bongaigaon	Coal	750	3929.96
Darlipalli	Coal	800	607.42
Hydro Region		**800**	**3449.6**
Koldam Hydro	Water	800	3449.6
RE		928	1487.51
Solar	Sun	870	1371.25
Wind	Wind	50	103.11
Small Hydro	Water	8	13.15
DBF		3082	8953.7
Dadri Coal	Coal	1820	6546.8
Dadri Gas	Gas	830	1851.8
Faridabad	Gas	432	555.1
Western Region		12552	59494.2
Mouda	Coal	2320	10403.7
Korba	Coal	2600	19793.3
Sipat	Coal	2980	22530.3
Solapur	Coal	1320	817.2
Lara	Coal	800	2752.2
Gadarwara	Coal	800	1076.1
Anta	Gas	419	302.1
Kawas	Gas	656	1382.7
Gandhar	Gas	657	436.6
Southern Region		**7360**	**32381.7**
Ramagundam	Coal	2600	17126
Simhadri	Coal	2000	10649.7
Kudgi	Coal	2400	4606
Rajiv Gandhi CCP	Liquid Fuel	360	0
Total		**50355**	**259618.3**

*NEEPCO & THDC has been omitted due to insignificant contribution in NTPC group generation during reporting year.

Several of our projects having an aggregate capacity of 21,333 MW (including 6,240 MW from JVs and subsidiaries, 2814 MW from THDC and 300 MW from NEEPCO) are under implementation at 37 Locations in India and abroad. Out of the total capacity, 16,430 MW is coal-based, 2,555 MW is hydro and 2,348 MW is Renewables.

We are working to broad base our generation mix to ensure long-term competitiveness, mitigation of fuel risks and promotion of sustainable power development. We plan to increase our overall installed capacity to 130 GW by 2032, of which renewables (including hydro) will constitute 37 GW comprising around 28% of the total capacity.

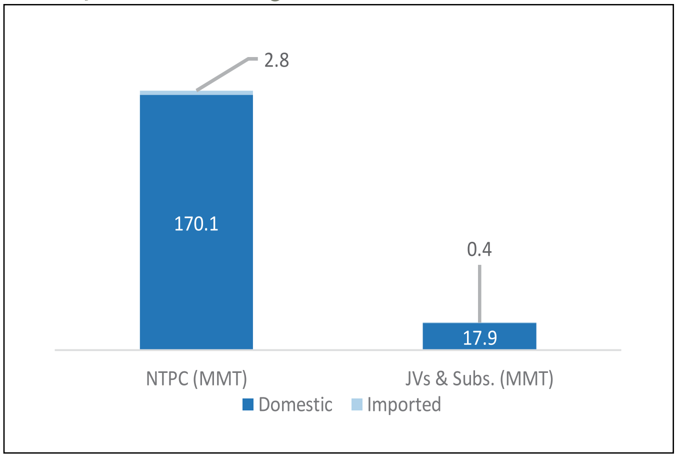
We supply electricity from our stations located across India to various bulk customers located throughout the country. Our customers are mainly State Electricity Utilities like State Electricity Boards, State Electricity Distribution Companies, SEB Holding Companies, State Power Departments - who account for around 90% of our electricity sales. Besides NTPC also sells electricity to private distribution companies in Delhi and some bulk consumers like Railways.

Raw Materials

Coal and water are our key raw materials. We continuously strive to reduce our specific consumption of raw materials in line with our philosophy of sustainable production and consumption.

Optimization of raw material consumption translates into value for our shareholders, as well as for our communities. This enable us to also reduce the tariff of electricity making it affordable for all and also reduce the burden on local resources by minimizing extraction and waste generation. During FY 20, our specific coal consumption was 0.68 kg/ kWh, specific oil consumption was 0.52 ml/kwh and specific water consumption was 2.92 l/ kWh. During FY 20, NTPC group sourced about 191.2 Million Metric Tons of coal.

Break up of Coal Sourcing



Coal Mining

NTPC has been allocated 10 coal blocks with estimated geological reserves of ~7 billion tonnes with mining capacity of 119 million tonnes per annum. With these coal blocks, NTPC aspires to become one of the largest captive coal mining companies in the country. Director General of Mines Safety

(DGMS), a statutory authority of govt of India, has selected Pakri-Barwadih as one of the two model mines in the country. In reporting year, Coal mine at Talaipalli became operational along with Pakri-Barwadih and Dulanga mines . NTPC achieved 11.15 MMT of coal production from the captive mines, registering an increase of 52.5% over previous year.

Projects	Coal Production (Million Tonne)		
	FY18-19	FY 19-20	Growth (%)
Pakribarwadih	6.81	9.42	38.32
Dulanga	0.5	1.54	208
Talaipalli	-	0.19	
Total	7.31	11.15	52.53

Energy Trading

NTPC is also in the energy trading business through following modes:

- Purchasing power from the developers and selling it to the Discoms on principal to principal basis
- Acting as an agent and recognising revenue on the difference between sales price charged to procurer and purchase price given to supplier.
- Energy trading through operations on commission basis. NTPC Vidyut Vyapar Nigam Ltd (NVVN), our subsidiary Company is a “Trader Member” of India Energy Exchange Ltd. (IEX) & Power Exchange India Ltd (PXIL) and undertakes trading of Power and REC on Power Exchange Platform of IEX and PXIL.

E-Mobility and ancillary services

We envisage enhancing our current presence in the ancillary services. NTPC targets a market share of 25% in ancillary services and storage and aims to achieve 10% of the estimated market share for supply of electricity in E-mobility business.

We have already ventured into the e-mobility space and have taken up various initiatives in line with national priorities, including - creation of charging infrastructure ecosystem (fast-charging stations, battery-swapping infrastructure, etc. at several locations in major cities and across highways; and implementation of e-bus projects with State Governments, State Transport Undertakings and City administrators. Towards this end, the Company has established 90 EV charging stations across India. NVVN has signed an agreement with Department of Transport of Andaman and Nicobar Islands to deploy 20 electric buses in Andaman and Nicobar Islands and will also set up public charging infrastructure in the Union Territory (UT).

We are planning to make a foray into battery storage systems, supported by research & development and collaboration with OEM/OES, research institutes, etc.

Hydrogen

NTPC in collaboration with the ministry of new and renewable energy (MNRE), GoI is going to launch a Hydrogen fuel cell-based bus project in the union territory of Leh, in an effort to make Leh carbon-neutral. Also, MoU has been signed with Siemens for Hydrogen Energy Cooperation. Under this colloboration, the production of green hydrogen using power from NTPC’S RE plant and subsequent uses of Hydrogen in Mobility segment as well as for production of synthetic fuel is being explored.

Business Development

To maximize our geostrategic reach, we are actively looking at business opportunities overseas. Our recent joint venture with Bangladesh Power Development Board (BPDB), called Bangladesh India Friendship Power Company Limited (BIFPCL) and opening of an International office in Myanmar are some of the notable steps in the same direction.

NTPC has been awarded the project management consultancy contract for the development of 500 megawatt (MW) solar park in the Republic of Mali. Also, Republic of Togo had engaged NTPC for development of 285-MW solar park. NTPC plans to anchor 10,000 MW of solar parks in ISA member countries in the next two years. Besides, we are also actively looking at other Middle-East and the African continent for business opportunities.

Trincomalee Power Company Limited (TPCL)

A 50:50 joint venture between NTPC and Ceylon Electricity Board has been formed to undertake the development, construction, establishment, operation and maintenance of electricity generating station Trincomalee at Sri Lanka.

Bangladesh-India Friendship Power Company Private limited

A 50:50 joint venture Company between NTPC and Bangladesh Power Development Board (BPDB) has been formed for developing a (2X660 MW) Coal based power project (Maitree Super Thermal Power Plant) Division, Rampal, Bangladesh.

Other Opportunities Abroad

Business opportunities in Sri Lanka, Bangladesh, Thailand, Nepal, Bhutan, Myanmar, Indonesia, Oman, UAE, Egypt, Ghana, Zimbabwe, Tanzania, Kenya and other African countries are being explored in the areas of power generation, O&M contracting, R&M of power plants, capability building and cross border power trading etc.

Natural Capital

Major Highlights of FY 19-20

- **57%** decrease in specific water discharge
- **17%** (Y-O-Y) increase in fly-ash utilization %
- **15%** decrease in specific PM
- **1 million** trees planted
- 1622 TJ of energy saved
- **15** stations achieved more than 100% ash utilisation

Material Topic(s): [1] [2] [16] [17] [3] [4] [5] [7]

Target SDG(s): [6] [7] [9] [11] [12] [13] [14] [15]

NVGSEE Principle: [2] [6] [9]

For NTPC, environmental sustainability is just a performance matrix, but is intrinsically inter-woven into its long-term growth strategy. In line with our value of sustainable production and consumption of natural resources, we are continuously upgrading our systems to set new global benchmarks in environmental compliance, practices and stewardship.

NTPC Koldam

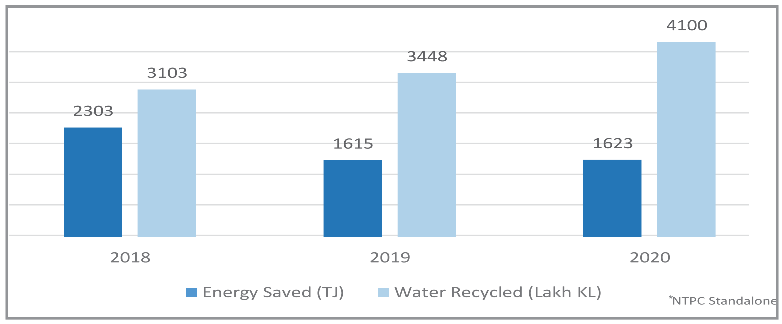
NATURAL CAPITAL

Related Sustainability Topics

- Compliance Management
- Climate Change impacts
- Water Management
- Air emissions
- De-carbonization of generation mix
- Biodiversity
- Effluent management
- Waste management
- Fly ash utilization

Risks Mapping:

- Compliance of emission, ash utilization and other regulatory norms
- Sustaining efficient plant operations
- Water footprint reduction
- Non-availability/ failure/ sub-optimal use of ERP
- Threats to safety & security of people & property
- Natural/ manmade disasters



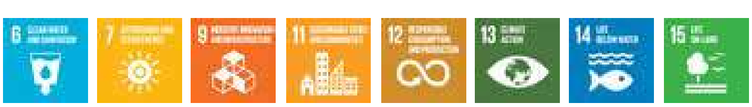
Reference to other frameworks:

- IPIECA: EII

Relevant GRI indicators:

- 301-1
- 306-4
- 302-3
- 303-1
- 304-2
- 334-3
- 64-EN22 (ADR)
- 305-2
- 305-5
- 305-7
- 306-2
- 306-3
- 302-2
- 307-1
- 64-EN11 (ADR)
- 64-EN15 (AGR)
- 64-EN21 (ADR)
- 305-1
- 302-4
- 303-2
- 304-1
- 302-1
- 306-5
- 305-4
- 305-6
- 306-1
- 304-4
- 64-EN23 (ADR)
- G4-EU13
- 64-EN12 (ADR)
- G4-EN16 (ADR)

Relevant SDGs:



At NTPC, we practice a precautionary approach to address all environmental risks. We have undertaken pre EIA studies based on which Environmental Management Plans for all stations are prepared and implemented. Our environmental policy focusses on optimum utilization of natural resources, minimization of waste by recycling & reuse, adoption of latest technologies and augmentation of older units for higher efficiency. We are in a continuous process of compliance with the techno-economically feasible engineering solutions to ensure compliance. Accordingly, we are regularly upgrading our operations for maintaining the environmental parameters as per the norms of regulatory agencies. 19 of our stations are ISO:14001 certified. Rest newly commercialized plants are in the process of getting ISO certified. We have also established an environmental grievance mechanism for recording all grievances.

Water & Effluent Management

For electricity production, water is a prime resource, and we use water in a judicious and sustainable manner. Fresh water is drawn by our stations from various sources of water bodies such as rivers, reservoirs, canals. Sea water is used by our coastal plants. The water consumption is being monitored continuously through online water metering systems. Water consumption of the stations is continually optimized by practicing 3R principle (Reduce, Recycle & Reuse), which is the core of our Water Policy.

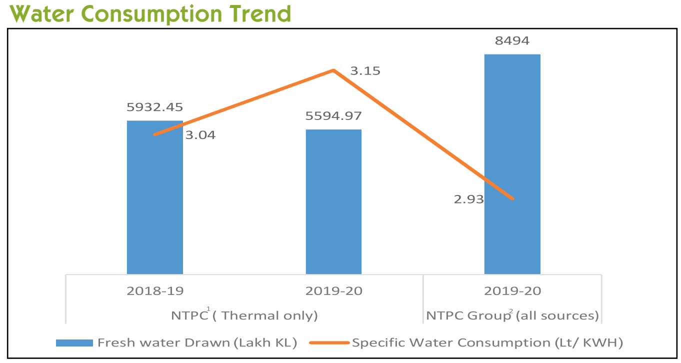
In almost all of our Thermal Power Plants, water is used in a closed loop system and very little loss is incurred through various processes except in the cooling water system where significant amount is lost as evaporation, drift and blow down. We are in the process of implementing ZLD (Zero Liquid Discharge) at all of our stations. Hence, there is no significant impact on the water bodies and related habitats by the organization's discharges of water and runoff.

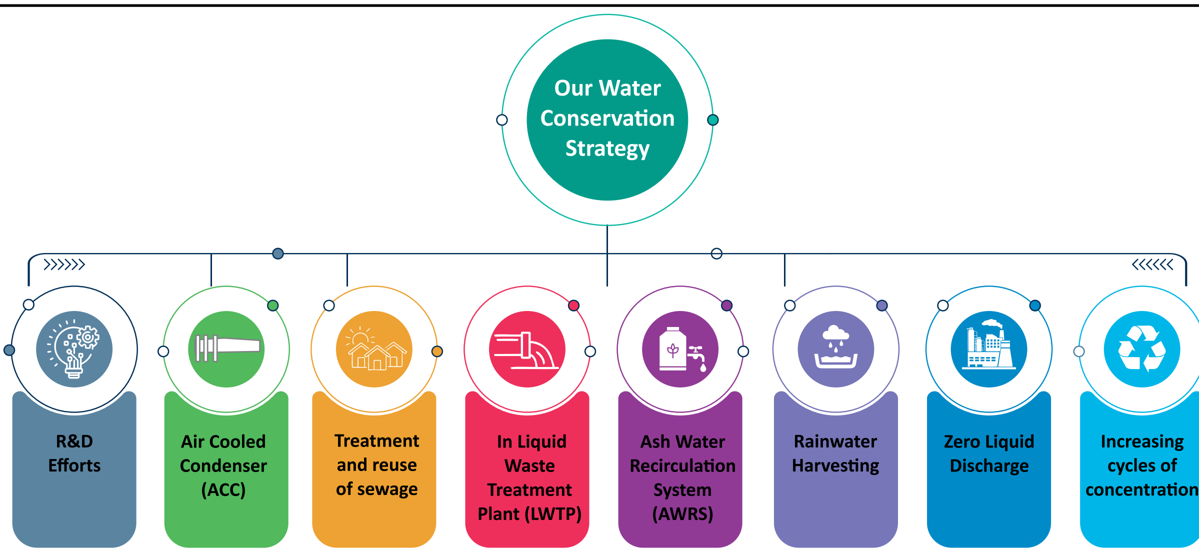
Increasing reuse and recycling of effluents has also led to a decrease in fresh water withdrawal requirements over the years. However, increased penetration of renewables into the grid and reducing power demand in the country is slowly forcing the thermal units to operate at very low PLF, further degrading its water consumption. Further, implementation of wet FGD system at all stations is going to make the water reduction process challenging.

Water Consumption

Source	Consumption (Lakh KL)
Surface water	8494
Rain water	8.76
Sea water	954

Water Consumption Trend





Reduce

Through various water efficiency measures we have been able to reduce our total water consumption

We are implementing rainwater harvesting systems as part of our dedicated Rainwater Harvesting policy in all our plants to bring down the withdrawal level of fresh water from various sources. At all locations, rooftop rainwater harvesting is being deployed to either recharge groundwater or surface storage and use or combination of both. We collected and utilized 6.8 lakh KL and 1.92 lakh KL of rainwater at our Dadri and RGPPL, Ratnagiri plant respectively for plant operation in reporting year.

1. Closed loop systems

2. All sources such as Renewables, Thermal including Open Cooled stations where majority of water is returned to water bodies with properties under stipulated limits

Water Treatement Plant, NTPC Lara

Recycling

The effluent generated from various sources in the plant are collected in central monitoring basin after treatment in Liquid Waste Treatment Plant (LWTP). The collected effluent confirming to stipulated standards is re-used for various purposes in operation of plants such as ash handling, service water, etc. Treated effluent over and above re-use, if any (Non-ZLD Plants), is discharged outside. Sewage treatment Plants have been provided for treatment and reuse of sewage effluent from plant as well as townships. The effluent quality is monitored regularly and treated effluent is used further in horticulture purposes in the NTPC premises. In the reporting year, 4100 Lakh KL of treated water were recycled.

Reuse

We have put in place an Ash water recirculation system (AWRS) to reuse the decant & toe drain water from ash pond for meeting the requirement of ash handling and service water.

Further, we are in the process of implementing the Zero Liquid Discharge (ZLD) system at all our stations. By FY 2019-20, ZLD has been completed at 13 stations and is in advance stage of completion at other stations. We have also implemented rain water harvesting systems at almost all of our locations[1].

Water Discharge

Except few plants, all our stations are designed in the closed cycle system and therefore, the plant effluent discharges into water bodies are very minimal. This ensures there is no adverse impact on the related biodiversity and eco-system. In case of non-ZLD plants, where treated effluents discharged into the natural watercourse, it is in conformity with the regulatory standards.

Effluent parameters

	2018-19	2019-20	
Parameters	NTPC		NTPC Group
Quantity (Lakh KL)	573	236	336
pH (Range)	7.1-8.2	6.9-8.2	6.9-8.2
TSS (mg/lt)	35	32	30
O&G (mg/lt)	1.8	2.0	2.1

Waste Management

We are also committed to environmentally friendly, socially responsible and techno-commercially viable handling and disposal of all waste generated in our premises. Our integrated approach for waste management comprises of collection, segregation, transportation, processing, recycling, and disposal of various types of wastes. While the focus is towards optimal utilization of resources requiring only minimum quantities to be disposed of, where disposal is required, all rules and regulatory requirements are complied with. The utilization and disposal of hazardous and non-hazardous wastes generated by power plants are governed by regulations.

Hazardous Waste

Hazardous wastes such as used lubricating and transformer oil, spent resins etc. are generated at our operating facilities. These are disposed through authorized agencies in accordance with the Hazardous and other Wastes (Management and Transboundary Movement) Amendment Rules, 2019 for transportation of Hazardous wastes. Non-Recyclable waste are sent to Treatment, storage & Disposal Facility (TSDF) for proper treatment & disposal as per the HWM Rules 2016.

Waste type	Disposal Methods	Unit	Quantity
Used Lube Oil	Sold to registered recyclers	KL	1116
Used Transformer Oil		KL	206
Containers of hazard wastes		MT	764
Spent resin	CPCB/SPCB authorised treatment, storage and disposal facilities or through nearby co-processors	KL	29
Used Batteries	Sold to manufacturers under buy back policy	MT	133
Bio-medical waste	Through authorised agencies approved by SPCB	MT	23
E-waste	Through registered & approved recyclers/ dismantlers of CPCB/ SPCB	MT	83

We have already phased-out Polychlorinated Biphenyl (PCBs) from our operations. We do not engage in import or export of any hazardous waste or materials under the Basel Convention.

There is no radioactive waste generated and disposed from our power plants.

Non-hazardous waste

Our efforts towards waste minimization have led to a reduction of over 7.3 % in generation of non-hazardous wastes during FY20 as compared to the previous year at standalone basis. We have banned single-use plastic at our locations.

Waste type	Disposal Methods	Unit	Quantity
Misc. Ferrous Scrap	Disposed through E-Auction	MT	28774
Non-Ferrous Scrap		MT	2042
Municipal Waste	Bio-Degradable waste is converted into manure through composting /vermin-composting/ Bio-gas/Bio-Methane nation process. Non-Biodegradable waste is disposed at identified landfills. Plastic waste is disposed through local traders/ collectors.	MT	31506

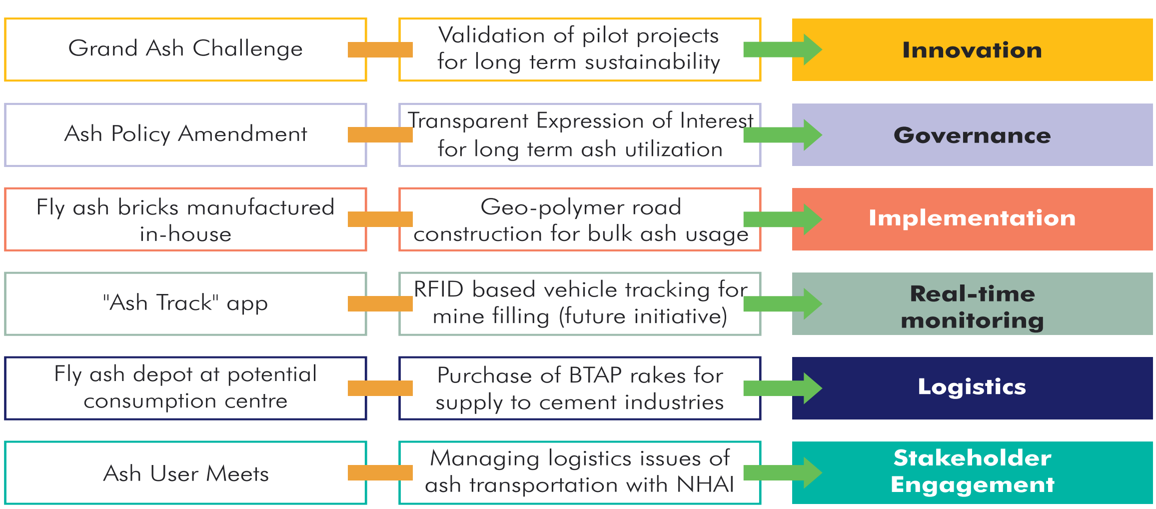
Circular Economy

Waste to Compost

NTPC has successfully revamped the "waste to compost" plant at Kadsada, Varanasi and managing operation & Maintenance (O&M) of this 600 Tons per Day (TPD) capacity plant. The plant generates about 60-80 TPD of compost. Sanitary land fill facility and leachate treatment facility have also been created at Varanasi to ensure scientific disposal of waste.

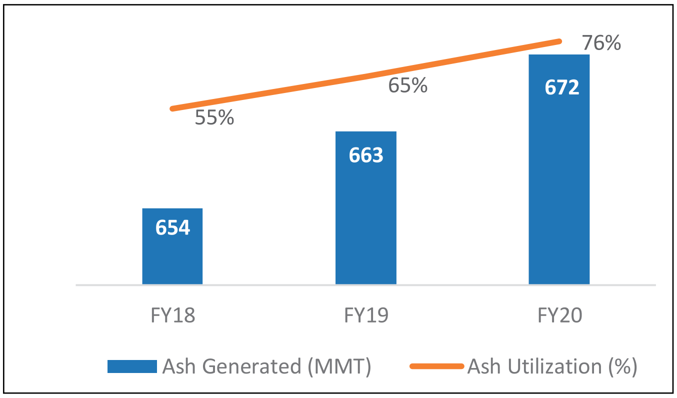
Ash Management

Ash is a non-hazardous waste and a material aspect considering the generation in huge quantity and associated challenges for utilization in certain geographical areas. We are making concerted efforts towards sustainable ash utilization. We have implemented Ash Policy since 2015, which serves as our vision document for integrating ash utilization right from its generation to usage/ conversion in end product. Though we take utmost care in ensuring structural integrity and strength of our ash dyke and preventing any spill/ breach, one spill from ash dyke of Vindhyachal Station was reported during the FY 2019-20.

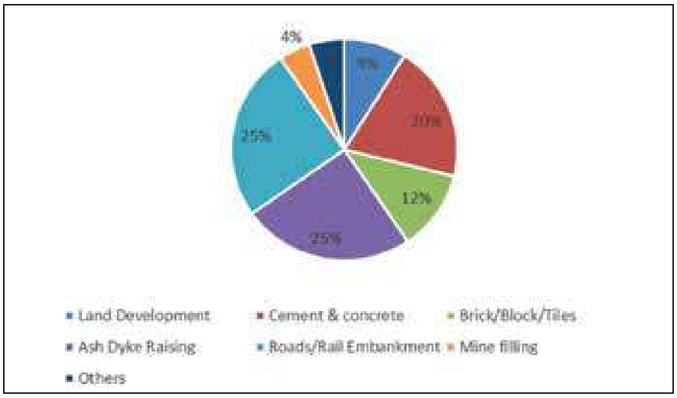


Our Ash Management Initiatives

Ash utilization



Fly-ash utilization breakup (%)



In FY 2019-20, 15 of our stations achieved 100% ash utilization. We plan to achieve group-wide 100% ash utilization in short term.

Ash utilization is low at some of our stations either due to limited availability of ash utilization industries in the near-by areas, or, overabundance of fly-ash in the area due to multiple thermal power stations in the vicinity, or, due to non-compliance of notification by users (building construction industries, mining & brick manufacturers). To resolve the issues due to supply and demand gap, we are in the process of developing fly-ash depots at high consumption centres.

Bottom Ash Utilization:

NTPC Korba is supplying bottom ash for stowing of Surakachar underground mine of SECL and thus saving natural sand. NTPC is also using bottom ash filter material for dyke raising activity.

Also, to promote utilization of bottom ash, a research study was carried out in association with NCBM. The study concluded that Bottom Ash can be used as replacement of sand (upto 50%) in cement and concrete. NTPC has requested to BIS for amendment of IS 10262: 2019, “Concrete Mix Proportioning – Guidelines” to incorporate use of Coal based Bottom Ash as a partial replacement of Fine aggregates in Concrete.

Resource Efficiency and Material Management

Material Consumed

NTPC follows a comprehensive approach for improving resource efficiency with due focus on the regular evaluation of resource consumption intensity. There has been emphasis on its further improvement through measurement, monitoring and implementation of conservation plans.

The basic input materials in power generation are fuel (coal/gas as primary fuel and oil as secondary fuel) which are as such totally consumed in boiler and hence there is no scope for recyclability of input materials for thermal power generation. Similarly, the chemicals during water treatment are totally consumed and not recycled.

Several steps for improvement in cycle efficiency have been taken resulting in reduction of losses and significant improvement in fuel saving (Coal and Oil) per unit of energy generated. As far as coal is concerned, adoption of higher size units for power generation is leading to improvement of design/operational efficiency which in turn is reducing the specific coal consumption.The trends for improvement in performance parameters of specific coal consumption and specific oil consumption are shown in table below:

Type	Unit	NTPC		JVs & Sub
		FY 2018-19	FY 2019-20	FY 2019-20
Coal	MMT	172.22	169.46	18.07
	Kcal/Kg	3626.00	3480.68	3634.00
	Kg/Kwh	0.66	0.68	0.70
Natural Gas	MMSCMD	4.65	3.17	2.20
	Kcal/SCM	9365.00	9315.49	9766.00
	SCM/Kwh	0.23	0.23	0.19
Naptha	MT	5887	97.90	0
	Kcal/Kg	11248.00	11368.00	NA
LDO	KL	42626	82213.84	28109.00
	Kcal/KL	9521.00	9541.80	9461.00
HFO	KL	56254	50726.27	0
	Kcal/KL	9857.00	9890.93	NA
HSD	KL	9561	86.57	0
	Kcal/KL	9054.00	9023.56	NA

Apart from coal and water, there are other associated input material, which forms a major part of our operations. Like coal and water, these materials are also sourced from nature and so posses the risk of becoming scarce if not consumed judiciously. At NTPC, we take continuous measures for effective and efficient use of our input materials. The snapshot of these input materials for NTPC group has been presented below.

Input Material	Chlorine	Ammonia	Alum	HCl	H2SO4	Lube OIL	Transformer Oil
Consumption	5387 MT	9341 MT	13493 MT	18241 MT	20691 MT	1005 KL	341 KL
Sp. Consumption	0.019 g/Kwh	0.033 g/Kwh	0.047 g/Kwh	0.064 g/Kwh	0.072 g/Kwh	0.004 ml/Kwh	0.001 ml/Kwh

Bio-Mass co-firing

NTPC is using biomass in its coal plants to replace equal amount of coal leading to reduced emissions. The biomass is used in form of agro residue-based pellets, made out of stubble and husk. Our Dadri plant has become the first power plant in the country to commercialise biomass co-firing along with coal. The co-firing is done with up to 10 per cent of agro-residue-based biofuel. Till date over 6000 MT of such pellets have been utilized at Dadri Plant.

We are scaling up this technology in almost all of our coal-fired power plants across the country. The purpose behind usage of agro-based pellets is three fold - one it turns off stubble burning in farms and brings down pollution, two it reduces coal usage in power production and three, it contributes to improve income of farmers in nearby areas.

The below table summarizes our current achievements and future plans:

	Short -Term	Long -Term
Duration	9 Months	4 Years
Plants under consideration (No.)	19	All
Pellet amount (Mn Tonnes)	1.9	20.7
Financial Implications (Rs. Cr)	1400	15110

Paperless office

We have successful implemented “Project PRADIP” for digitization of documents and paperless processes. This initiative has not only helped us in saving tons of paper but also resulted in faster decision making, transparency and improved efficiency. As part of extending the benefits of digitalization, a comprehensive vendor portal has been launched for submission of e invoices and its tracking status for our vendors and service providers.

4000
Fully grown trees saved

Or 3.3 Cr of A4 size eq. paper is saved annually due to our paperless initiative

Energy & Efficiency Management

For us, energy conservation is not only intended to reduce our costs, but it is also a part of our sustainable consumption strategy with a view to conserve national energy reserves. In this regard particularly, adoption of higher size units has led to efficiency improvement, leading to a reduction in per unit coal consumption. We are supplementing these efforts with co-firing of agro-residues, implementation of Energy and Efficiency Management System, reduction in Auxiliary Power Consumption to further reduce our overall energy consumption.

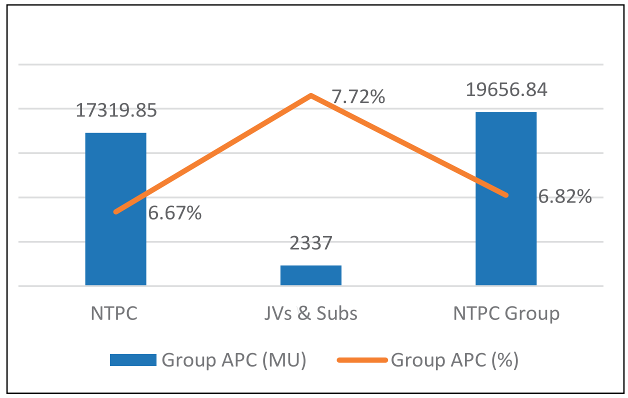
Energy intensity

The energy intensity of the Group, which provides a measure of its operational efficiency, amounted to 9.7 MJ/kWh in FY 20. The table below shows the break-up of total primary energy consumption (as listed in above section) and energy intensity among NTPC and JVs/ Subsidiaries.

Type	Unit	NTPC		NTPC Group
		FY 2018-19	FY 2019-20	FY 2019-20
Total primary energy consumption	TJ	2679566	2512969	2820455
Energy Intensity	MJ/kWh	9.8	9.7	9.7

Auxiliary Power Consumption (APC)

We have been taking a lot of initiatives to conserve energy through energy and operational efficiency measures. The total auxiliary power consumption (APC) at group level was 6.82%. APC of thermal plants has increased as compared to previous years due to increasing level of part load operations owing to low power demand in the country and increased penetration of renewables in grid.



Our Energy Efficiency Initiatives

Name of Indicator		Unit	FY 2017-18	FY 2018-19	FY 2019-20
1	Electrical Energy	MU	120.5	127.52	130.1
2	Heat Energy (Eq. MT of coal)	MT	74859	22474	21222
3	Heat Energy (Eq. MCM of Gas)	MCM	0.091	0.122	0.246
4	Total Energy Saved	TJ	2303	1615	1622.5

Energy Efficiency Strategy

01 Utilization of low grade heat from power plant Flue gas

02 Perform, achieve and trade

03 Heat rate improvement using wind solar hybrid

04 Capacity building
- CFD modelling
- Online performance optimization tool

SUSTAINABILITY REPORTING

Our Energy Conservation Highlights for FY 20

Thermal Energy

- HP and IP cylinder efficiency improvement during capital overhaul
- Boiler modifications to improve steam parameters & efficiency
- TDBFP cartridge replacements

Energy Audit

- Mandatory energy audits in 2 stations
- Auxiliary Power Consumption Energy Audits at all stations
- Measurement & Verification audits under PAT scheme (2nd cycle) of 21 stations

Lighting

- Large scale replacement of existing lighting (FTL's, HPSVs, CR's Halogen)
- 10 lacs LED fittings have been replaced till March 2020

Auxiliary Power Consumption

- Retrofitting HT VFD in ID Fans of one unit of 210 MW
- Installing grid-connected roof top / CW channel top Solar PV systems
- Replacement of inefficient BFP cartridge based on high SEC
- Energy Efficient Coating on pump internal of Cooing Water/ Other large water pumps.
- Installation of VFD's in various LT drives
- ESP duct modification using CFD
- Replacing existing motors with Energy Efficient motors.
- Destaging of BFP to optimize power consumption.
- Optimizing nos. of running BEP's, CEP's mills and CW pumps and fans during prolonged partial loading on the units.

Performance on PAT (Perform, Achieve and Trade)

PAT (Perform, Achieve and Trade) is one of the schemes of National Mission on Enhanced Energy Efficiency (NMEEE). It is a market based mechanism to enhance cost effectiveness of improvements in energy efficiency, in energy intensive large industries and facilities, through certification of energy savings that could be traded. BEE (Bureau of Energy Efficiency) is the nodal agency for implementation of PAT. One ESCerts is equivalent to 1 Mtoe (Metric Tonne Oil Equivalent). NTPC has exceeded the targets and earned 170653 ESCerts in PAT cycle I. Outcome of PAT cycle II M&V audits is yet to be notified by BEE.

Air (Non-GHG) Emissions Management

We have made consistent efforts to reduce our air emissions through state-of-the-art technologies and monitoring systems. As per the new notifications of Ministry of Environment, Forests and Climate Change (MoEFCC) for maintaining the limits for specific water consumption and stack emissions from thermal power plants for SOx, NOx, PM and mercury emissions, NTPC is leading the power sector in country by implementing the requisite measures.

We have installed Continuous Emission Monitoring System (CEMS) in all running units to monitor emissions of Particulate Matter (PM), Sulfur Dioxide (SO2) and Nitrogen Oxides (NOx) in flue gases. The emissions are monitored on a real-time basis which also includes mercury emissions. These results are directly linked with the servers of regulatory agencies namely CPCB/SPCB. Additionally, we regularly conduct off-line monitoring of our stacks. Ambient air quality monitoring is also monitored through an online Ambient Air Quality Monitoring System (AAQMS).

For controlling PM emissions NTPC stations are equipped with more than 99.8% efficient ESPs. Further, ESP augmentation through Renovation & Modernisation (R&M) has been taken up wherever necessary.

For controlling the SOx emission, NTPC has installed the FGD (Flue Gas Desulphurisation) system in stage-V of Vindhyachal station. The same is under commissioning at Bongaigaon, Dadri and Jhajjar plants. Further, order for 56+ GW capacity has been placed and replication is being explored in the remaining stations.

Also, for bringing down NOx emissions to less than 450 mg/NM3 the combustion modification technology is under execution at Jhajjar and Dadri plants. Order for 20+ GW capacities has already been placed. For further reduction of NOx emissions NTPC has taken up pilot projects at its selected stations with SCR and SNCR technologies. This will ensure the compliance of regulatory norms for SOx & NOx applicable at present as well as in future.

We are monitoring Mercury emissions from our plants. At many stations, mercury emissions are below minimum detectable limit (MDL). In all such cases, for FY 20, 50% of MDL is considered while calculating mercury load. We are also upgrading our technologies and systems to ensure a reduction in consumption of Ozone Depleting Substances (ODS). We have already phased out the use of PCBs from all our operations.

Trend for Air Emissions

Name of Indicator	NTPC			NTPC Group
	2017-18	2018-19	2019-20	
SOx (MT)	959902	1203030	1171805	1279366.16
Specitic SOx (Gm/Kwh)	2.63	3.38	3.47	4.41
NOx (MT)	482410	547768	562240	612983.06
Specific NOx (Gm/Kwh)	1.75	1.77	1.88	2.11
Particular Matter PM (MT)	88830	88948	83892	89246.82
Specific PM (Gm/Kwh)	0.27	0.26	0.22	0.31
Mercury		3.09	9.48	10.18
Specific Mercury		0.00	0.028	0.04
ODS (CFC-11 equivalent (kg))	1085	952	1066	1194

GHG Emission & Climate Change Mitigation

As India's leading power generator, we consider it our ethical responsibility to contribute to the global efforts towards GHG emission reduction and climate change mitigation. We are committed to reduce the Greenhouse Gas (GHG) emission intensity of our power generation. Our decarbonization strategy is four-pronged.

Our climate change strategy

1. **Fuel Diversification**

   As on date, NTPC group (including NEEPCO and THDC) has 875 MW, 163 MW and 3457 MW of Solar, Wind and Hydro capacity respectively, total amounting to 4.495 GW. With 2348 MW of solar and 520 MW of Hydro in pipeline, the same would reach to 7.363 GW in short term. By 2032, NTPC will have 37 GW of non-fossil based capacity.

2. **Technology Upgradation & Efficiency Improvement**

   We have adopted comparatively cleaner and energy-efficient technologies that reduce GHG emissions per unit of electricity generated. We are continuously moving from sub-critical to supercritical and onto ultra-supercritical technology. NTPC is among early adopters of supercritical boilers in India, which save ~2% of fuel per unit of power generated resulting in 8% reduction of emission intensity with respect to conventional subcritical power plants. It also increase efficiency by around 8%. Till date, we have commissioned 13 GW of critical/ ultra-super critical power plants.

   Also, as mentioned in the earlier section, we did energy saving of around 7.5 TJ in the reporting year. In the Perform, Achieve and Trade (PAT) scheme of GoI, NTPC has exceeded the targets and have earned 170653 EScerts.

3. **Research & Development**

   CO_2 is the largest gaseous pollutant in several major industry viz fossil fuel power plants, cement, sugar, textile etc. We are working on to capture CO_2 from waste flue gases & convert it to hydrocarbon viz Methanol. This will ensure that we generate a clean fuel as well sequester carbon from the environment further adding great economic value. We are working on the following two projects:

   a) Project-1: Design & Setup of 10 TPD CO_2 to Methanol Plant at NTPC Vindhyachal.

   b) Project-2: Development of Indigenous Catalyst & Reactor for Methanol Synthesis

      - R&D Project launched on 25th June'20 with CSIR Indian Institute of Petroleum, Dehradun
      - b) Catalyst & Reactor development by June'21 & Pilot Scale Plant by Dec'21 for 10 kg/day output

4. **Carbon sink development**

   NTPC in collaboration with ONGC is developing Carbon Capture and Usage (CCU) at its Jhanor-Gandhar plant. Our R&D efforts as mentioned above will also enable carbon capturing and utilization.

   Our afforestation efforts not only add to India's green cover and oxygen bank but also perform the role of 'sinks' for the polluting emissions from the stations etc. We have set a target to plant 10 million trees up to 2026 with 1 million trees each year on an average.

GHG emissions- Scope 1

	NTPC Only		NTPC Group
	2018-19	2019-20	2019-20
Scope 1 GHG Emission (MT)	240369173	226132940	252495018
Scope 1 GHG Emission Intensity (gm/kWh)	875.81	871.02	876.45

As India's leading power sector oranisation, we recognize our responsibility towards using clean fuels and technologies to provide low-carbon power at affordable prices and remain committed to supporting India's Nationally Determined Contribution to climate change.

As compared to previous years, GHG intensity of our gas stations increased slightly due to partial loading on account of low availability to gas stations and energy demand.

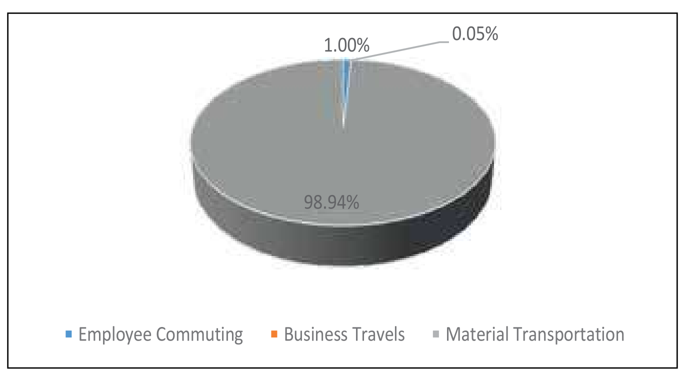
GHG emissions- Scope 2

Name of Indicator	FY 2018-19	2019-20
CO_2 (Coal Station) (MT)	23267.5	15845

Our Scope 2 GHG emissions due to electricity consumption at offices, training centers and research centers outside plant premises e.g. at PMI, Netra, Corporate Office, Engineering Office etc., has decreased due to energy efficiency initiatives and solar RTPV integration.

GHG emissions- Scope 3

Our scope 3 GHG emission for reporting year has been 978052 MT. The breakup of emission are as follows:



We have developed a strategic and long-term approach to reduce our environmental impact. Our strategy is based on a view to convert climate challenges into opportunities.

TASKFORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES (TCFD)

TCFD was established by the Financial Stability Board with the aim of improving the reporting of climate-related risks and opportunities. We have recognised the TCFD recommendations with a commitment to enhance its climate-related disclosures, and improve the management and reporting of climate-related risks.

NTPC's has instituted governance systems and structures including the oversight of responsibilities with respect to climate change risks at multiple levels ranging from operations to Board of Directors:

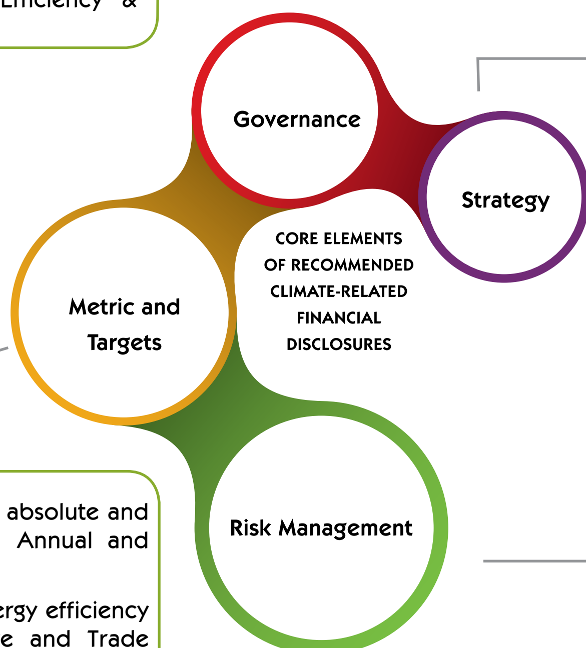
1. Oversight & Committees:
   a. Board of Directors
   b. Board level CSR & Sustainability Committee
   c. Corporate level Sustainability Steering Committee
2. Dedicated Departments:
   a. Sustainability Department
   b. CenPEEP - Centre for Power Efficiency & Environmental Protection

1. Analysis and description of climate change impacts on NTPC's all business segments covering strategic advantages and competitive strengths has been done.
2. Structured materiality assessment process conducted in accordance with the GRI Standards in consultation with third party,

For more details please refer:

Materiality assessment chapter at Page no. 180

Financial capital at Page no. 193



1. NTPC has been reporting annually its absolute and specific carbon emissions through Annual and Sustainability Reports.
2. NTPC plants have been allocated energy efficiency targets under the Perform, Achieve and Trade schemes. We have initiated the 'Comprehensive Performance Optimisation Programme' thereby successfully balancing the dual objectives of reducing carbon-di-oxide emissions that contribute to climate change and facilitating higher efficiency of power generation.
3. NTPC is committed to diversify its fuel capacity mix to have 28% of non-fossil based generation capacity by 2032.
4. For more details please refer:

Manufacturing Capital Chapter from Page no. 197-198

Natural Capital Chapter from Page no. 206-208

Climate change and its associated physical and transitional risks has been considered as strategic risks. The same has been included in company's overall risk management framework.

For more details please refer:

Risk Management Chapter at Page no. 184

Biodiversity Conservation

At NTPC, we believe that we cannot achieve sustainable growth until we take care of our nature and other species. Our goal of building the economy could only be achieved by respecting the ecology. Thus, we put in our most sincere efforts to try to give back to nature more than we take. Envisioning a clear and comprehensive goal to preserve our nature, we have developed a dedicated NTPC Biodiversity Policy in 2018 which clearly states our vision and guidelines for conservation, restoration and enhancement of biodiversity. Also, NTPC is a proud member of Indian Business and Biodiversity initiative.

Our Biodiversity Strategy

Mapping	of biodiversity interfaces, including assessment of its risks & opportunities
Implementation	of biodiversity conservation and management plant
Enrichment	of greenbelt for Biodiversity
Engagement	Including advocacy, capacity-building and dialogue with local communities, academia, NGOs, and international fora.
Decision-making	on the basis of applicable biodiversity aspects in the environment management systems
Target	setting for biodiversity management
Monitoring	and reporting on progress towards targets
Accountability	By designating a bio-diversity champion within the organization

We also have a flagship programme towards conservation of Olive Ridley Turtles. The coast of Andhra Pradesh is known for the nesting and foraging of Olive Ridley Turtles – which is a Vulnerable Category species on IUCN's Redlist. Thus efforts are underway by the Andhra Pradesh Forest Department since 2010 to minimize the impact of human interventions on the critical habitat. We are now a proud partner in the efforts of the forest department to conserve the habitat of Olive Ridley Turtles by way of a five-year agreement between our Simhadri Station and the forest department for conservation efforts in 9 coastal districts of Andhra Pradesh covering 732 km of coastal area. Under this initiative, we have spent ₹4.6 Crore in a phased manner till date. As a result of our efforts, resulted in increasing trend in the hatchlings released in the sea-water.

Conservation of Olive Ridley Turtles

Our three-fold conservation plan:

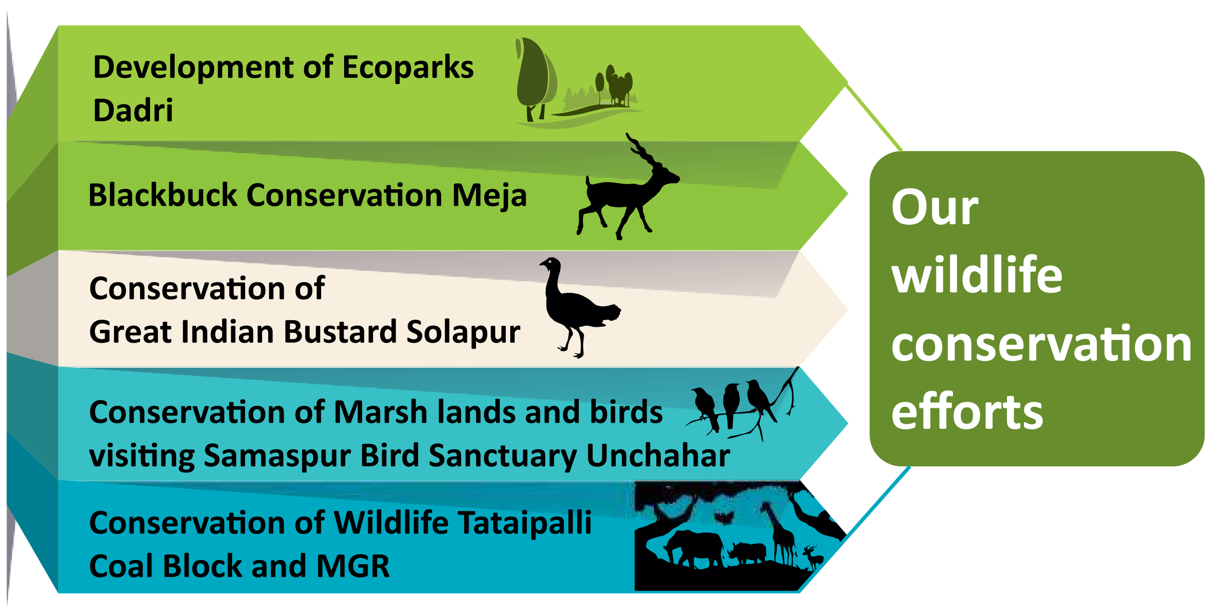
- Identification of nesting beaches
- Development of hatcheries along nesting beaches and ensuring security during hatching
- Capacity building of communities to strengthen the conservation efforts

We understand the importance of our operations for the society and nation's economy, but we are also cognizant enough to ensure that none of our station location and operation have a significant and irreversible negative impact on protected areas and wildlife sanctuaries.

During setting up of a new power plant, if there is any involvement of forest land, statutory permission for diversion of forest land for non-forest activities is obtained from MOEF&CC. This is done in accordance with Forest (Conservation) Act, 1980; which includes enhancement of forests with the amounts deposited for Compensatory Afforestation and Net Present Value of forest land involved.

Similarly, in case of involvement of coastal marine areas, clearance under Coastal Regulation Zone Notification is obtained and the provisions therein are implemented.

None of the project sites for thermal power plants established by NTPC were located within 10 km. or respective eco-sensitive zones of the protected areas or the areas of high biodiversity outside the protected areas.



However, in case of following thermal power projects wildlife sanctuaries were declared after the project was accorded Environmental Clearance (EC) or constructed:

- In case of Kahalgaon Station, the stretch of Ganga river adjacent to the project site was declared as a Dolphin Sanctuary by State Government after the project was accorded Environmental Clearance by MoEF&CC and the construction of the project was nearing completion. Also, A special scientific study has confirmed that the impact of treated effluents from Kahalgaon STPP, soon to be declared ZLD, on the sanctuary are insignificant.
- In case of Feroz Gandhi Unchahar Thermal Power Station, Samaspur Bird Sanctuary was established by State Government in 1987 much after the project construction was started by UP State Electricity Board in 1981. NTPC took over the project in 1992.

Even for our Koldam Hyroelectric Power Plant (HEPP), where habitat of Cheer Pheasant (Catreus wallichii), which is included in IUCN Red List species (under vulnerable category) existed in some area of Majathal Wild Life Sanctuary, which falls under submergence area of Koldam HEPP. In order to restore the area of Majthal Wildlife Sanctuary involved in Koldam Project, NTPC has identified jointly with wildlife Wing of GoHP 500 ha of land in and around Majthal Wildlife Sanctuary for Cheer Pheasant habitat, acquired the land and handed over to State Government to get it notified as a sanctuary. In addition, another 10 km2 wildlife habitat has been identified in consultation with State Forest Department of HP to get it notified as a Sanctuary. Various schemes such as compensatory afforestation, CAT plan, RIM plantation, development of fisheries etc. towards environmental and bio-diversity conservation are already being implemented through the concerned authorities. We have also made financial contributions towards the various schemes being implemented by the state government at Koldam HEPP to restore/ enhance the wildlife habitats.

Further, we have taken various voluntary initiatives towards conservation of aquatic and terrestrial wildlife around our operations. Our Simhadri Station in Andhra Pradesh is supporting the Central Marine Fisheries Research Institute (CMFRI) to deploy artificial reefs near the coast. These reefs simulate coral beds, and function as a comfortable habitat for fish and diverse marine organisms. The first deployment of artificial reefs in Andhra Pradesh was successfully done off the Muthalampalem coast.

Our vision of having a healthy ecology around begins from inside of our plants. Not only do we put in our best efforts to avoid disturbance to ecology of the surrounding area

Ash Mound Park at NTPC Dadri

by minimizing discharge/disposal of waste/effluents, but we also give a special thrust to afforestation and green belt development at all our projects covering vast tracts of land in and around projects. At some of the projects (like Rihand and National Capital Power Project), we have converted barren stretches of land into lush green environments.

Our afforestation efforts not only add to India's green cover and oxygen bank but also perform the role of 'sinks' for the polluting emissions from the stations etc. We have set a target to plant 10 million trees up to year 2026 with 1 million trees each year on an average

Badarpur Biodiversity Park

We have taken up the development of Mega Eco Park at Badarpur spread over 884 acres, one of the largest man-made parks in not only India but will be bigger than New York Central Park spread over 842 acres. Eco Park is being developed over already closed Badarpur station's Ash dike.

Narmada Landscape Restoration Project

NTPC in collaboration with US-AID is supporting a unique Biodiversity Project titled "Narmada Landscape Restoration Project" along River Narmada between Maheshwar and Omkareshwar dams. With an investment of about Rs 25 Crores, this project will be benefitting the local population, Indore City,and Madhya Pradesh at large as the project is aimed to enhance green cover, improve water retention, the crop diversity including to promote organic farming and marketing. The project is being taken up involving Global Green Growth Institute (GGGI) Headquartered at Seol and Indian Institute of Forest Management Bhopal. This project is also one of its kind in India and implementation is likely to become a role model for replication across the country

35 million trees planted Since inception

All NTPC stations have environmental cells and 19 NTPC stations are certified for ISO: 14001. The Environment Management Systems are regularly inspected/ audited internally as well as externally by Regulatory agencies such as SPCBs & CPCB, NGO and ISO certification agencies.

The contact persons for lodging grievance are displayed at the main entrance of the plant. The grievances are also maintained in the grievance book. Total 08 nos. grievances were received in reporting year. No significant fines and non-monetary sanctions during the FY 2019-20. However, an amount of Rs one crore has been deposited towards interim environmental compensation for the spill from Vindhyachal ash dyke.

11.6 000'ha Afforested

1.96 000'ha Terracing

2.62 000'ha Pasture Development

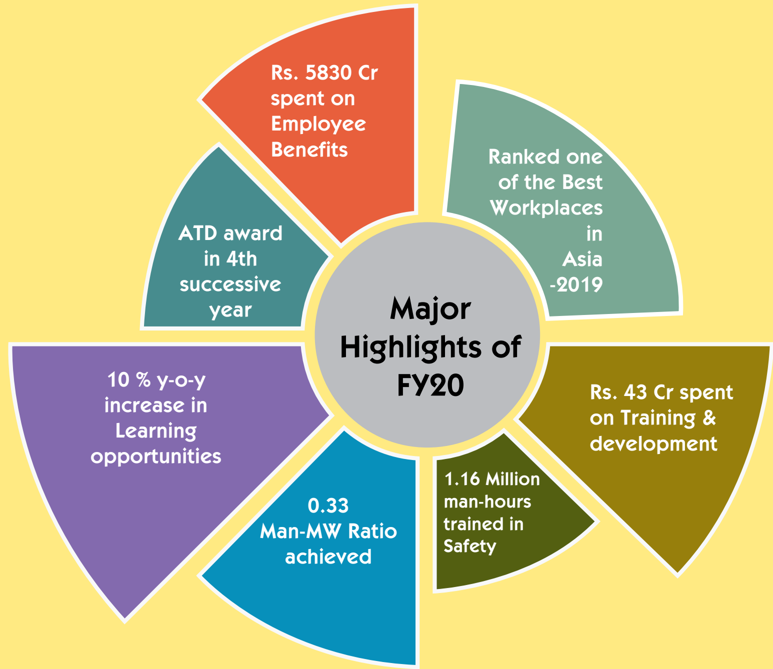
1.53 000'ha RIM Plantation

20000 Check-dams

NTPC is legally bound to comply the environmental laws and regulations formulated by the statutory agencies. Hence, the company is in a continuous process of 100% compliance with the techno-economically feasible engineering solutions to ensure compliances of any directives issued by regulators in a time bound manner.

Due to stringent environment norms, day-by-day company requires renovation & modernization (R&M) of pollution control technologies /devices of our old running units. Accordingly, NTPC is able to comply all the directives of legal authorities with the R&M activities.

Human Capital



Material Topic(s): [1] [24] [7] [19]

Target SDG(s): [3] [5] [8]

NVGSEE Principle: [3] [5]

At NTPC, we believe that organizational success is outcome of employees' success. Employees are the driving force behind our sustained stellar performance over all these years of market ascendancy. As a commitment towards our core values, employees' participation in our management has been made effective based on mutual respect, trust and a feeling of being a progressive partner in growth and success.

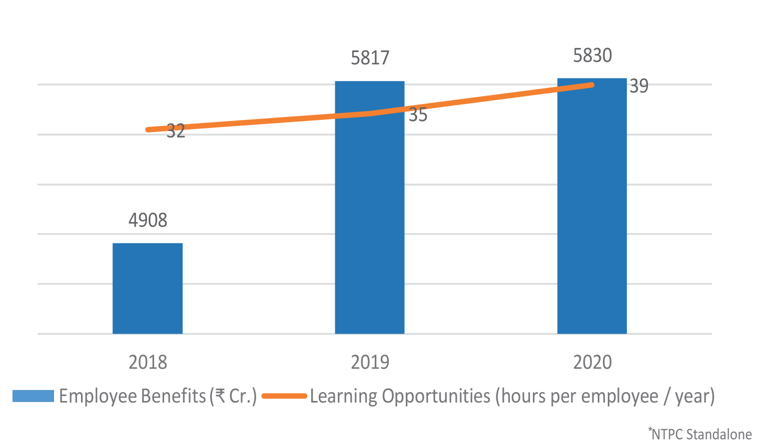
HUMAN CAPITAL

Related Sustainability Topics

- Labour practices
- Compliance management
- Employee development and engagement
- Diversity inclusion
- Health and Safety

Risks Mapping:

- Attracting and retaining skilled and experienced employees
- Succession planning



Reference to other frameworks:

- IPIECA: HS1, HS2, HS3, HS5, SE8, SE10, SE15, SE16, SE17, SE18
- UNGC: 1, 2, 3, 4, 5, 6

Relevant GRI indicators:

- 401-1
- 401-2
- 401-3
- 403-1
- 403-2
- 403-3
- 403-4
- 405-1

- 405-2
- 408-1
- 409-1
- G4-10 (ADR)
- G4-11(ADR)
- G4-EU15

- G4-EU17
- G4-EU18
- G4-LA6 (ADR)
- G4=LA6 (ADR)

Relevant SDGs:

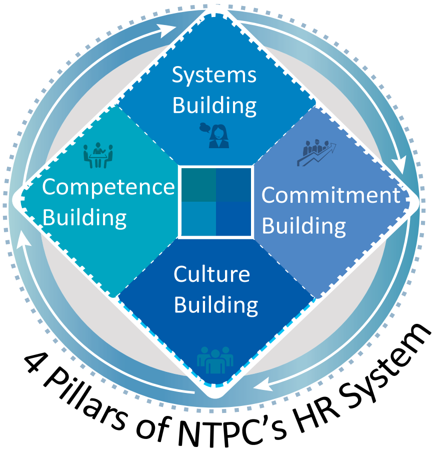
We take pride on our extremely talented team of committed professionals that has contributed their best to bring the Company to its present heights. NTPC have been able to induct, develop and retain the best talent and have ensured a very low attrition rate as compared to others in the sector. The HR vision of NTPC is "To enable its people to be a family of committed world class professionals, making NTPC a learning organisation." Our HR Systems is based on four pillars.

Over the years our strong values, commitment and focused systems have led us to receive various HR Awards by reputed institutions and consistently enabled us to feature among the "Great Places to Work For". Centre of excellence related to HR practices has been established at Simhadri and Unchahar stations.

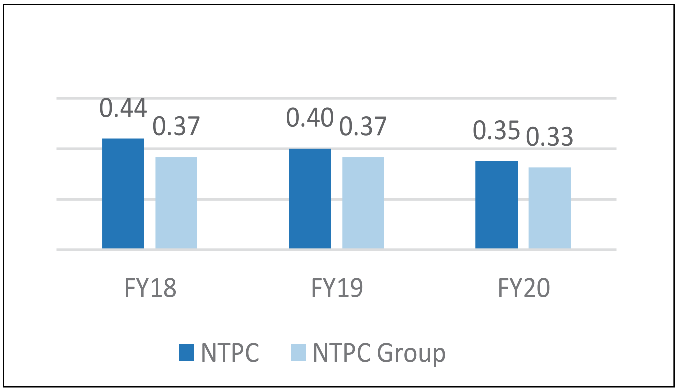
New Recruits at NTPC PMI, Noida

About Workforce

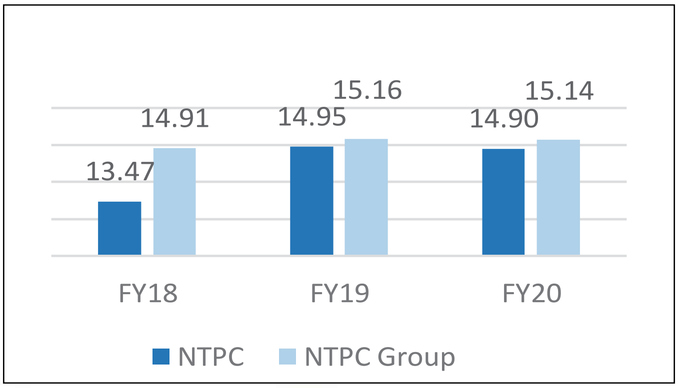
Our highly qualified and motivated pool of employee are our core assets. Their effective management with high personnel engagement and employee productivity serves as competitive advantage to us contributing to the organisational growth. The commitment of our employees is reflected in terms of financial parameters such as sales per employee, value added per employee etc. Our overall Man-MW ratio for the year FY20 was 0.35 excluding JVs/ subsidiaries and was 0.33 including them. Generation per employee was 15.14 MUs during the year for NTPC group.



Man-MW Ratio



Generation (MU) per Employee



We believe in workforce that represents a fusion of both experienced and young employees. From young professionals to proficient employees, members of different generations are enabling us to further grow and expand our business. At NTPC, there is fair representation of people from every state and regions of the country. The details on the breakup of current workforce by age group and gender has been provided below:

Total number of Employee

Total Employee	FY 2019-20	
Executive	Male	11650
	Female	793
Non- Executive	Male	6260
	Female	462
Total		**19165**

Contractual Workforce

Total	**99506**

Details of Employee Hired and Separated

Total Employee		FY 20	
		Separated	New Hire
Gender Diversity	Male	145	140
	Female	13	27
Total		**144**	**167**

Our turnover rate is very low and most employees chose a lifetime career with us. During FY 20, our employee turnover rate was 0.82%.

Equal Opportunity, Diversity and Inclusion

At NTPC, we believe in maintaining employee diversity and have a strong and dedicated workforce having diverse talents, perspectives and backgrounds. We recognise and respect the different cultures, national origins, races, religions and sexual orientations in the world, and among our people and do not discriminate on the basis of religion, gender, race, caste or disabilities. Besides equal employment, entire workforce is also entitled to the same benefits, training and skill enhancement programs. Men and women are treated at par in all respects.

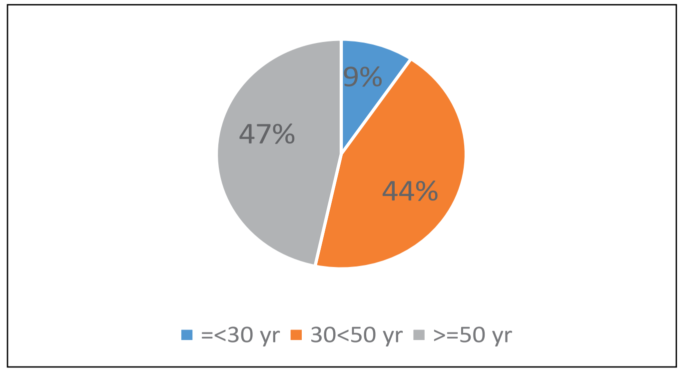
Females in Management Role

% Females in	FY 20
All Management	7.08%
Top management	**3.81%**

Employee Diversity

Type	Strength
Specially abled Employees	2.6 %
Reserved communities	46%

Age Diversity



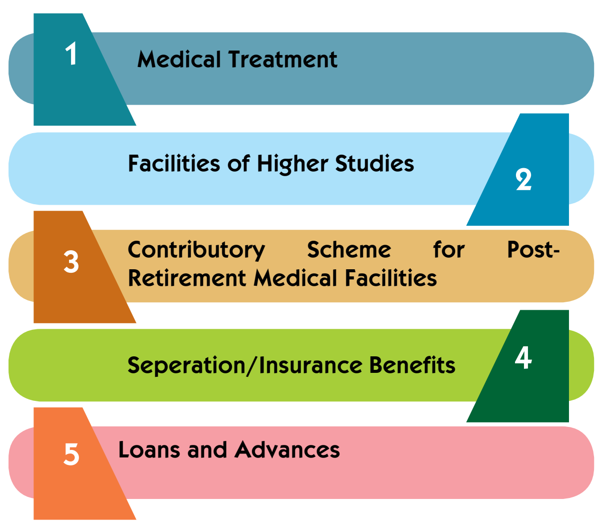
Employee Benefits

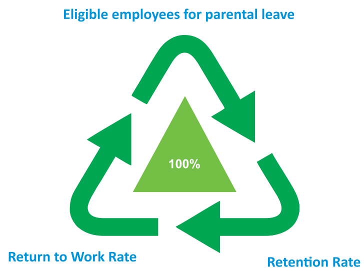
At NTPC, for our full time employees we extend an entire gamut of benefits. This includes paid childcare leave, comprehensive medical care, higher education facility, housing advance, social security etc. We also extend post-retirement medical benefits to employees to meet any exigency that may arise in future.

Parental leaves are applicable for both the gender. However, as per regulation, some additional benefits such as maternity leave, and special childcare leave of 2 years are provided to women employees. In FY20, 757 male and 76 female candidates availed parental leave.

In reporting year, Rs. 5830 Cr were incurred on our employee benefits.

Major Employee Benefits





Benefit Plan Obligation

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. We pay fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the profit or loss. Our obligation is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Company and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by NTPC and is managed by separate trust. The Company has PRMF, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empanelled hospitals.

NTPC complies with the Minimum Wages Act. The lowest wage of employee in NTPC is same across all locations of the company irrespective of the gender. The ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual) is around 3.5.

The wage payment to the contract workers directly into their bank account on last day of every month is also ensured by us. This has been enabled through our digital initiative "CLIMS" easing and enabling proper verification of documents like payment sheets, PF deposit receipt etc. The remuneration policies for the highest governance body, executives and supervisors are in line with DPE guidelines.

The management approach on compensation and benefits is guided by beyond the government guidelines issued from time to time and complies with statutory conditions.

Performance management System

To incentivize our workforce for their contribution in the organizational growth, we have developed a dynamic PMS to assess the performance of our employees and reward on annual basis appropriately. As a part of performance management system, all executives receive performance feedback during mid-year review and final appraisal. Promotion of executives to next higher grades position is on the basis of merit, efficiency, grade service and suitability.

Employee - Management relationship

At NTPC, respect for human rights, individual dignity and professional conduct is crucial for our operations. NTPC is committed to operate in a manner consistent with the United Nations (UN) Universal Declaration of Human Rights, the 10 UN Global Compact (UNGC) principles and the applicable International Labour Organisation (ILO) Core Conventions on Labour Standards. We conducts our business in an ethical manner where its workforce is appreciated and valued.

We respects the rights of our employees to freedom of association in accordance with applicable laws. All NTPC employees in the workman (non- executive) category have freedom to associate themselves with various unions to facilitate collective bargaining agreement.

The minimum notice period for significant operational changes like location transfer or termination/resignation from service varies between one to three months.

We consider it as our highest priority to ensure safety of our employees at the workplace. We strive to maintain a safe and secure culture for our women workforce. To this end, we have formed the Internal Complaints Committees at our operational locations where complaints against sexual harassment can be registered. This is supported by the Anti-Sexual Harassment Policy which ensures a free and fair enquiry process. During FY20, 2 cases of sexual harassment were reported, out of which all cases were resolved and the other no cases are under pending as on date.

For addressing the grievances of employees, NTPC has a time bound Grievance Redressal Mechanism covering all employees at each location. The employee grievances are also captured through different forums like participative forums, communication meetings, employee organizational climate survey etc.

NTPC adheres to statutory and regulatory requirements related to payment of wages and benefits. We ensure that there is no violation of the rights of employees and provides statutory benefits like Provident Fund and medical facilities.

All employees and contractors are sensitised on Human Right related topics through structured training programmes.

Human Rights training

Name of Indicator	Gender	% of employee trained	
		FY 2018-19	FY 2019-20
Executive	Male	34.7%	41.91%
	Female	25.3%	36.28%
Non-Executive	Male	44.0%	48.76%
	Female	37.4%	47.12%

Name of Indicator	Gender	Man hours	
		FY 2018-19	FY 2019-20
Executive	Male	57168	60624
	Female	2904	4188
Non-Executive	Male	45408	38892
	Female	2676	2880

Adequate transparency is maintained with a focused approach on consultation and participation of external stakeholders especially with respect to Project Affected Families (PAF). Special provisions for vulnerable communities also find a mention in the relevant policies. In addition to individual benefits, a comprehensive community development plan is undertaken and implemented progressively. Institutional mechanisms are also in place for Grievance redressal. Human rights issues are adequately addressed to minimize any possibility of violation. Human rights clauses are included in all significant investment agreements and contracts.

NTPC regularly monitor and audits compliance with regulations as well as internal policies. During the reporting year, no complaints on Human Right related issues like child labour, forced labour etc. at workplace were reported.

Security Practices

At NTPC, ensuring security for the workforce is our prime concern. We understand our responsibility for establishing and maintaining a secured working environment in all our installations, workforce, data and operations. This is being taken care of by deploying CISF at all units of NTPC as per norms of Ministry of Home Affairs. Similarly, ex-servicemen security agencies are deployed in the non-core areas like project townships, HQs, Offices etc. duly sponsored by the Directorate General of Resettlement, under Ministry of Defence, as per norms set by the DPE. GoI imparts training and refresher courses to these personnel in security systems and human rights aspects before their formal induction to the service.

Concrete steps are being taken for upgrading surveillance systems at all projects/ stations by installing state-of-the-art security systems.

At NTPC, we have introduced CLIMS (Contract Labour Information Management System), a biometric labour attendance system for contract labours. Besides improving security, this has helped in monitoring and execution of labour payments and benefits.

People before PLF

People before PLF (Plant Load Factor)' is the guiding philosophy behind the entire gamut of HR policies at NTPC. We value our employees and believe that the quality of benefits for our employees is one of the motivation factor in improving employee retention and enhancing their productivity.

At NTPC, regular feedback is taken from employees by conducting annual employee satisfaction surveys through external agencies. For FY 20, the employee satisfaction index score was 80%. The purpose is to seek employee feedback on various systems such as satisfaction w.r.t safety and security, grievance-handling mechanism, organization commitment, monetary benefits, job satisfaction, welfare facilities, recognition and appreciation among others. Through surveys, employees contribute towards improvement of various systems within organization by providing their valuable feedback.

With this perspective, we have introduced the work-from-home policy for our employees to increase employee motivation, convenience to work and better management of work/life balance

Talent Management

At NTPC, we believe in holistic development of not just our product but also of our employees to give them an edge over others for their personal and professional growth. Given the global trend of rapid changes in technology and innovation, it has always been important to us to nurture our employees for the global competence. We have been able to sustain emerging leadership through our comprehensive learning and development programs. Our quest to keep the organization in tune with the emerging business is reflected in our new tag line for learning "Learning at speed of business". During FY 20, Rs. 42.65 Cr were incurred as Training & development Expenditure on standalone basis.

Our commitment towards a dedicated and comprehensive learning approach is driven through:

- **NTPC Power Management Institute (PMI), Apex L & D Centre at the corporate level**
- **6 Regional Learning Institutes**
- **Employee Development Centers at each operating station**

The effective chain of PMI, RLI and EDC's provided an effective learning grid to the employees.

Training Highlights

Total trained employees (Executive & Non- Executive) – 17,023
Total Training Hours- 6,63,786
Skill Management Programs- 20+
- Total Employees trained- 63,759
- Total hours- 6,83,370

We also promote international training and development opportunities for our employees. We have partnered with several eminent international institutions like Harvard Business School, Wharton Business School etc. on various subjects matters.

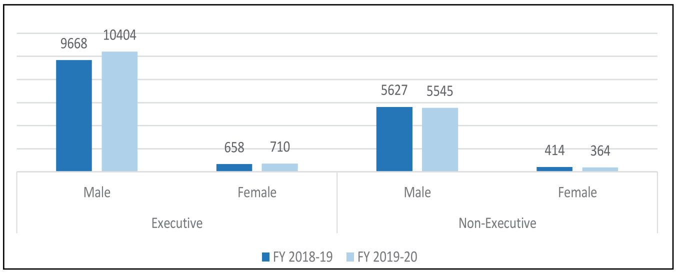
Our collaborations for holistic development:

- **ISHA Foundation**
- **Art of Living**
- **Swami Sukhbodhan**
- **Brahma Kumaris**

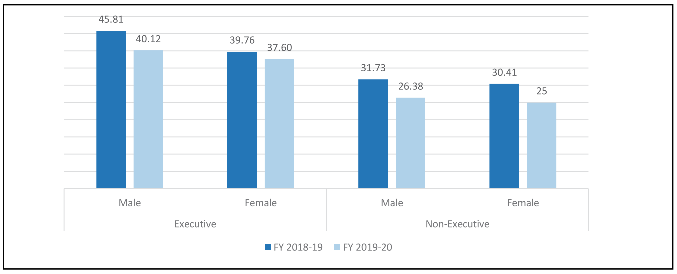
The objective of this initiative is to create an environment where employees and their families are motivated to deliver excellence not just as a professional but also as a person.

SUSTAINABILITY REPORTING

No. of employee trained



Average man hour training per employee



Skill development trainings

Management Level	% of employees who attended skill development trainings	Average hours of training
Top management	72%	17.74
Middle management	71%	22.66
Lower management	76%	25.39
Other employees	70%	19.01

Training on different aspect

Aspects	% of employees attended training	
	2018-19	2019-20
Code of conduct/ethics	4.43%	6.51%
Environmental	2.91%	2.57%
Supply Chain	2.98%	1.76%

Learning through digital platform

Safety Training at NTPC Safety Academy, Unchahar

Key Highlights

- Channeling innovation across organization through various collaborations and certifications like:
  - Harvard Manage Mentor- 2000 licenses
  - GPiLearn Courses- 1000 licenses
  - Strategic Human Resource Management- 200 memberships
  - E Library- 25000 ebooks,100000+Dissertation,
  - 20000+ book Summaries
- Design Thinking certification program for 25 executives in partnership with MIT, Sloan.
- Introduction of advanced program augmented with reality and virtual reality effects for classroom development programs to provide more dynamic and enthralling learning experience
- Young Leader Development initiative for handpicked potential young executives to learn advanced cross functional subjects' tools and technologies.138 executives are trained for FY20.
- Eminent Speaker Series enabling and empowering employees with rich experiences and achievements of eminent personalities of global repute from different walks of life.
- National School of business, in association with IIM, Ahmedabad for courses in energy management at PMI, Noida
- NTPC adopted 18 nos. of ITI's and developing 8 nos. new ITI's across India for skill development programmes in various trades
- NTPC managing and funding the IIIT, Raipur and Medical college at Sundergarh, Odisha
- 20 Safety Programs on IOSH & one on NEBOSH
- ATD award in 4th successive year for 2019-20
- HCM Excellence Award (Silver Medal) in 2019 by Brandon Hall group

Occupational Health and Safety

We are committed to provide a safe, healthy and hygienic work environment to all our employees and contractors. Organizational safety is a part of our core values. Thus, we precisely inculcate safety awareness among our workforce. Striving for zero-incidence at our workplace, we have a regulated set of procedures and safety rules for all of our work at plants and other locations which has to be mandatorily followed for all business operations.

Our robust occupational health and safety management system covers all of our operating stations and projects and 100% of the total workforce. Every year, internal safety audits by Safety Officers and external safety audits by reputed organizations are carried out as per statutory requirement for each Project/ Station.

In accordance to our safety principals, we have developed a comprehensive and centralized Hazard Identification, Risk Assessment and Control (HIRAC) document for our Coal, Gas, and Hydro stations. Station-specific HIRAC documents are prepared to identify site-specific risks and control procedures. Strategy for safety implementation is made in the form of Operation Guidance Notes (OGNs), Local Management Instructions (LMIs), Job Safety Analysis (JSAs) and Disaster Management Plan (DMP).

Safety Standard

All our stations are OHSAS 18001 certified except 3 which has been certified with ISO 45001. Also, baseline Audit for international level NOSA accreditation in Safety and Environment have been done at four NTPC stations.

We promote collaborative and participative approach by fostering employee participation, consultation, and communication on health and safety aspects. To be able to effectively carry forward and institutionalize such participatory approach across all levels and functions, training programs for our employees and contract workers are conducted on a regular basis. Every year, concerted efforts are made to ensure that 80-90% of our workforce undergo such trainings. The training programs covers topics such as electrical safety, material handling, working at height, road safety, and chemical handling, etc. . These topics relate to the key work-related hazards and risks for our business, apart from topics pertaining to general operations and best practices on occupational health and safety.

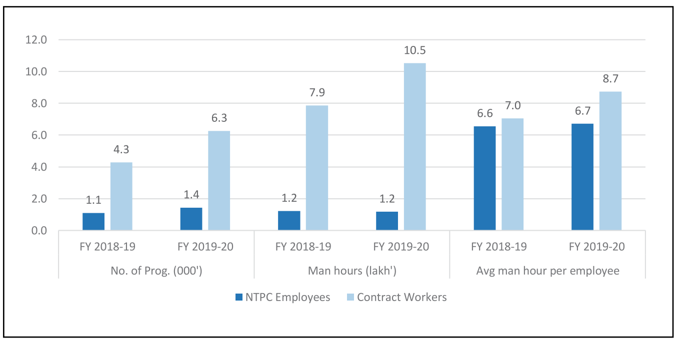
Safety Highlights

- 7703 training programs
- 799150 professionals trained
- 234817 learning man-days
- Total Man hours of training – 1.16 Million man-hours
- Average man-hours per person - 8.48

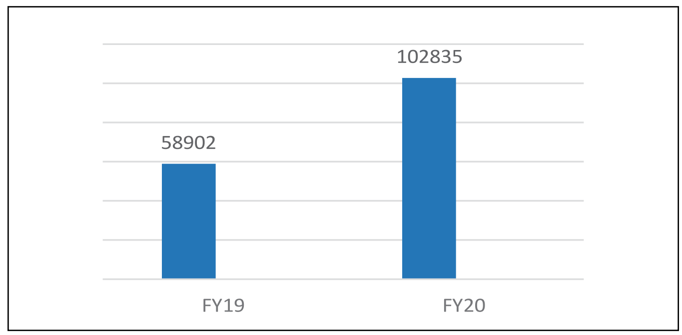
Safety Pep Talk

To imbibe emergency response procedures into our routine systems, we have successfully established NTPC Safety Academy at Unchahar, where our employees and stakeholders are provided hands-on training on safety and emergencies. A safety committee at each of our operating stations has been constituted as per the Factories Act. Medical examination of all the employees is conducted at regular intervals (1-3 years) and annually for those placed in hazardous areas. To minimize the risks, regular monitoring of the workplace for hazards like dust/coal dust, gas or vapor, illumination, noise-level is carried out.Training programme for contract employees are conducted at all sites on regular basis covering all relevant topics on Occupational Health and Safety. The percentage of employees undergoing such trainings is 80-90% every year.

Safety Training



Deviations Reporting (Lead)



Topics

Fire Safety	Disaster Management plan & Emergency Response Functions
Hazards identification in Power Station	First Aid
Working at height and falling objects	Safety in Elevators, lifts, hoists etc.
Transportation and Road Safety	Confined Space Entry Procedure
Electrical Safety	Work Permit Procedure

Health

Our NTPC hospitals provide round the clock service to its employees and their dependents across locations. We also have empaneled 250+ specialty and super specialty hospitals across approx. 25 cities/towns for providing specialist treatment to our employees. Ambulances equipped with Advanced Life Support systems are available at power plants to cater to medical emergencies. 100 % preventive medical checkup is mandatory for all employees. Also various lectures & camps are organized through specialists on medical & lifestyle regularly for greater awareness.

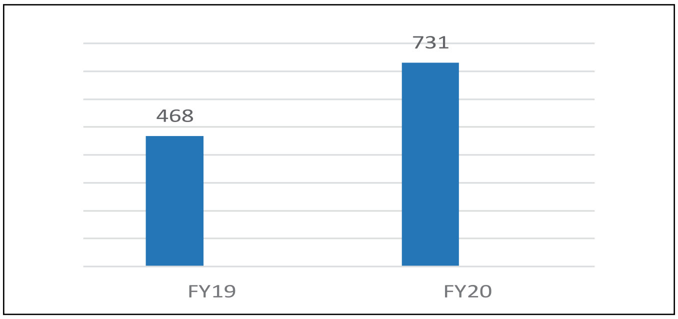
Our aim is to reach the target of zero injuries and incidents across all our operating stations. We have a formal process for investigation of all accidents to assess the cause, extent of loss and recommendation for prevention. There is a robust incident reporting system across NTPC which is closely monitored in terms of Lead and Lag indicators. Since activities representing Lead indicators are proactive in nature, NTPC gives due importance in promoting such activities. They help in identifying potential hazard in terms of unsafe condition, unsafe act and further eliminating them. This gives the right input and direction to us in improving safety culture towards progressing to incident free work place.

No incident of work-related ill health or occupational disease case were recorded during the reporting year. Further, no legal cases or potential risks related to health and safety including diseases and judgments affecting members of the public were recorded.

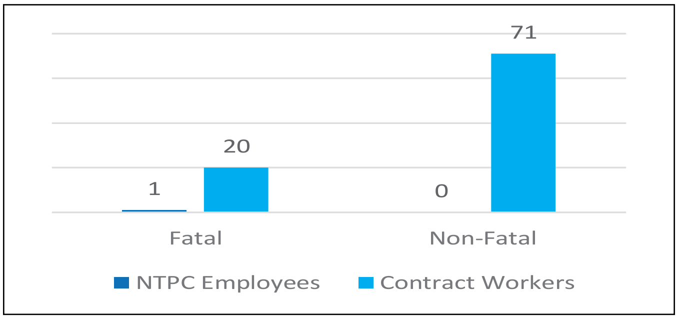
Classroom safety training on Scaffolding

Field safety training on Scaffolding

Near Miss Reporting (lead)



Reportable Incidents Reporting (Lag)



In line with our long-term goals, we have established effective engineering controls at all our stations to indicate and monitor emergency situations at our sites. Detailed emergency plans have been developed at all stations as per statutory provisions.

Responsibilities are assigned to all concerned to handle emergency situations. We conduct regular mock-drills at our stations to check the healthiness of the System and procedures. Observations/suggestions, pursuant to such drills are complied with. We regularly conduct awareness programs on disaster management plan through in-house and external expert faculties.

	NTPC	Contractor
Persons employed at site	16937	99506
No. of high consequences injuries	NIL	NIL
Rate of high consequences injuries	NIL	NIL
No. of Injuries	0	71
*Frequency rate of injuries	0.02	0.37
Man days lost	6000	121647
Man-Hours	42274752	248366976

*The rates have been calculated based on 1,000,000 hours worked

SUSTAINABILITY REPORTING

Social Capital

Major Highlights of FY 20

- Highest MSE procurement (46%) amongst Maharatna PSUs
- 100% realization of current bills
- 95.5 % Customer Satisfaction Score
- INR 304.92 Cr spent during FY20 towards CSR activities
- 10 Lakh lives touched through CSR works
- 96% indigenous purchase in value

At NTPC, we put our partnership
and not production as the corne
ensure our progression remains
strive for equitable, inclusive, sus
communities, customers and supp

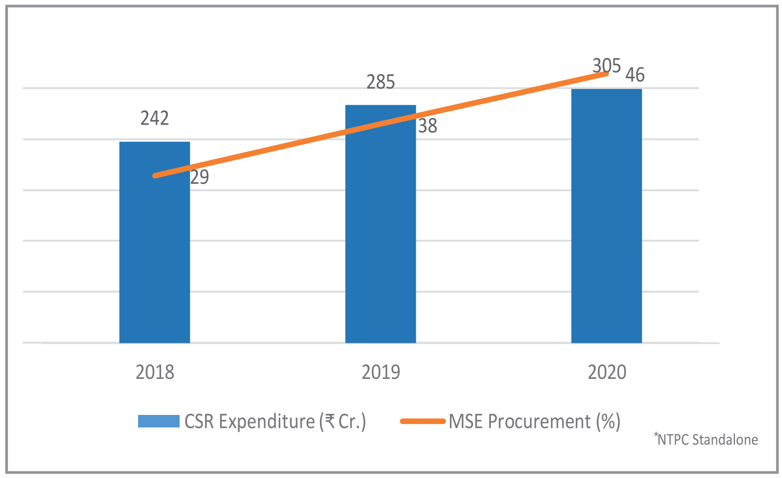
SOCIAL CAPITAL

Related Sustainability Topics

- Ethics and Integrity
- Customer satisfaction and loyalty
- Indigenous people's rights
- Sustainable supply chain
- Disaster management
- Land acquisition
- Community engagement

Risks Mapping:

- Regulatory & legal
- Safety, security of people and property
- Natural/ manmade disaster
- Sustaining realisation



ps ahead
er-stone of our growth story. We work to
people-driven and people-centric. We
tainable and simultaneous growth for our
pliers.

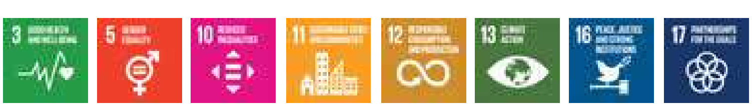
Reference to other frameworks:

- IPIECA: HS4, SE1, SE2, SE3, SE4, SE5, SE6, SE7, SE9, SE13, SE14
- NVG Principle: 2,4,7,8
- WBCSD

Relevant GRI indicators:

- 204-1
- 414-1
- 417-2
- 205-1
- 414-2
- 417-2
- 205-2
- 416-1
- 419-1
- 205-3
- 416-2
- G4-EU22
- 308-2
- G4-EU25
- 413-2

Relevant SDGs:



At NTPC, we aim to create shared value and maximize it for all stakeholders – shareholders, employees, customers, suppliers, regulators and the community. Our core values and transparent Corporate Governance practices help us in our endeavor to meet the expectations of our stakeholders.

Our Finance, HR, Commercial, CSR, R&R, and C&M functions are at the forefront of our interactions with most stakeholders[6]. As a responsible corporate citizen, we incessantly endeavour towards creating synergistic and symbiotic value across our value chain to enhance our social, environmental and economic performance.

Our customers

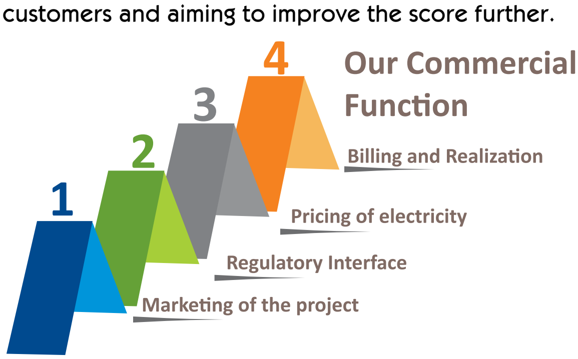
Customer Meet at Kerala

Customer engagement

Customer-centricity is one of the keystones of our business value chain. We value our relationship with the customers and recognize Customer Focus as one of our core values. We have an elaborate system of Customer Relationship Management (CRM), through which we reach out to our customers to collect their valuable feedback/ experiences/ expectations using regular structured interactions including support services and trainings.

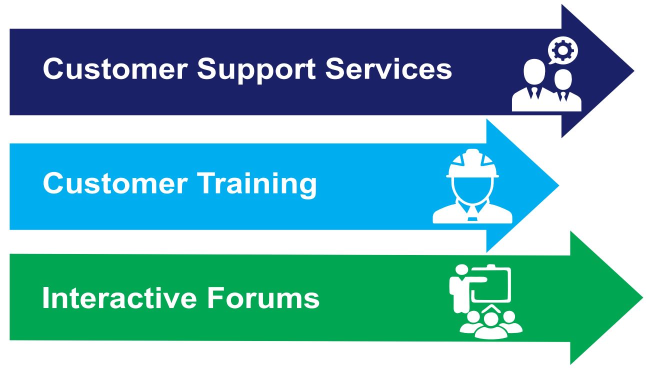
We have also put in place a Customer Satisfaction Index (CSI) survey system, to gather customer's feedback through a survey and respond to their requirements. As per the CSI survey conducted in FY 20, 95.5 % of our customers were satisfied and there are no complaints as such from customers. However, as part of the tariff determination process under the overall Regulatory System, different cases have been filed by NTPC against CERC/ Customers or filed at the Appellate Tribunal/ Courts by different beneficiaries against NTPC/ CERC.

We are working diligently to meet the expectations of rest of the customers and aiming to improve the score further.



[6] Refer to pages xx of this Report for specific details on stakeholder engagement.

Pillars of our Customer Relationship Management



Health and safety impacts of our product

As a responsible power producer, we offer technical and managerial support services to our clients to the best of our capabilities, as required, even though we are not directly involved in the businesses of transmission and distribution. We offer various customer support activities in different areas, including health and safety aspects to the customers in the form of workshops and seminars.

We take due care in displaying safety instructions in the local languages. Electricity, our sole product cannot be labelled due to its intrinsic nature. However, NTPC has been complying with the Grid Code and Grid standard - national and international - wherever applicable.

No incidence of non-compliance with regulations and voluntary codes concerning the health and safety impacts of our product and services was reported.

Customer Privacy

No complaints have been received concerning breaches of customer privacy, neither have any leaks, thefts, or losses of customer data been identified during FY20.

Marketing Strategy

Our marketing strategy for electricity sale is managed by our commercial function and for consultancy services by consultancy and Business Development (BD) wing. Commercial department analyses the demand and supply situation in the region and markets the power from the newly proposed projects.

We approach all state power distribution utilities of the region, for getting requisition of power from the proposed project, based on which viability of the project is studied further. Based on the consent received, Power Purchase Agreements are signed with the state power utilities. Allocation of power from the upcoming generating station to the respective willing customers (state utilities) is done by the Ministry of Power, Government of India.

Witnessing the rising demand for clean and sustainable energy, we have been investing and redirecting our strategy to provide renewable energy to interested customers. We are significantly reducing our dependency on coal and gas through renewable power infusion.

However, due to the recent thrust on renewable energy in the country, there is a probability of a reduction in scheduled generation from coal/gas plants due to renewable power infusion as a result of addition of renewable capacity, Renewable Power Obligation and subdued demand of electricity. Our commercial function makes the un-requisitioned surplus power thereof available to interested consumers through Power Exchange or bilateral agreement. We have created an online portal with direct connectivity to customers/ beneficiaries and RLDC for ease of transactions.

During FY20, no non-compliance concerning marketing communications was reported.

Our Suppliers

Vendor meet at NTPC Fridabad

NTPC business model consists of procuring physical assets, raw materials and services for our production processes and subsequent evacuation of power through our intermediate customer to the end-user. We are committed towards augmenting the supply chain sustainability and reducing negative externalities of business operations. We seek to institute triple bottom line approach in our value chain and encourage our supply chain partners to follow best environment, social and governance (ESG) practices in their business operations.

No. of suppliers (Total company wide)

Supplier Category	
Domestic	17256
Foreign	108
Total	17364

Vendor enlistment

We have a process of on boarding for all the vendors through pre-qualification, which ensures vendor credentials and capability to execute assignments; adherence to health, safety and environment norms; and compliance with statutory requirements, including human rights. We measure the performance of the vendors and provide regular and transparent feedback for their improvement and development. The enlistment of vendors are done for a period of three years and the list of vendors is updated periodically to reflect the market scenario with regard to presence of vendors for material and services.

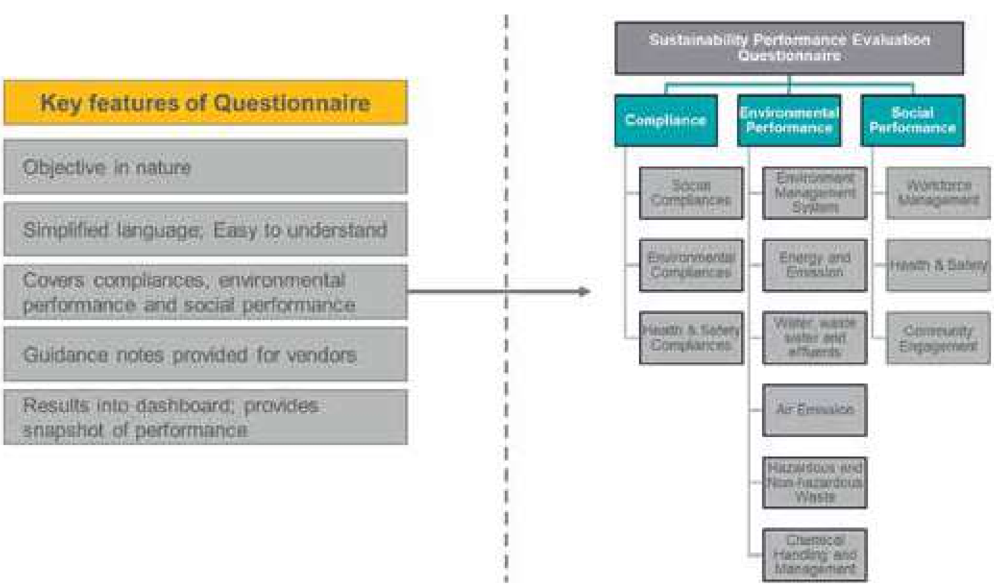
Vendors Enlistment Status

Group	Total Applications Received	Total Vendors Enlisted
MEG	716	119
CEG	1861	259
Total	2577	378

Sustainable Supply Chain

We are implementing Sustainable Supply Chain Management System through instituting Suppliers' Sustainability Performance assessment and Sustainable Supply Chain guidelines at NTPC with structured well-defined objective of assessing and mitigating supply chain risks.

For the assessment of suppliers w.r.t to various sustainability parameters a 'Sustainability Performance Evaluation framework' (questionnaire) was developed in consultation with a third party. For the baseline assessment NTPC engaged with one of the big four consultants to assess the current Sustainability/EHS practices of our suppliers. 30 critical suppliers in terms of volume of business, Criticality of Material Supplied, Diversity of Sectors etc. were selected and assessed for their sustainability performance in the reporting year. Key features and parameters of the Sustainability Performance Evaluation framework has been described as below:



SUSTAINABILITY REPORTING

We believe in maintaining transparency in our procurement process. We have a dedicated Shared Services Centre (SSC) for procurement that provides a uniform platform for collating goods and services requirements of all plants and coordination with the suppliers/ contractors, resulting in benefits of economies of scales, more favourable conditions, and long term commitments. The platform provides better control and compliance with various policies and guidelines. Currently, there are 9 shared service centres catering to the procurements of over 30 of our sites. SSC has resulted in benefits of economies of scales, more favourable conditions, and long-term commitments.

As a result of the SSC, we are able to screen all our vendors on a continuous basis for any negative impacts on the environment, society or any potential human rights violations. Assessments are carried out through physical inspections as well. Only those suppliers that clear our screening process are pursued for any procurement opportunity. We maintain a policy of not engaging with / terminating business relationships with the suppliers who are unable to clear our screening process.

Human Rights provisions are built in our bidding documents for supply cum erection and civil packages invited on competitive bidding basis covering our suppliers and contractors. All our supply chain partners are committed to ensure that no instances of child labour or any form of forced or compulsory labour take place at any of our vendors' site locations. We have a defined set of policies and frameworks to ensure that no human rights of indigenous local communities are violated throughout our supply chain.

We practice a fair, equitable and transparent tendering procedure. We are also actively soliciting feedback from our vendors to continuously improve our vendor management systems for improved vendor relationships.

NTPC has issued various Policy guidelines in FY 20 to strengthen and thereby minimizing the negative impacts in supply chains:

1. Provisions pertaining to Safety Aspects / compliance to Safety rules in bidding document.
2. Implementation of Public Procurement (Preference to Make in India) in future contracts / procurement in NTPC thereby major focus on i) Preference to Local Suppliers ii) Qualifying Requirements and technical specifications in tenders ensure wider participation from local suppliers iii) Major Focus on Domestic Competitive Bidding
3. In select items Relaxed Qualifying Requirements for start-up in line with Government guidelines.

Following actions have been taken to adjust payment policies and procedures

1. NTPC has launched vendor payment portal for all the suppliers/contractors for bill tracking for the supply of goods and services rendered.
2. NTPC has now on-boarded all the three TReDS platforms approved by Reserve Bank of India. TReDS aims to provide liquidity to the MSME seller by the financiers present on the TReDS platform at very attractive interest rates, without a recourse, much before the due date of payment.
3. In line with Government of India's Digital India initiative, guidelines have been issued regarding implementation of 100 % digital invoice submission in NTPC by vendors.

Indigenous focus

To encourage Indian bidders and suppliers, provisions regarding price preference and deemed export benefits are stipulated in the bidding documents as per the extant policy of Government of India. Our procurement process promotes indigenous goods, by giving preference based on domestic content in the procured goods[7]. We have been consistently able to maintain the value of our indigenous purchase at more than 96 % of the total purchase FY18 onwards.

NTPC is giving purchase preference to local suppliers in line with provisions of 'Public Procurement (Preference to Make in India), Order 2017' (PPP-MII Order).

FY	Indigenous (Rs. Cr.)	Imported (Rs. Cr.)
2017-18	3847.9	85.97
2018-19	4894.05	108.54
2019-20	4895.00	197.00

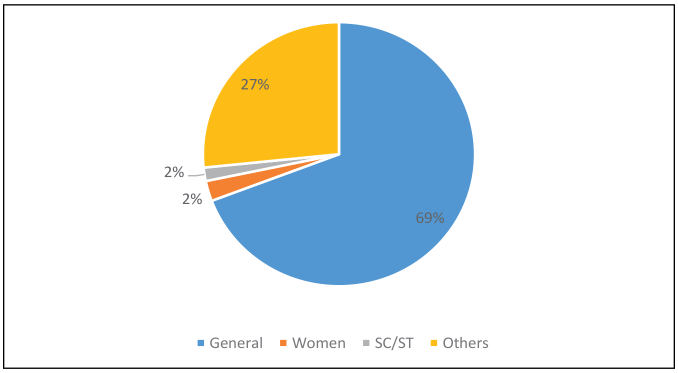
For reporting purpose, all operations based in India has been considered local and domestic vendors operating out of India as local vendors. We also give a preference to Project Affected Persons (PAPs) for award of petty contracts etc., for supplying goods and services

MSME statistics

We continue to promote procurement from MSEs. Also, our Public Procurement Policy defines an annual target for procurement from MSEs to encourage participation in tender for local & small manufacturers including SMEs. The benefits include EMD exemption, tender document fee exemption, purchase preference of 15% and reservation of 385 items. Additionally, we have developed a dedicated MSE vendor registration portal for collating vendor database for items reserved exclusively for procurements from MSEs. In FY 20, we have a MSE vendor base of 4925, an increase of 7 % from the previous year.The breakup of MSE vendors are shown below:

[7]We comply with the 'Public Procurement (Preference to Make in India), Order 2017'.

Breakup of MSE vendors



Procurement from MSEs

Sl. No.	Period	Total Procurement (Crores)	MSE % NTPC	SC/ ST % NTPC	Women %
1	FY 18	4045.64	28.69	0.42	NA
2	FY 19	4072.58	37.59	0.62	0.10
3	FY 20	3608.21	46.22	0.42	0.18

Over the years, we have witnessed a steady increase in our MSE procurement and as on date, there is no vendor complaint pending action at our end.

Vendor Development Programs (VDPs) for MSEs including Special vendor development Programs for Women and ST/SC MSE vendors are conducted every year. In FY 20, NTPC Units organised 17 MSE Vendor Development Programs (VDPs), including 8 Special VDPs for SC/ST MSEs. We have established a dedicated cell to expedite and resolve complaints on our 'MSME SAMADHAN' portal - our dedicated grievance portal for MSMEs.

In addition to above, Pre-bid meetings and Pre NIT meetings with the prospective bidders are also held in case of procurements exceeding certain specified value or are critical in nature. These meeting provides the prospective bidders a forum to raise queries in respect of bidding documents. Necessary clarifications are issued by NTPC to all the prospective bidders.

NTPC is committed towards providing necessary governance support and allocating required resources for organization wide implementation of Supply Chain Sustainability Policy.

Our Regulators & Compliances

Regulator engagement

Being a centralized institution, our policy framework is guided by the Government of India. We are governed and regulated by the Central Electricity Regulatory Commission (CERC). The CERC also determines the electricity tariffs for our stations. We discuss issues, opportunities, and policies for the simultaneous growth of our organization as well as the national economy through periodic regulators meets.

We are committed to comply with all regulatory compliances. In FY20 we have had no cases of fines, penalties and warning against us for non-compliance with government regulations.

Our management bodies ensure that our power distribution partners and clients follow and stand at par with our commitment toward sustainability.

Socio-Economic Compliance

No non-compliance with laws and/or regulations in the social and economic area were identified during FY20. However, at the end of FY20, 4199 cases were pending against us in courts. There were no legal actions for anti-competitive behaviour, anti-trust, and monopoly practices in the reporting year.

Public Policy

We do not support, in cash or in-kind, any political party or their members and related institutions.

Our Communities

At NTPC, our operations also extend in the direction of creating societal value. Our spirit of caring and sharing is embedded in our vision and mission statement. As an organisation, NTPC owes its success to the people of India and strives to work for their sustainable development.

Our core organizational belief of changing lives and adding value to our communities is manifested through constant engagements with our communities across our geographic locations. Corporate Social Responsibility (CSR) has been synonymous with our core business. Our Resettlement & Rehabilitation (R&R) policy covers community development

Eye Camp at NSPCL, Durgapur

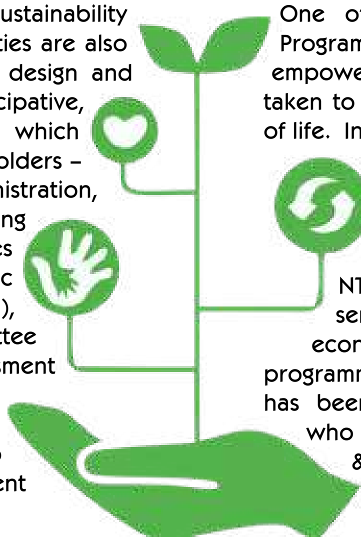
(CD) activities – which are initiated as soon as a project is conceived and thereafter, extensive community / peripheral development activities are taken up along with the project development.

Corporate Social Responsibility (CSR)

Our policy for CSR is in line with Companies Act 2013 and DPE Guidelines for CSR. It covers a wide range of activities including implementation of key programmes through NTPC Foundation.

CSR programs undertaken by Company include activities specified in Schedule VII of the Companies Act 2013 & rules made there under and any other activity for benefit of community at large. Focus areas of NTPC's CSR activities are Health, Sanitation, Safe Drinking Water, and Education. However, company also takes up activities in the areas of Capacity Building of the youth, Women Empowerment, Social Infrastructure livelihood creation and support through innovative agriculture & livestock development, support to Physically Challenged Person (PCPs), and activities contributing towards Environment Sustainability.

Preference for CSR activities is being given to local areas around Company's operations, ensuring that majority CSR funds are spent for activities in local areas. However, considering Inclusive Growth of all & Environment Sustainability to supplement Government efforts, activities are also taken up anywhere in the country. We design and shortlist our CSR portfolio based on a participative, bottom-up and consultative process which includes consultations with various stakeholders – including Panchayat officials, District Administration, civil society, community members - including women representatives and representatives of backward communities, public representatives (elected/ nominated), Village Development Advisory Committee (VDAC) etc. We also conduct Need Assessment Surveys (NAS) at every five years through reputed external agencies in consultation with local communities and institutions to design customized community development solutions through our CSR activities.



The effectiveness of CSR & Sustainable Development programme is assessed through both internal & external evaluations. NTPC conducts a third-party Social Impact assessment at every two-year for all its major CSR activities at various operating stations. During the Year 2019-20, NTPC has taken up Impact Evaluation at 06 stations. These studies which take Human Development Indicators as reference for measuring the impact have statistically demonstrated that the CSR interventions of the company are improving the lives of people. We have also established a formal local community grievance process.

We have a board level Corporate Social Responsibility and Sustainability Committee to oversee the CSR activities. In FY20, we exceeded our minimal prescribed expenditure on CSR works and spent around Rs. 304.92 Cr towards CSR initiatives. Of the total CSR expenditure in FY20, over 56 % was spent towards education and skill development; and hunger & poverty, healthcare and sanitation. This was in line with the priorities defined by the government. For detailed break-up of CSR Expenditure in various Thematic Areas please refer to CSR report.

One of our most prominent initiative is our Flagship Program Girl Empowerment Mission (GEM) targeted for the empowerment of the girl child wherein interventions were taken to make the girls self-reliant and confident in all walks of life. In FY 20, 04 weeks residential summer workshops were provided to more than 1800 girl children in the age group of 10-12 years studying in Govt. schools in the vicinity of 23 NTPC Locations.

NTPC foundation

NTPC has also set up the NTPC Foundation, engaged in serving & empowering the physically challenged and economically weaker section of the society. Its flagship programme i.e 'NTPC Utkarsh' - Merit Scholarship for students has been launched to encourage and motivate students who are pursuing secondary, high school, engineering & medical science studies. The program envisages to benefit 7300 students every year. During the year 420 students have received the scholarships. Disability Rehabilitation Centre (DRC) at NTPC Tanda, Rihand, Korba, Dadri, Bongaigaon and Farakka established in collaboration with National Institute for the Orthopedically Handicapped (NIOH), under the Ministry of Social Justice and Empowerment, Government of India has benefited about 2900 physically challenged people with approximately 9300 Surgical corrections, serving aids & appliances during the year.

Grievance Mechanisms

Participation of Panchayat, community & local authorities is encouraged during planning, implementation & monitoring of CSR & Sustainability projects and their feedback regarding acceptance, support & recognition of CSR initiatives. The key issues are addressed during consultations, periodic meetings and in implementation phase of CSR Projects wherein community feedback are received and addressed.

Our CSR Repertoire, FY 20

Education

- Implementation of project for improvement of learning levels in about 130 Government Schools.
- Construction of school & hostel for tribal children near NTPC Rihand, in UP.
- Construction of school buildings at Varanasi UP, Hoshangabad MP & Sambalpur Odisha.
- Smart Tab labs in Government schools in vicinity of 03 NTPC Stations.
- Providing quality education to rural children through 34 schools located in NTPC townships.

- Supply of solar power, dual desk benches, play equipment's in govt schools
- Distribution of uniforms, books, stationery, bags etc. in more than 450 schools benefitting about 70,000 students

Health

- Support for infrastructure development & equipment availability at National Cancer Institute Nagpur
- Support of part funding for construction of Oncology Block at King George Hospital Vizag.
- Setting up Burn Units at AIIMS Patna, AIIMS Bhubaneswar & King George Medical University Lucknow.

- Construction of Eye Hospital at Dadri, UP and of operating room complex at Eye hospital in Bhubaneswar.
- Mobile Health Clinics at 10 locations benefitting about 80000 persons per year
- Proactive relief measures during COVID-19 such as regular sanitization of villages, face masks & grocery distribution, distribution of PPE kits to health professionals
- Conduct of 800 Medical Health check-up camps with more than 5000 surgeries for eye cataract, family planning and minor surgeries
- Regular health related initiatives in the communities benefitting about 235 villages and more than 2,00000 individuals

Sanitation

- Revival and ensuring operation of Mechanized Solid Waste Management plant at Karsada,Varanasi, UP.
- 50 Nos of Mini Manufacturing units (MMU) for Sanitary Napkin installed in Odisha
- Construction of 360 individual household toilets and 160 community toilets

- Installation of sanitary napkin vending machine and incinerators in more than 40 Govt. schools and colleges.
- Set up of sanitary napkin manufacturing units at NTPC Sipat & Ramagundam with provision of free distribution to the adolescent girls of Govt schools.

Infrastructure strengthening

- Installation of more than 2300 Solar Street Lights in various districts of UP & neighbourhood of NTPC stations
- Installation of 3,2 and 2 mini solar power plants in Telangana, Odisha and UP respectively
- Construction of 28 Community Centres, installation of 180 High Mast Lights Street Lights,
- Construction & repair of about 55 kms of roads in the villages
- Supporting the developmental & beautification works at Charminar Hyderabad, under 'Swachh Iconic places Project' of Govt. of India.

Drinking water

- Installation of more than 500 handpumps at various locations near NTPC operations.
- Installation of about 70 tube wells/ bore wells and 30 RO plants/Water ATMs,
- Supply of water through water tankers to inhabitants near NTPC locations

- Installation of 62 water-harvesting units in 13 villages near NTPC Sipat.
- Rejuvenation of 08 Nos village ponds
- Implementation of piped drinking water schemes in more than 20 villages

Livelihood Generation & vocational Training

- Installation of Energy Efficient Pump System in the fields of farmers in Identified five districts of Uttar Pradesh by government
- Capacity building of Farmers through livelihood support & imparting knowledge of innovative agriculture practices.
- Setting up centres for Integrated Livestock Development benefitting more than 4000 families
- Support for setting up of Skill development and Pachkarma treatment center in New Delhi.

- Adoption of 18 Industrial Training Institutes (ITIs) and is a setting up of 8 new ones to enhance employability
- Memorandum of Understanding (MoU) with National Skill Development Corporation (NSDC) to develop the skills of 30000 youth over a period of 05 years spread in 12 states including 8,000 youth of J&K
- Regular vocational training courses in various trades like Electrical Repairing, Mobile Repairing, Motor Rewinding, Welding, Light Motor Driving including obtaining LMV driving license, computer Training etc conducted for improvement of employability around NTPC stations.

Women Empowerment

- More than 25000 women imparted training in various vocational courses like sewing, beautician, food processing etc

- Tool kits & sewing machines provided to the successful trainees.

Art, Culture & Sports

- Funding Archery Association of India (AAI) for National Ranking Archery Tournaments and National Archery championships.
- Adoption & Promotion of football in the state of Chhattisgarh.
- Various sports events organized in Govt schools in the vicinity of NTPC stations to promote Rural Sports.

Activities for Specially-abled Persons

- Distribution of equipment and appliances to about 260 Specially-abled Persons
- Inclusive education & vocational training to Specially-abled Persons of about 30 villages all across NTPC locations.

Environmental Sustainability

- Installation of 3 Bio Methanation Plants/ Eco man Foodie/ Paper recycling machines
- 5 Solar projects

- Rain Water Harvesting/ Rehabilitation of ponds at 2 locations

Disaster Management

- Substantial support in the relief activities during FANI Cyclone in Odisha.
- Support committed for Redevelopment of Kedarnath town, Uttrakhand and its surrounding areas devastated during natural calamity of 2013.

Resettlement & Rehabilitation (R&R)

We strive to avoid disagreements with our communities and address social issues at the exploratory stage of the projects itself. As a part of our decision-making process, we have developed an R&R policy. Our Resettlement & Rehabilitation (R&R) policy covers community development (CD) activities - which are initiated as soon as a project is conceived. The CD activities are also initiated under ICD (Initial Community Development) Policy. We are sensitive towards the needs and aspirations of the Project affected Persons (PAPs) and have always tried for the best possible R&R package. We have established Public Information Centres/ R&R Offices to disseminate useful information sought by the villagers. Other useful information is also communicated through notices, pamphlets, letters, etc. In last 6 years upto FY 20, Rs. 1625 Cr worth of expenditure were incurred towards Community Development (CD) work for R&R. Land compensation and R&R grants disbursement were in active mode mainly in Darlipali, North Karanpura, Lara, Tanda-II Thermal Power Projects and Pakri- Barwadih, Kerandari, Dulanga and Talaipalli Coal mining projects in FY 2019-20.

Minimizing R&R issues

We proactively try to minimize R&R issues to maximum extent possible at the time of projects exploration itself & other adequate relocation. We redesign and optimize the layouts to avoid acquisition of homesteads to the extent possible and also minimize the need for the acquisition of agricultural land. However, in case the physical displacement becomes absolutely necessary, we remain committed to their adequate relocation and minimization of the transition period and consequent impacts.

Grievance Redressal System

We have a Grievance Redressal System for grievance of PAPs at our projects. We have also set up dedicated R&R groups which operate at Projects, Regional Headquarters and the Corporate Centre. Further grievances are also received through RTI which are answered in time-bound manner. As a result of our efforts, no significant actual and potential negative impacts on local communities were identified/ reported, and no grievances about impacts on society were filed during the reporting period. Further no incidents of violations involving rights of indigenous peoples.

For more details on R&R system, polices and frameworks, NTPC website can be accessed.

R&R Colony at NTPC Darlipali

SUSTAINABILITY REPORTING

Intellectual Capital

Major Highlights of FY20

- 48 number of Patents filed by NTPC
- 10 NABL ISO 17025 accredited Labs under NETRA
- Rs. 202 Crore revenue from consultancy services
- 183.33 Crore expenditure towards R&D

At NTPC, our research and development (R&D) initiatives are in sync with our overall business portfolio. As a leading player in the world energy sector, we recognize the need of adapting to emerging technologies and upgrading the technologies through R&D.

Material Topic(s): [2] [14] [15] [18] [21]

Target SDG(s): [7] [8] [9] [12]

UNGC Principle: [9]

Women in action at NETRA

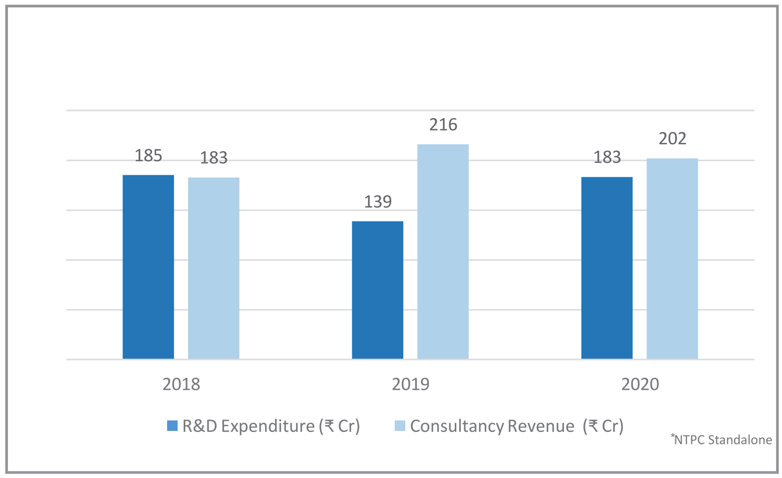
INTELLECTUAL CAPITAL

Related Sustainability Topics

- Quality Management
- New technologies and digitization

Risks Mapping:

- Develop technological solutions for operation of plants at high performance
- Breach of information security



Reference to other frameworks:

- UNGC: 9

Relevant GRI indicators:

305-1, 305-2

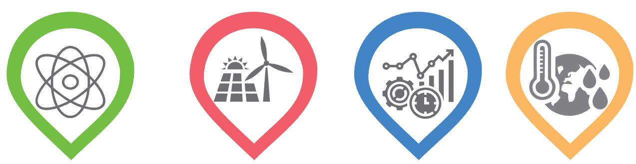
Relevant SDGs:

Research and development

Our research and development (R&D) initiatives are driven by the need of adapting to emerging technologies. NTPC have assigned 1% of PAT for R&D activities focused to address the major concerns of the sector as well as the future technology requirements of the sector.

Towards this direction, we established NTPC Energy Technology Research Alliance (NETRA) in 2009 as state-of-the-art center for research, technology development and scientific services. NETRA collaborates with leading institutes, technology players and service providers both at national and international level. A Research Advisory Council (RAC) comprising of eminent scientists and experts from India and abroad has been constituted to steer NETRA for high end research. In-house Scientific Advisory Council (SAC) has also been constituted to provide directions for improving plant performance & reducing cost of generation

NETRA Focus Area



NETRA laboratories are ISO 17025 accredited and provide high end scientific services to all NTPC stations as well as many other utilities. NETRA NDT laboratory is also recognized as Remnant Life Assessment Organization under the Boiler Board Regulations, 1950. Total number of full time employees posted at NETRA as on date is 63.

R&D Expenditure

S.No	Description	Expenditure in (Rs Crores)	
		2018-19	2019-20*
a)	Capital	87.17	48.97
b)	Revenue	51.42	134.36
c)	Total	138.59	183.33

Collaborations

1. **Academia**

   IIT-Delhi, IIT –Bombay, IIT Madras, IIT –Kanpur, IIT –Kharagpur, IIT Dhanbad , IISc-Bangalore, TERI

2. **Research Institutions**

   NETL-USA, Curtin University-Australia; Newcastle University-Australia, VGB-Germany, DLR / ISE-Germany, NML, CSIR lab's such CMERI, CGCRI, NCCBM, CPRI, CBRI Roorkee

3. **Industry Association**

   ONGC, IOCL, BHEL, IGCAR

NTPC NETRA

Patents and Copyrights

a) **Total number of Patents filed by NTPC: 48**

   Number of Granted Patents: 19

   Patents under process of Grant: 29

b) **Total Number of Copyrights in the name of NTPC Ltd.: 09**

   Number of Granted Copyrights: 07

   Copyrights under process of Grant: 02

Major projects completed:

Water Technology:

1. 120 TPD Solar Water Desalination plant at NTECL-Vallur.
2. Pilot project for Adiabatic Cooling Tower at NETRA
3. Mauda St-I Cooling Tower performance improvement
4. Study for effectiveness of Nano-Silver H2O2 Biocide treatment at Tanda

Ash-Technology:

1. Construction of M40 grade Geo-polymer road at NTPC Ramagundam and NTPC Farakka
2. Bottom Ash as Replacement of Fine Aggregate (sand) in Cement Concrete: Data Submitted to BIS for codification
3. Development of Fly ash based Geopolymer mortar
4. Development of Fly ash based Geopolymer Tetrapod and paver blocks

Renewables:

1. 1MW Floating Solar PV plant at Kawas commissioned (With in house designed and developed Floaters)
2. Installation and commissioning of Solar Thermal Hybrid Plant at Dadri
3. 30 kWp DC Microgrid pilot at NETRA

Efficiency and other areas:

1. Development of Robotic System for Remote Visual Inspection of Boiler Headers
2. In-situ Non-destructive assessment of Post Weld Heat Treatment Quality of T-91 tubes
3. Online Transformer Asset Health Monitoring System
4. Ultrasonic Testing based Hydrogen damage assessment of Boiler Tubes

5. Installation of Fiber Bragg Grating based Fiber Optic Sensor for Vibration Measurement of generator end winding at Korba and for Temperature Measurement in APH at Dadri
6. Development of design guide by experimentation in pilot plant for Pneumatic Ash Conveying system:
7. Methodology for identification of secondary (used) CRGO strips using electromagnetic sensor
8. Completion of 13 no. of AUSC-R&D Projects

Major Ongoing Projects:

Carbon capture and Utilization

1. 10 TPD 'CO2 to Methanol' Demonstration Plant with Indigenous development of Catalyst & Reactor for conversion of CO2 to Methanol in parallel

Hydrogen

1. Exploration of Sea Water Electrolysis
2. Blue Sky' Technology for Hydrogen Production: Development of Lab scale Reactor for production of Hydrogen through Photo-Electro-chemical process

Water Technology

1. Electro-Coagulation & Dissolved Air Floatation (EC-DAF) System at Mauda
2. 240 TPD Non Thermal FO based high recovery system

Ash-Technology

1. Development of Fly Ash based Controlled Low Strength Material (CLSM)
2. Light Weight Aggregate (LWA) Plant at Sipat
3. Geo-polymeric concrete Roads at various stations
4. Development of Green Cement
5. Fly Ash to coarse aggregate

Efficiency and other areas:

1. Flexibilization project for Reducing Technical Minimum to 40% for U#6 Dadri (2nd Phase)
2. Development of technology for Detection & Quantification of Exfoliation of Boiler Tube using Magnetic Coercive Force (MCF) and Ultrasonic Method
3. Development of underwater robotic system for inspection of CT basin, CW channel, CW Pump and fore bay
4. Preparation of Nano N- doped Graphene at NETRA for lubricating oil of ID fan at NTPC station to reduce power consumption
5. Phase Change Material Based Thermal Energy System
6. Development of sensor for Ash Level Measurement
7. Online measurement of Moisture in transformer oil

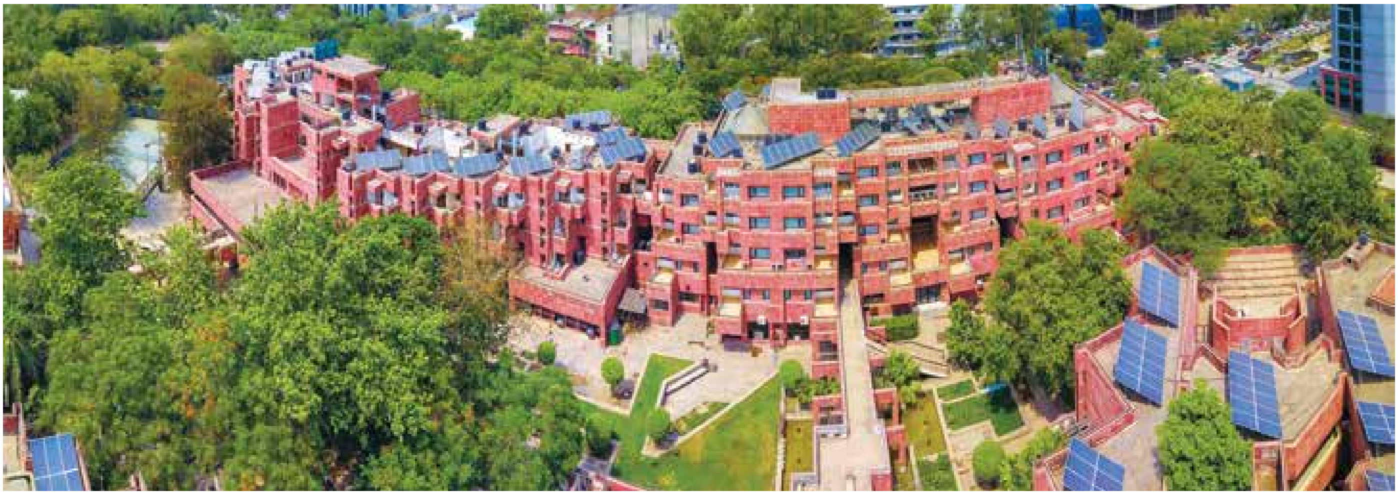
Apart from various projects NETRA also provides advanced scientific support to NTPC Stations and outside power utilities in various areas such as Non-Destructive Evaluation and Imaging, Metallurgy & Failure Analysis, CFD Services for process improvement Transformer, Generator Health, Creep & fatigue analysis, Corrosion & Water Chemistry, Coal & Combustion and Environment, etc.

Various activities such as Workshop on Applied robotics in Power plant, ESP Efficiency Improvement using CFD modeling were conducted by NETRA in reporting year. NETRA Meet was conducted for the very first time in NTPC to promote synergy between R&D Centre and NTPC stations. NTPC Innovation scheme was also launched to foster R&D activities in NTPC. Capacity Building Training on Concentrated Solar Thermal (CST) was also done under the MOU on Indo-German R&D cooperation on clean energy technologies. Five books were also published in addition to various research papers.

Our Learning & Development Centre

NTPC runs a state-of-the-art Power Management Institute (PMI), an apex learning and development (L&D) centre, at NOIDA. The L&D centre of NTPC, is actively engaged in making our people future ready in terms of technology, business acumen and leadership. PMI also delivers programmes to Power Sector companies in the Gulf Counties at their locations and participants from South Asia, Gulf and African countries come to PMI for attending programmes.

NTPC NETRA



NTPC PMI

PMI has the state-of-the-art physical and digital infrastructure to impart learning in world class ambience. The classrooms are equipped with modern facilities including smart boards, video conferencing and session-recording which supports contemporary pedagogy. PMI has covered 4,000 executives in management learning through HMM and 1000 in the power plant technical skills domain by licenses from General Physics (GPiLearn).

Various in-house e-platforms has been launched to provide access to diverse e-Learning resources to complement the learning to meet the unique learning needs across demographic spectrum of generations engaged at work place. An e-library of 25,000 e-books, 1,000,000 articles, reports and journals supports employees' knowledge up-gradation.

The L&D interventions are designed after a multidimensional 'Training Need Analysis' (TNA) for enhancing technical, functional, strategic and leadership skills with focus on business objectives of the Company.

At NTPC, we are aware of pivotal role of effective leadership and to ensure continuity in leadership pipeline, 379 middle level executives were given rigorous inputs under 2 weeks strategic leadership development program (10X). The program is designed to equip the participants with ten strategic competencies to enable them to take leadership roles and strategic positions in the days to come.

We have aspiration of global growth and are conscious of the fact that the emerging business complexities would need global mindset and competence to lead across.

Further, NTPC promotes NTPC Education and Research society (NEARS) under which NTPC School of Business (NSB) provided two AICTE approved programmes namely, "Post Graduate Diploma in Management' (Executive) and 'Post Graduate Diploma in Management'(Energy Management) with academic support from IIM, Ahmedabad. The courses are designed to focus on energy management consolidates to deliver knowledge centered and value added academic and research enrichment services for sustainable development of Indian economy.

Our Consultancy Services:

NTPC Consultancy offers services "From Concept to Commissioning and beyond" and undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants. It is accredited with an ISO 9001:2008 certification and projects are related to engineering, project management, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Our Consultancy unit is comprised of vast pool of technically qualified and managerial manpower and are well supported by excellent infrastructure and knowledge management facilities to deliver our client, qualitative and cost effective solutions in line with global standards. We have been providing services in India as well as in countries like Bangladesh, Nepal, Sri Lanka, Bhutan, Myanmar and Gulf countries.

In the international arena NTPC Consultancy is providing PMC services for Solar Power Project in Dalwak in Dapaong (33 MWp) and Solar Park in Mango in Savanes Region, Govt. of Togo. At the domestic front, NTPC Consultancy is providing Project Management Consultancy (PMC) for implementation of 2X660MW Khurja STPP to THDC. It is also providing PMC for 2X660MW Buxar TPP of SJVN.

Presently, NTPC consultancy is associated with a capacity of around 29,100 MW for its clients. In FY 20, NTPC Consultancy received orders of Rs 285.79 Cr and generated revenue of Rs. 202 Cr.

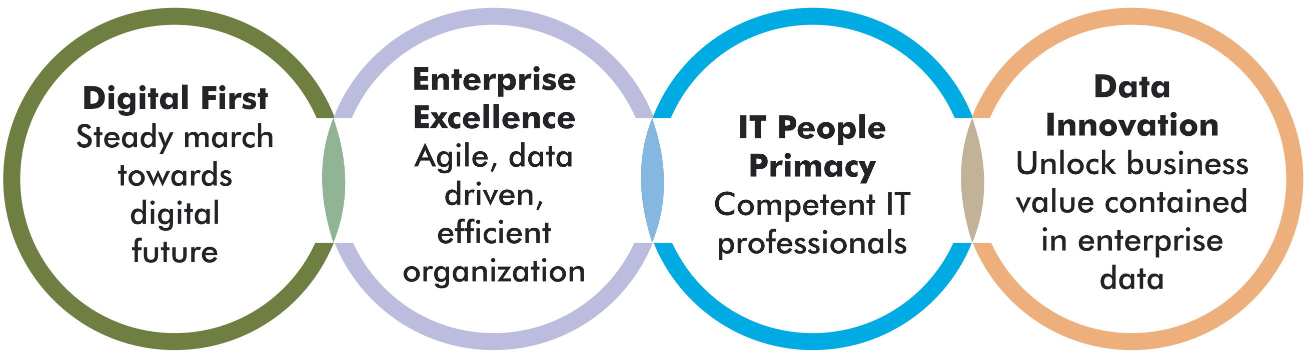
NTPC Consultancy is registered as a consultant with several leading international development and financial institutions such as The World Bank, The Asian Development Bank, The African Development

SUSTAINABILITY REPORTING

Digital Initiative at NTPC

NTPC recognizes the fact that digitalization and AI is pivotal to its business model, to strengthen its current system and provide new revenue and value-producing opportunities given the uncertainties and dynamisms in power sector. NTPC has developed its IT strategy focused on four strategic theme in line with its Corporate Plan-2032. This has been done to align NTPC IT with the emerging IT trends amid increasing influence of digitalization in power sector.

Information security /cybersecurity strategy and policies approved by the management have been implemented at all locations. A well documented BCP (Business continuity Plan) is in place to ensure business continuity of organisation. Data Centre (DC) is operational at NOIDA and Disaster Recovery Centre (DRC) is operational at Hyderabad. NTPC's data centers at Noida and Hyderabad are ISO 27001 certified for security compliance. Asynch data replication is being carried out between the both data



Strategic Themes

centres with a permissible RPO of 15 Mins. DR, Hyderabad is 100% replica of DC,Noida with full redundancy. Switch over / switch back of SAP operations from DC to DRC carried out periodically as a preparedness to ensure business continuity in case of contingency. Once in a year the drill of switch over / switch back drill is carried out. The company has not experienced breaches of information security or other cybersecurity incidents over the past three years.

Expenditure on IT/ Digitalisation

	FY 2018-19	FY 2019-20
Expenditure	Rs. 68 lacs	Rs. 200 Cr

Our IT Strategy aims to achieve 100% Paperless Office, Data Analytics for decision making, induction of new technology such as IIOT, AI, Machine learning etc. over next 2 years.

Further, in line with the "Digital India" initiative of GoI, NTPC has taken measures towards digitization by implementation of various initiatives like:

1. Digitization – Successful implementation of "Project PRADIP" for digitization of documents and paperless processes. This initiative has not only helped us in saving tons of paper but also resulted in faster decision making, transparency and improved efficiency.
2. ERP – Implemented Enterprise Resource Planning (ERP) application to integrate all our business functions. SAP R/3 ERP system has been implemented for all business areas of NTPC encompassing i.e.... Material Management, Sales & Distribution, Plant Maintenance, Project Systems, Finance & Controlling, Human Resource, Production Planning, Quality Management, ISU , BI (Business Intelligence), Solution Manager, Basis, ABAP. This is the life line of NTPC business system.
3. Non-ERP web based applications have been developed for areas such as Engineering Drawings approval, Quality Control Management, Hospital Management, Labour Management, Transit Camp Management, RTI, Security Control etc.
4. Security –A 24x7 Security Operation Centre (SOC) is in operation to monitor all external and internal data traffic using latest tools through SOC and latest threat management tools to prevent any cyber-attack or data theft.
5. As part of virtual office, employees are increasingly enabled to work from anywhere
6. IT & OT integration – OSI PI System (Data Historian) has been implemented as a bridge between the IT and OT systems to enable generation & process data analysis for business decisions.
7. Various web and mobile based applications and have been launched by us such as Coal Monitoring Portal, Ash Management Portal, CPSE Conclave action points monitoring portal etc. to take care of requirements of various internal departments and Ministry of Power.

Awards And Achievements

NTPC wins CII-ITC Sustainability Awards 2019

NTPC won the prestigious CII-ITC Sustainability Award 2019 and was honoured with Outstanding Accomplishment in the Corporate Excellence Category, wherein assessment is done at company level. Also, the company received Commendation for Significant Achievement in the Domain Excellence category of Corporate Social Responsibility. The recognition has been bestowed on NTPC by CII-ITC Centre of Excellence for Sustainable Development at the 14th CII-ITC Sustainability Awards 2019.

NTPC awarded in ATD Global BEST Award 2020

NTPC has been selected as a 2020 ATD BEST award winner by The Association for Talent Development (ATD), USA. The award recognizes employee talent development practices that affect enterprise-wide success. NTPC has bagged this award for the 4th time in succession.

Best Performing Power Generation Company Award to NTPC

General (retd.) Dr. V.K. Singh, Union Minister of State for Road Transport and Highways, GOI presented the Best Performing Power Generation Company Award to NTPC at the Dun & Bradstreet Infra 2019 Awards

NTPC has been ranked 14 in 2019 "Great Place to Work"

NTPC has been ranked 14 in 2019 "Great Place to Work" rankings for India. NTPC is also ranked best in the PSU category and among organization with more than 10,000 employees category. NTPC constantly feature in the list for 11 years in a row.

Awards And Achievements

NTPC Corporate CSR department and Farakka conferred with FAME Best CSR Award 2019

NTPC has been conferred with “FAME Best CSR Award 2019” in Diamond Category for Excellence in Best Innovative CSR Project on 2nd June 2019.

NTPC Farakka also bagged the FAME CSR Award 2019 in Diamond category for its remarkable achievement in the field of CSR.

NTPC was adjudged winner of 14th edition of the BML Munjal Awards

NTPC along with TCS was adjudged winner of 14th edition of the BML Munjal Awards in the Sustained Excellence category in New Delhi. The award was given for Sustained Business Excellence through best Learning and Development practices.

NTPC Faridabad awarded with National Safety Award

NTPC Faridabad has been awarded RUNNER-UP for Prestigious National Safety Award- 2017 for Accident Free Year by DGFASLI, Ministry of Labour and Employment, GOI.

NTPC wins double honor at the Governance Now 7th PSU Awards

NTPC won 2 awards i.e. ‘Employee Productivity (Financial Category)’ and ‘Digital PSU (Non-Financial Category)’ awards at the Governance Now 7th PSU Awards. The Governance Now 7th PSU Awards honour the efforts of Public Sector Undertakings (PSUs) that have been key to the country’s growth.

SUSTAINABILITY REPORTING

Annexure-1: Policies and systems

No.	Policies/ System	Web Link
Director (Finance)		
1.	Code of Conduct	https://www.ntpc.co.in/investors/code-of-conduct
2.	Fraud Prevention Policy	http://www.ntpctender.com/about/FraudPolicy.asp
3.	Whistle Blower Policy	https://www.ntpc.co.in/sites/default/files/downloads/ WhistleBlowerPolicy.pdf
4.	Internal Code of Conduct for prevention of insider trading	https://www.ntpc.co.in/download/internal-code-conduct-prevention-insider-trading-dealing-securities-ntpc-limited
5.	Code of Corporate Fair Disclosure Practices for prevention of insider trading	https://www.ntpc.co.in/download/code-corporate-fair-disclosure-practicces-prevention-insider-trading
6.	Related Party Transaction Policy	https://www.ntpc.co.in/download/related-party-transaction-policy-ntpc
7.	Policy for determination of materiality of events or information for disclosure	https://www.ntpc.co.in/sites/default/files/downloads/ NTPCPolicyForDeterminationofMaterialityofevents.pdf
8.	Policy on maintenance & preservation of documents	https://www.ntpc.co.in/sites/default/files/DocumentPreservationPolicy.pdf
9.	Policy for determining Material Subsidiaries	https://www.ntpc.co.in/download/policy-determining-material
10	Dividend Distribution Policy	https://www.ntpc.co.in/sites/default/files/downloads/ DividentDistributionPolicyofNTPCLimited.pdf
Director (HR)		
11.	CDA Rules	Policy manual available on NTPC Intranet
12.	Training Policy for Directors of NTPC	https://www.ntpc.co.in/download/training-policy-director-ntpc
13.	Human Right Policy	Policy available on NTPC Intranet
14.	Placement and Transfer Policy	Policy manual available on NTPC Intranet
15.	R&R Policy	https://www.ntpc.co.in/en/corporate-citizenship/r-and-r-policies
16.	Initial Community Development Policy	https://www.ntpc.co.in/edownload/initial-communitydevelopment policy-2009
17.	Policy for CSR and Sustainability	https://www.ntpc.co.in/download/ntpc-policy-csr-sustainability
18.	Career Development Policy	https://www.ntpc.co.in/en/careers/career-growth-opportunities
Director (Operations)		
19.	Safety Policy	https://www.ntpc.co.in/en/sustainability/health-and-safety
20.	Environment Policy	https://www.ntpc.co.in/en/environment/environment-policy-andmanagement
21.	Water Policy	https://www.ntpc.co.in/sustainability.report-policies/7312/ntpc-water-policy-2017
22.	Ash Policy 2015	https://www.ntpc.co.in/sites/default/files/downloads/AshPolicy2015.pdf
Director (Technical)		
23.	Biodiversity Policy	https://www.ntpc.co.in/sites/downloads/biodiversitypolicy2018.pdf
24.	Rain Water Harvesting Policy	https://www.ntpc.co.in/sites/default/files/downloads/NTPCRainWaterHarvestingPolicy2018-pdf
Director (Comml.)		
25.	Commercial systems & Procedures	https://www.ntpc.co.in/sites/default/files/downloads/procurementandworkpolicy.pdf

Annexure-2: Corporate Membership with National & International Organisations

Aspects	Organisation Name
Safety	1. British Safety Council
	2. Institute of Fire Engineers
	3. National Safety Council
	4. National Safety Council, USA
Industry Association	5. Confederation of India Industry (CII)
	6. Delhi Productivity Council (DPC)
	7. Federation of Indian Chambers of Commerce & Industry (FICCI)
	8. Foundation of Restoration of National Values
	9. Institute of Company Secretary of India (ICSI)
	10. Institute of Internal Auditors
Human Resource	11. Power HR Forum
	12. Power Sector Skill Council
	13. The Foreign Correspondent's Club of South Asia
	14. Strategic Human Resource Management (SHRM), USA
Infrastructure	15.India Infrastructure Forum
	16. South Asia Forum for Infrastructure Regulation (SAFIR)
Society & Environment	17. United Nation Global Compact (UNGC)
	18. TERI Council for Business Sustainability (CBS)
	19. India Business and Biodiversity Initiatives (IBBI)
Energy	20. Central Board of Irrigation & Power (CBIP)
	21. Electric Power Research Institute (EPRI), USA
	22. Energy Transit on Commission India (ETC), India
	23. Indian Federation of Green Energy
	24. International Conference on Large High Voltage Electric System (CIGRE)
	25. The Energy and Resources Institute (TERI)
	26. World Energy Council (WEC)
	27. Central Mechanical Engineering Research Institute (CSIR)
	28. Council of Power Utilities
	29. Excellence Enhancement Centre, EEC
	30. National Accreditation Board for T&C Laboratories
	31. The American Society for Non destructive Testing
Mining	32. The Mining, Geological & Metallurgical Institute of India

KPMG Assurance and Consulting Services LLP
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DLF Cyber City, Phase - II
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Independent Assurance Statement to NTPC Limited on their non-financial disclosures in the Integrated Report for Financial Year 2019-20

To,

The Management of NTPC Limited,
NTPC Bhawan,
Scope Complex 7, Institutional Area,
Lodhi Road, New Delhi – 110003

Introduction

We ('KPMG Assurance and Consulting Services LLP', or 'KPMG') have been engaged by NTPC Limited ('NTPC' or 'the Company') for the purpose of providing an independent assurance on non-financial disclosures in the Integrated Report ('the Report') for the reporting period from 1st April 2019 to 31st March 2020 ("the Year or the Reporting Period"). Our responsibility was to provide reasonable assurance on select non-financial disclosures as described in the scope, boundary and limitations.

Reporting Criteria

NTPC has developed its report based on the applicable accounting standards and has incorporated the principles of the International Integrated Reporting Framework (<IR>) published by the International Integrated Reporting Council (IIRC), into the Integrated Report.

In addition to the <IR> Framework, non-financial reporting criteria has been derived by the management of NTPC from the GRI Standards of the Global Reporting Initiative.

Assurance Standards Used

We conducted our assurance in accordance with:

- Assurance requirements of International Federation of Accountants' (IFAC) International Standard on Assurance Engagement (ISAE) 3000 (Revised) - Assurance Engagements Other than Audits or Reviews of Historical Financial Information.
    - Under this standard, we have reviewed the information presented in the Report against the characteristics of relevance, completeness, reliability, neutrality and understandability.
    - Reasonable assurance is a high level of assurance but, it is not a guarantee that it will always detect a material misstatement when it exists

Scope, Boundary and Limitations

The boundary of assurance covers the non-financial performance of all NTPC and NTPC – Joint Venture subsidiaries in India.

KPMG

KPMG Assurance and Consulting Services LLP
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DLF Cyber City, Phase - II
Gurugram - 122 002 (India)

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Fax: +91 124 336 9001
Internet: www.kpmg.com/in

The assurance process was limited to the non-financial disclosures covering the period 1 April 2019 to 31 March 2020 in the Report

Review of sample data and related information was done using a desktop sharing tool with the following locations:

Selected NTPC Plants

- Faridabad, Haryana
- Jhajjar, Haryana
- Dadri, Uttar Pradesh

Review of data on a sample basis, at the above-mentioned locations, pertaining to the following General Disclosures and Specific Disclosures of the GRI Standards:

General Disclosures:

- Organizational Profile (102-1 to 102-13)
- Strategy (102-14, 102-15)
- Ethics and Integrity (102-16, 102-17)
- Governance (102-18 to 102-39)
- Stakeholder Engagement (102-40 to 102-44)
- Reporting Practice (102-45 to 102-56)

Management Approach: 103-1 to 103-3

Specific Disclosures:

- Environmental Topics:
  - Materials (301-1)
  - Energy (302-1 to 302-5)
  - Water and effluents (303-1 to 303-5)
  - Biodiversity (304-1)
  - Emissions (305-1,305-2, 305-4, 305-6, 305-7)
  - Effluents and Waste (306-1 to 306-5)

- Social Topics:
  - Employment (401-1, 401-3)
  - Labour Management Relations (402-1)
  - Occupational Health and Safety (403-1 to 403-10)
  - Training and Education (404-1 to 404-3)
  - Diversity and Equal Opportunity (405-1 to 405-2)
  - Non-discrimination (406-1)
  - Freedom of Association and Collective Bargaining (407-1)
  - Child Labour (408-1)
  - Forced of Compulsory Labour (409-1)
  - Security Practices (410-1)
  - Rights of Indigenous People (411-1)
  - Human Rights Assessment (412-1 to 412-3)
  - Local Communities (413-1 to 413-2)
  - Customer Health and Safety (416-1 to 416-2)

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Limitations

The assurance scope excludes the following:

- Data related to Company's financial performance.
- Data and information outside the defined reporting period.
- The Company's statements that describe expression of opinion, belief, aspiration, expectation, aim to future intention provided by the Company and assertions related to Intellectual Property Rights and other competitive issues.
- Data review outside the operational sites as mentioned in the boundary above.
- Strategy and other related linkages expressed in the Report.
- Mapping of the Report with other reporting frameworks.
- Aspects of the Report other than those mentioned under the scope above.

The above non-financial disclosures may have inherent limitations owing to the nature of disclosures as well as the methodologies used for measuring, calculating and/or estimating these disclosures. The accuracy of measurement methods, changes in criteria for measurement and individual judgment may impact the comparability of data

Assurance Procedures

Our assurance process involved performing procedures to obtain evidence about the reliability of specified disclosures. The nature, timing and extent of procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the selected sustainability disclosures whether due to fraud or error. In making those risk assessments, we have considered internal controls relevant to the preparation of the Report in order to design assurance procedures that are appropriate in the circumstances.

Our assurance procedures also included:

- Assessment of NTPC's reporting procedures, as defined by NTPC's management in reference to the reporting criteria.
- Review of systems, processes, as well as internal and external controls.
- Review of records and testing, including re-calculation, of sample data to establish an assurance trail with increased sample size.
- Evaluating the appropriateness of the quantification methods used to arrive at the non-financial disclosures presented in the Report.
- Review of systems and procedures used for quantification, collation, and analysis of non-financial disclosures included in the Report.
- Understanding the appropriateness of various assumptions, estimations and materiality thresholds used by NTPC for data analysis.
- Discussions with the personnel responsible for the evaluation of competence required to ensure reliability of data and information presented in the Report.
- Assessment of data reliability and accuracy

KPMG Assurance and Consulting Services LLP, an Indian limited liability partnership and a member firm of the KPMG network of independent member firms affiliated with KPMG International Cooperative ("KPMG International"), a Swiss entity

KPMG (Registered) (a partnership firm with Registration No. BA-62445) converted into KPMG Assurance and Consulting Services LLP (a Limited Liability Partnership with LLP Registration No. AAT-0367), with effect from July 23, 2020

Registered Office: Lodha Excelus, 1st Floor Apollo Mills Compound,N. M. Joshi Marg, Mahalaxmi, Mumbai - 400 011

KPMG

KPMG Assurance and Consulting Services LLP
Building No. 10, 4th Floor, Tower-C
DLF Cyber City, Phase - II
Gurugram - 122 002 (India)

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Fax: +91 124 336 9001
Internet: www.kpmg.com/in

- The reviews of the following selected sample sites were carried out remotely with the help of screen sharing tools.

Conclusions

We have reviewed the selected disclosures in the Integrated Report of NTPC Limited for the FY 2019-20. Based on our review and procedures performed and in line with the boundary, scope and limitations as described above, we conclude that

- Selected non-financial disclosures which have been subjected to reasonable assurance procedures as defined under scope of assurance, are fairly stated, in all material aspects, and are in alignment with the reporting criteria.
- Data representation and calculation related errors were detected but the same were resolved during the assurance process. We have provided our observations to the Company in a separate management letter. These, do not, however, affect our conclusions regarding the Report.

Independence

The assurance was conducted by a multidisciplinary team including professionals with suitable skills and experience in auditing environmental, social and economic information in as per requirements of ISAE 3000 (Revised) standard.

Our work was performed in compliance with the requirements of the IFAC Code of Ethics for Professional Accountants, which requires, among other requirements, that the members of the assurance team (practitioners) be independent of the assurance client, in relation to the scope of this assurance engagement, including not being involved in writing the Report. The Code also includes detailed requirements for practitioners regarding integrity, objectivity, professional competence and due care, confidentiality and professional behaviour. KPMG has systems and processes in place to monitor compliance with the Code and to prevent conflicts regarding independence. The firm applies ISQC 1 and the practitioner complies with the applicable independence and other ethical requirements of the IESBA code.

Responsibilities

NTPC Limited is responsible for developing the Report contents. The Company is also responsible for identification of material sustainability topics, establishing and maintaining appropriate performance management and internal control systems and derivation of performance data reported. This statement is made solely to the Management of NTPC Limited in accordance with the terms of our engagement and as per scope of assurance. Our work has been undertaken so that we might state to the Company those matters for which we have been engaged to state in this statement and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company for our work, for this report, or for the conclusions expressed in this independent assurance

KPMG Assurance and Consulting Services LLP
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statement. The assurance engagement is based on the assumption that the data and information provided to us is complete and true. We expressly disclaim any liability or co-responsibility for any decision a person or entity would make based on this assurance statement. Our report is released to NTPC Limited on the basis that it shall not be copied, referred to or disclosed, in whole or in part, without our prior written consent. By reading this assurance statement, stakeholders acknowledge and agree to the limitations and disclaimers mentioned above.

Manpreet Singh
Partner
KPMG Assurance and Consulting Services LLP (August 07, 2020)

STANDALONE BALANCE SHEET AS AT 31 MARCH 2020

₹ Crore

Particulars	Note No.	As at 31 March 2020	As at 31 March 2019
ASSETS			
Non-current assets			
Property, plant and equipment	2	**1,56,273.02**	1,25,290.68
Capital work-in-progress	3	**73,066.76**	90,808.89
Intangible assets	4	**538.28**	329.94
Intangible assets under development	5	**292.52**	397.80
Financial assets			
Investments in subsidiary and joint venture companies	6	**26,350.61**	13,054.02
Other investments	7	**50.28**	91.92
Loans	8	**600.26**	544.38
Other financial assets	9	**1,425.16**	1,424.29
Other non-current assets	10	**11,122.62**	13,269.30
Total non-current assets		**2,69,719.51**	2,45,211.22
Current assets			
Inventories	11	**10,731.86**	7,988.02
Financial assets			
Trade receivables	12	**15,668.11**	8,433.86
Cash and cash equivalents	13	**20.37**	24.38
Bank balances other than cash and cash equivalents	14	**2,188.74**	2,119.96
Loans	15	**308.56**	305.79
Other financial assets	16	**11,529.13**	8,331.84
Other current assets	17	**8,378.41**	14,929.89
Total current assets		**48,825.18**	42,133.74
Regulatory deferral account debit balances	18	**9,122.76**	3,406.00
TOTAL ASSETS		**3,27,667.45**	2,90,750.96
EQUITY AND LIABILITIES			
Equity			
Equity share capital	19	**9,894.56**	9,894.56
Other equity	20	**1,03,674.88**	97,513.61
Total equity		**1,13,569.44**	1,07,408.17
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	21	**1,46,538.70**	1,19,698.08
Trade payables	22		
Total outstanding dues of micro and small enterprises		**10.35**	6.41
Total outstanding dues of creditors other than micro and small enterprises		**57.66**	41.76
Other financial liabilities	23	**652.24**	1,314.29
Provisions	24	**635.69**	588.74
Deferred tax liabilities (net)	25	**8,093.98**	4,200.14
Total non-current liabilities		**1,55,988.62**	1,25,849.42

STANDALONE BALANCE SHEET AS AT 31 MARCH 2020

₹ Crore

Particulars	Note No.	As at 31 March 2020	As at 31 March 2019
Current liabilities			
Financial liabilities			
Borrowings	26	**14,049.36**	15,376.09
Trade payables	27		
Total outstanding dues of micro and small enterprises		**495.70**	353.41
Total outstanding dues of creditors other than micro and small enterprises		**8,504.93**	7,197.53
Other financial liabilities	28	**23,715.74**	24,902.27
Other current liabilities	29	**1,270.90**	684.34
Provisions	30	**6,830.22**	6,840.36
Total current liabilities		**54,866.85**	55,354.00
Deferred revenue	31	**3,242.54**	2,139.37
TOTAL EQUITY AND LIABILITIES		**3,27,667.45**	2,90,750.96

Significant accounting policies 1

The accompanying notes 1 to 70 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Balance Sheet referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S.K.Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place:Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

STANDALONE STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2020

₹ Crore

Particulars	Note No.	For the year ended 31 March 2020	For the year ended 31 March 2019
Income			
Revenue from operations	32	**97,700.39**	90,307.43
Other income	33	**2,778.02**	1,872.13
Total income		**1,00,478.41**	92,179.56
Expenses			
Fuel cost	34	**54,241.82**	52,493.74
Electricity purchased for trading		**2,776.44**	2,713.68
Employee benefits expense	35	**4,925.60**	4,779.89
Finance costs	36	**6,781.97**	4,716.74
Depreciation and amortization expenses	37	**8,622.85**	7,254.36
Other expenses	38	**8,663.81**	7,548.63
Total expenses		**86,012.49**	79,507.04
Profit before tax and regulatory deferral account balances		**14,465.92**	12,672.52
Tax expense	49		
Current tax			
Current year		**2,493.29**	2,955.00
Earlier years		**2,660.17**	(105.88)
Deferred tax		**4,028.49**	(5,767.83)
Total tax expense		**9,181.95**	(2,918.71)
Profit before regulatory deferral account balances		**5,283.97**	15,591.23
Net movement in regulatory deferral account balances (net of tax)	64	**4,828.84**	(3,841.34)
Profit for the year		**10,112.81**	11,749.89
Other comprehensive income			
Items that will not be reclassified to profit or loss			
Net actuarial gains/(losses) on defined benefit plans		**(346.04)**	(235.98)
Net gains/(losses) on fair value of equity instruments		**(41.64)**	(16.74)
		(387.68)	(252.72)
Income tax on items that will not be reclassfied to profit or loss	49		
Net actuarial gains/(losses) on defined benefit plans		**60.46**	50.85
Other comprehensive income for the year, net of income tax		**(327.22)**	(201.87)
Total comprehensive income for the year		**9,785.59**	11,548.02

₹ Crore

Particulars	Note No.	For the year ended 31 March 2020	For the year ended 31 March 2019
Earnings per equity share (Par value ₹ 10/- each)	55		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**10.22**	11.88
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**5.34**	15.76

Significant accounting policies 1

The accompanying notes 1 to 70 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S.K.Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

STANDALONE STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2020

(A) Equity share capital
For the year ended 31 March 2020

₹ Crore

Particulars	**Amount**
Balance as at 1 April 2019	**9,894.56**
Changes in equity share capital during the year	-
Balance as at 31 March 2020	**9,894.56**

For the year ended 31 March 2019

₹ Crore

Particulars	Amount
Balance as at 1 April 2018	8,245.46
Changes in equity share capital during the year (refer Note 19)	1,649.10
Balance as at 31 March 2019	9,894.56

(B) Other Equity
For the year ended 31 March 2020

₹ Crore

Particulars	**Reserves & surplus**						**Equity instruments through OCI**	**Total**
	Capital reserve	**Securities premium**	**Bonds/ Debentures redemption reserve**	**Fly ash utilisation reserve fund**	**General reserve**	**Retained earnings**		
Balance as at 1 April 2019	50.08	2,228.46	7,902.43	636.63	83,682.53	3,022.42	(8.94)	**97,513.61**
Profit for the year	-	-	-	-	-	10,112.81	-	**10,112.81**
Other comprehensive income	-	-	-	-	-	(285.58)	(41.64)	**(327.22)**
Total comprehensive income	-	-	-	-	-	**9,827.23**	**(41.64)**	**9,785.59**
Transfer to retained earnings	-	-	(891.00)	-	-	891.00	-	-
Transfer from retained earnings	-	-	-	-	6,500.00	(6,500.00)	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 20)	-	-	-	(48.15)	-	-	-	**(48.15)**
Final dividend paid for FY 2018-19 (Note 20)	-	-	-	-	-	(2,473.64)	-	**(2,473.64)**
Tax on final dividend	-	-	-	-	-	(506.62)	-	**(506.62)**
Interim dividend paid for FY 2019-20 (Note 20)	-	-	-	-	-	(494.73)	-	**(494.73)**
Tax on interim dividend	-	-	-	-	-	(101.18)	-	**(101.18)**
Balance as at 31 March 2020	**50.08**	**2,228.46**	**7,011.43**	**588.48**	**90,182.53**	**3,664.48**	**(50.58)**	**1,03,674.88**

For the year ended 31 March 2019

₹ Crore

Particulars	Reserves & surplus						Equity instruments through OCI	Total
	Capital reserve	Securities premium	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	General reserve	Retained earnings		
Balance as at 1 April 2018	50.08	2,228.46	7,274.56	631.21	80,831.63	2,508.57	7.80	93,532.31
Profit for the year	-	-	-	-	-	11,749.89	-	11,749.89
Other comprehensive income	-	-	-	-	-	(185.13)	(16.74)	(201.87)
Total comprehensive income	-	-	-	-	-	11,564.76	(16.74)	11,548.02
Transfer to retained earnings	-	-	(1,104.50)	-	-	1,104.50	-	-
Transfer from retained earnings	-	-	1,732.37	-	4,500.00	(6,232.37)	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 20)	-	-	-	5.42	-	-	-	5.42
Issue of bonus shares (Note 20)	-	-	-	-	(1,649.10)	-	-	(1,649.10)
Final dividend paid for FY 2017-18 (Note 20)	-	-	-	-	-	(1,970.67)	-	(1,970.67)
Tax on final dividend	-	-	-	-	-	(400.96)	-	(400.96)
Interim dividend paid for FY 2018-19 (Note 20)	-	-	-	-	-	(2,951.88)	-	(2,951.88)
Tax on interim dividend	-	-	-	-	-	(599.53)	-	(599.53)
Balance as at 31 March 2019	50.08	2,228.46	7,902.43	636.63	83,682.53	3,022.42	(8.94)	97,513.61

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S.K.Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place : Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

STANDALONE STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2020

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit before tax		**14,465.92**	12,672.52
Add: Net movements in regulatory deferral account balances (net of tax)		**4,828.84**	(3,841.34)
Add: Tax on net movements in regulatory deferral account balances		**1,022.31**	(1,055.13)
Profit before tax including movements in regulatory deferral account balances		**20,317.07**	7,776.05
Adjustment for:			
Depreciation and amortisation expense	**8,622.85**		7,254.36
Provisions	**265.73**		1,150.07
Deferred revenue on account of advance against depreciation	**-**		(74.35)
Deferred revenue on account of government grants	**33.07**		(39.03)
Deferred foreign currency fluctuation asset	**(1,033.89)**		(251.53)
Deferred income from foreign currency fluctuation	**1,289.12**		371.78
Regulatory deferral account debit balances	**(5,851.15)**		4,896.47
Fly ash utilisation reserve fund	**(48.15)**		5.42
Exchange differences on translation of foreign currency cash and cash equivalents	**0.03**		0.01
Finance costs	**6,730.26**		4,699.00
Unwinding of discount on vendor liabilities	**51.71**		17.74
Interest/income on term deposits/bonds/investments	**(53.22)**		(67.65)
Dividend income	**(210.40)**		(124.19)
Provisions written back	**(471.04)**		(316.22)
Profit on de-recognition of property, plant and equipment	**(12.25)**		(2.72)
Loss on de-recognition of property, plant and equipment	**59.96**		173.84
		9,372.63	17,693.00
Operating profit before working capital changes		**29,689.70**	25,469.05
Adjustment for:			
Trade receivables	**(7,234.25)**		(855.89)
Inventories	**(2,206.69)**		(1,607.99)
Trade payables, provisions, other financial liabilities and other liabilities	**1,534.47**		588.34
Loans, other financial assets and other assets	**3,420.35**		(4,410.69)
		(4,486.12)	(6,286.23)
Cash generated from operations		**25,203.58**	19,182.82
Income taxes (paid) / refunded		**(3,189.32)**	(3,025.54)
Net cash from operating activities - A		**22,014.26**	16,157.28
B. CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment & intangible assets	**(14,534.55)**		(17,701.26)
Payment for business acquisition	**-**		(2,145.33)
Disposal of property, plant and equipment & intangible assets	**63.62**		71.06
Investment in subsidiaries and joint venture companies	**(13,317.48)**		(3,051.35)

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Loans and advances to subsidiaries	(46.32)		(17.65)
Interest/income on term deposits/bonds/investments received	63.18		55.93
Income tax paid on interest income	(37.23)		(39.46)
Dividend received	210.40		124.19
Bank balances other than cash and cash equivalents	(78.74)		1,809.65
Net cash used in investing activities - B		**(27,677.12)**	(20,894.22)
C. CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from non-current borrowings	28,775.62		24,844.83
Repayment of non-current borrowings	(7,667.17)		(13,839.47)
Proceeds from current borrowings	(1,326.73)		8,875.77
Payment of finance lease obligations	(42.77)		(8.51)
Interest paid	(10,503.90)		(9,248.74)
Dividend paid	(2,968.37)		(4,922.55)
Tax on dividend	(607.80)		(1,000.49)
Net cash from financing activities - C		**5,658.88**	4,700.84
D. Exchange differences on translation of foreign currency cash and cash equivalents		(0.03)	(0.01)
Net increase/(decrease) in cash and cash equivalents (A+B+C+D)		**(4.01)**	(36.11)
Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		**24.38**	60.49
Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		**20.37**	24.38
Notes:			
1 Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.			
2 Reconciliation of cash and cash equivalents:			
Cash and cash equivalents as per Note 13		**20.37**	24.38

3 Refer Note 61 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.

4 Reconciliation between the opening and closing balances in the balance sheet for liabilities arising from financing activities:

For the year ended 31 March 2020

₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2019	1,28,621.46	186.41	15,376.09
Cash flows during the year	10,604.55	(42.77)	(1,326.73)
Non-cash changes due to:			
- Acquisitions under finance lease	-	686.03	-
- Interest on borrowings	11,095.20	-	-
- Variation in exchange rates	3,532.47	-	-
- Transaction costs on borrowings	(21.04)	-	-
Closing balance as at 31 March 2020	**1,53,832.64**	**829.67**	**14,049.36**

For the year ended 31 March 2019

₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2018	1,16,174.91	184.34	6,373.51
Cash flows during the year	1,756.62	(8.51)	9,002.58
Non-cash changes due to:			
- Acquisitions under finance lease	-	10.58	-
- Interest on borrowings	9,371.17	-	-
- Variation in exchange rates	1,372.75	-	-
- Transaction costs on borrowings	(53.99)	-	-
Closing balance as at 31 March 2019	1,28,621.46	186.41	15,376.09

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 21 and Note 28.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S.K.Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place : Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
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Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

Note 1. Company Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the "Company") is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003. The Company is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Company includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These standalone financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other provisions of the Companies Act, 2013 (to the extent notified and applicable) and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors on 27 June 2020.

2. Basis of measurement

The financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 27 of accounting policy regarding financial instruments); and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Company presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;
- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 months period as normal operating cycle.

C. **Significant accounting policies**

A summary of the significant accounting policies applied in the preparation of the financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the financial statements.

The Company has elected to utilize the option under Ind AS 101-'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16-'Property, plant and equipment' & Ind AS 38-'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Company's date of transition to Ind AS, were maintained on transition to Ind AS.

1. **Property, plant and equipment**

1.1. **Initial recognition and measurement**

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the Company and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost includes purchase price including import duties and non-refundable taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the company to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

1.2. **Subsequent costs**

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Company and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

1.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

1.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

1.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business and on the assets of Corporate & other offices of the Company, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the coal mining, oil & gas exploration and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a) Kutcha roads	2 years
b) Enabling works	
- residential buildings	15 years
- internal electrification of residential buildings	10 years
- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips.	5 years
c) Personal computers & laptops including peripherals	3 years
d) Photocopiers, fax machines, water coolers and refrigerators	5 years
e) Temporary erections including wooden structures	1 year
f) Telephone exchange	15 years
g) Wireless systems, VSAT equipments, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipments	6 years
h) Energy saving electrical appliances and fittings	2-7 years
i) Solar/wind power plants which are not governed by CERC Tariff Regulations.	25 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 25 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized over lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business which are not governed by CERC tariff Regulations are fully amortized over lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired for mining business under Coal Bearing Areas (Acquisition & Development) Act, 1957 is amortized on the basis of balance useful life of the project. Other right-of-use land acquired for mining business is amortized over the lease period or balance life of the project whichever is less.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities (recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/ amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the enterprise and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Refer policy nos.C.6.3 and C.19 in respect of depreciation/amortization of coal mining assets and right-of-use assets respectively.

2. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work-in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

3. Intangible assets and intangible assets under development

3.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Company and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Company, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost includes any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Company intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

3.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

3.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

3.4. **Amortization**

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

4. **Regulatory deferral account balances**

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the entity. If these criteria are not met, the regulatory deferral account balances are derecognized.

5. **Exploration for and evaluation of mineral resources**

5.1. **Oil and gas exploration activities**

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment as per the policy of the Company.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

5.2. **Coal mining exploration activities**

Exploration and evaluation assets comprise capitalized costs which are attributable to the search for coal, pending the determination of technical feasibility and the assessment of commercial viability of an identified resource which comprises inter-alia the following:

- researching and analyzing historical exploration data;
- gathering exploration data through topographical, geo chemical and geo physical studies;
- exploratory drilling, trenching and sampling;
- determining & examining the volume and grade of the resource; and
- surveying transportation and infrastructure requirements.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development' and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned.

Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as incurred.

6. **Development expenditure on coal mines**

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Mines under development are brought to revenue on occurrence of earliest of the following milestones except otherwise when commercial readiness is specifically stated in the project report:

a) From the beginning of the financial year immediately after the year in which the project achieves physical output of 25% of rated capacity as per approved project report; or

b) From the beginning of the financial year in which the value of production is more than total expenses; or

c) 2 years of touching of coal.

The above is subject to commercial readiness to yield production on a sustainable basis (i.e. when the Company determines that the mining property will provide sufficient and sustainable return relative to its perceived risks and therefore it is considered probable that future economic benefits will flow to the Company).

On being brought to revenue, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

6.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Company has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be.

6.2. Mines closure, site restoration and decommissioning obligations

The Company's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Company estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Company recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation.

The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

6.3. Amortization

On being brought to revenue, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine. Mining property is amortized on Straight Line Method from the year in which the mine is brought under revenue, in 20 years or life of mine whichever is less.

7. Joint operations

The Company has entered into joint arrangements with others for operations in the nature of joint operations. The Company recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Company.

8. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and (c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Company borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Company borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended uses are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

9. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates and discounts. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Steel scrap is valued at estimated realizable value.

10. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

11. Government grants

Government grants are recognized initially as deferred income when there is reasonable assurance that they will be received and the Company will comply with the conditions associated with the grant. Grants that compensate the Company for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Company for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

12. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/facilities, promotion & facilitation activities for use of fly ash.

13. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Company. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Company. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

14. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Company initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

15. Revenue

Company's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease, sale of coal from captive mines to subsidiary companies and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from investments in joint venture & subsidiary companies, dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

15.1. Revenue from sale of energy

The majority of the Company's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Company's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Company recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 – 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Advance against depreciation considered as deferred revenue in earlier years is included in sales, to the extent depreciation recovered in tariff during the year is lower than the corresponding depreciation charged. Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized upto 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

15.2. Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Company recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

15.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR).

Scrap other than steel scrap is accounted for as and when sold.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the Company estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Company, and the amount of the dividend can be measured reliably.

16. Employee benefits

16.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Company has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The contributions to the fund for the year are recognized as an expense and charged to the statement of profit and loss.

16.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Company's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility (PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Company pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Company is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Company and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by the Company and is managed by separate trust. The Company has PRMF, under which retired employee and the spouse are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company.

The Company's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Company, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Company if it is realizable during the life of the plan, or on settlement of the plan liabilities. Any actuarial gains or losses are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Company recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

16.3. Other long-term employee benefits

Benefits under the Company's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Company's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Company's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Any actuarial gains or losses are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the entity does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

16.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Company has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

17. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Company's norms are included in cost of coal.

18. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized. The income tax consequences of dividends is recognized in profit or loss, other comprehensive income or equity according to where the Company originally recognized those past transactions or events.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Company assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Company evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

19. Leases

Effective 1 April 2019, the Company adopted Ind AS 116-'Leases' and applied to all lease contracts existing on 1 April 2019 using the modified retrospective transition method. Consequently, the lease liability is measured at the present value of remaining lease payments discounted at incremental borrowing rate applicable at the date of initial application and the right-of-use asset has been recognized at an amount equal to lease liability. Comparatives as at and for the year ended 31 March 2019 have not been adjusted and therefore will continue to be reported as per Ind AS 17-'Leases'. The details of accounting policies as per Ind AS 17 are disclosed separately if they are different from those under Ind AS 116.

19.1. As lessee

The Company assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Company assesses whether: (1) the contact involves the use of an identified asset (2) the Company has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Company has the right to direct the use of the asset.

The Company recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Company recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/ amortization and impairment losses.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. The lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Company changes its assessment whether it will exercise an extension or a termination option.

In the comparative period, as lessee the leases were accounted as per Ind AS 17 and classified as finance lease and operating lease, and accounted as follows:

Accounting for finance leases

In the comparative period, leases of property, plant and equipment where the Company, as lessee has substantially all risks and rewards of ownership were classified as finance lease. On initial recognition, assets held under finance leases were recorded as property, plant and equipment and the related liability was recognized under borrowings. At inception of the lease, finance leases were recorded at amounts equal to the fair value of the leased asset or if lower the present value of the minimum lease payments. Minimum lease payments amounts under finance leases were apportioned between the finance cost and the reduction of the outstanding liability.

The finance cost was allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Accounting for operating leases

In the comparative period, leases in which a significant portion of the risks and rewards of ownership were not transferred to the Company as lessee are classified as operating lease. Payments made under operating leases were recognized as an expense on a straight-line basis over the lease term unless the payments were structured to increase in line with expected general inflation to compensate for the lessor's expected inflationary cost increases. Lease incentives received were recognized as an integral part of the total lease expense, over the term of the lease.

19.2 As lessor

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Company determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Company, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount of the net investment in the lease.

Accounting for operating leases

Where the Company determines a long term PPA to be or to contain a lease and where the Company retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

20. Impairment of non-financial assets

The carrying amounts of the Company's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs to disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

21. Operating segments

In accordance with Ind AS 108-'Operating segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Company's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Company's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, and intangible assets other than goodwill.

Segment assets comprise property, plant and equipment, intangible assets, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Segment assets do not include investments, income tax assets, capital work in progress, capital advances, corporate assets and other current assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade and other payables, employee benefits and provisions. Segment liabilities do not include equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

22. Business Combinations

Business combinations are accounted for using the acquisition accounting method as at the date of the acquisition, which is the date at which control is transferred to the Company. The consideration transferred in the acquisition and the identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date. Goodwill is initially measured at cost, being the excess of the consideration transferred over the net identifiable assets acquired and liabilities assumed. Where the fair value of net identifiable assets acquired and liabilities assumed exceed the consideration transferred, after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve. Acquisition related costs are expensed as incurred.

23. Dividends

Dividends and interim dividends payable to the Company's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

24. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

25. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Company by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

26. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7-'Statement of cash flows'.

27. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Company recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument

27.1 Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Company recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Company may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Company decides to classify the same either as at FVTOCI or FVTPL. The Company makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Company decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale of investments. However, the Company may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

Equity investments in subsidiaries and joint ventures companies are accounted at cost less impairment, if any.

The Company reviews the carrying value of investments at each reporting date to determine whether there is any indication of impairment. If any such indication exists, then the recoverable amount of the investment is estimated. If the recoverable amount is less than the carrying amount, the impairment loss is recognized in the statement of profit and loss.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Company's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Company has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement; and either (a) the Company has transferred substantially all the risks and rewards of the asset, or (b) the Company has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss.

Impairment of financial assets

In accordance with Ind AS 109-'Financial instruments', the Company applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Company applies the simplified approach required by Ind AS 109 Financial Instruments, which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Company determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the entity reverts to recognizing impairment loss allowance based on 12 month ECL.

27.2 Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities measured at amortized cost net of directly attributable transaction cost. The Company's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Company that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Company may transfer the cumulative gain or loss within equity. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Company has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

27.3 Derivative financial instruments

Initial recognition and subsequent measurement

The Company uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

27.4 Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

D. Use of estimates and management judgments

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, income, expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. **Formulation of accounting policies**

   The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. **Useful life of property, plant and equipment and intangible assets**

   The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

   Useful life of the assets of the generation of electricity business (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. **Recoverable amount of property, plant and equipment and intangible assets**

   The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. **Post-employment benefit plans**

   Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Company considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. **Revenues**

   The Company records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

   Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Company, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

   Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

   Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

   The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37-'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Impairment test of investments in Subsidiaries and Joint Venture Companies**

    The recoverable amount of investment in subsidiaries and joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

11. **Income taxes**

    Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2020 ₹ Crore

Particulars	Gross block				Depreciation and amortization				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	As at 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Land									
(including development expenses)									
Freehold	6,160.24	9.45	31.40	**6,201.09**	-	-	-	**-**	**6,201.09**
Right of use	5,277.30	588.35	(3,076.91)	**2,788.74**	410.69	198.30	(205.05)	**403.94**	**2,384.80**
Under submergence (refer footnote (f) below)	776.77	0.29	(39.61)	**737.45**	110.89	26.74	(3.59)	**134.04**	**603.41**
Right of use - Coal Bearing Area Land	-	50.24	3,164.09	**3,214.33**	-	57.42	94.06	**151.48**	**3,062.85**
Roads, bridges, culverts and helipads	1,088.91	239.52	195.90	**1,524.33**	153.78	54.24	(5.32)	**202.70**	**1,321.63**
Building									
Freehold									
Main plant	5,793.45	1,490.67	50.25	**7,334.37**	721.09	247.45	(0.01)	**968.53**	**6,365.84**
Others	3,982.16	978.09	1.18	**4,961.43**	586.72	198.94	(86.55)	**699.11**	**4,262.32**
Right of use	18.91	10.76	(0.05)	**29.62**	7.42	4.57	(0.04)	**11.95**	**17.67**
Temporary erections	21.49	3.14	0.29	**24.92**	19.49	4.37	(1.04)	**22.82**	**2.10**
Water supply, drainage and sewerage system	665.19	89.33	18.29	**772.81**	112.37	35.44	(0.01)	**147.80**	**625.01**
Hydraulic works, barrages, dams, tunnels and power channel	4,259.88	-	97.26	**4,357.14**	830.84	231.13	3.59	**1,065.56**	**3,291.58**
MGR track and signalling system	1,082.50	1,078.32	(2.66)	**2,158.16**	263.38	85.92	-	**349.30**	**1,808.86**
Railway siding	1,651.55	1,413.72	125.65	**3,190.92**	237.02	107.96	-	**344.98**	**2,845.94**
Earth dam reservoir	318.89	141.85	(0.72)	**460.02**	58.19	23.99	-	**82.18**	**377.84**
Plant and equipment									
Owned	1,19,455.70	29,228.82	1,860.03	**1,50,544.55**	23,489.60	7,971.58	(387.82)	**31,073.36**	**1,19,471.19**
Right of use	85.77	-	-	**85.77**	18.87	4.75	-	**23.62**	**62.15**
Mining Properties	-	707.03	-	**707.03**	-	35.35	-	**35.35**	**671.68**
Site restoration cost	-	182.43	-	**182.43**	-	3.72	-	**3.72**	**178.71**
Furniture and fixtures	521.96	160.61	7.97	**690.54**	113.05	53.08	(4.06)	**162.07**	**528.47**
Vehicles including speedboats / helicopter									
Owned	12.64	1.00	(0.80)	**12.84**	4.04	1.20	(0.18)	**5.06**	**7.78**
Right of use	3.25	24.51	(2.03)	**25.73**	1.98	4.26	(1.86)	**4.38**	**21.35**
Office equipment	247.24	71.74	(0.77)	**318.21**	87.92	35.38	0.18	**123.48**	**194.73**
EDP, WP machines and satcom equipment	396.62	48.26	(47.09)	**397.79**	216.37	92.44	(43.47)	**265.34**	**132.45**
Construction equipment	201.10	28.25	(9.02)	**220.33**	51.22	18.62	(7.77)	**62.07**	**158.26**
Electrical installations	695.86	915.25	13.65	**1,624.76**	122.03	71.20	(1.09)	**192.14**	**1,432.62**
Communication equipment	88.47	12.89	0.35	**101.71**	39.25	9.00	(0.23)	**48.02**	**53.69**
Hospital equipment	31.96	3.03	(0.11)	**34.88**	6.43	1.94	(0.02)	**8.35**	**26.53**
Laboratory and workshop equipment	138.24	57.78	0.10	**196.12**	22.73	10.89	0.03	**33.65**	**162.47**
Assets for ash utilisation	40.71	4.81	-	**45.52**	-	-	-	**-**	**45.52**
Less: Adjusted from fly ash utilisation reserve fund	40.71	4.81	-	**45.52**	-	-	-	**-**	**45.52**
Total	**1,52,976.05**	**37,535.33**	**2,386.64**	**1,92,898.02**	**27,685.37**	**9,589.88**	**(650.25)**	**36,625.00**	**1,56,273.02**

As at 31 March 2019 ₹ Crore

Particulars	Gross block				Depreciation and amortization				Net block
	As at 1 April 2018	Additions	Deductions/ adjustments	As at 31 March 2019	As at 1 April 2018	For the year	Deductions/ adjustments	Upto 31 March 2019	As at 31 March 2019
Land									
(including development expenses)									
Freehold	5,937.23	178.90	44.11	6,160.24	-	-	-	-	6,160.24
Leasehold	4,824.35	304.89	148.06	5,277.30	274.56	111.75	24.38	410.69	4,866.61
Under submergence (refer footnote (f) below)	755.47	0.04	21.26	776.77	79.66	31.23	-	110.89	665.88
Roads, bridges, culverts and helipads	1,032.43	25.34	31.14	1,088.91	109.95	43.86	(0.03)	153.78	935.13
Building									
Freehold									
Main plant	5,178.69	531.05	83.71	5,793.45	509.52	212.43	(0.86)	721.09	5,072.36
Others	3,557.04	441.48	(16.36)	3,982.16	411.90	185.61	(10.79)	586.72	3,395.44
Leasehold	18.91	-	-	18.91	5.56	1.86	-	7.42	11.49
Temporary erection	17.22	4.14	0.13	21.49	14.04	5.45	-	19.49	2.00
Water supply, drainage and sewerage system	601.10	52.42	11.67	665.19	80.67	32.20	(0.50)	112.37	552.82
Hydraulic works, barrages, dams, tunnels and power channel	4,236.12	-	23.76	4,259.88	604.74	226.10	-	830.84	3,429.04
MGR track and signalling system	1,065.29	-	17.21	1,082.50	192.83	70.55	-	263.38	819.12
Railway siding	1,460.83	174.83	15.89	1,651.55	150.82	86.28	(0.08)	237.02	1,414.53
Earth dam reservoir	318.54	-	0.35	318.89	39.54	18.65	-	58.19	260.70
Plant and equipment									
Owned	1,08,359.00	10,619.52	477.18	1,19,455.70	17,010.31	6,809.78	(330.49)	23,489.60	95,966.10
Leased	85.77	-	-	85.77	14.12	4.75	-	18.87	66.90
Furniture and fixtures	407.86	111.48	2.62	521.96	75.60	37.96	(0.51)	113.05	408.91
Vehicles including speedboats									
Owned	12.48	0.44	(0.28)	12.64	2.93	1.24	(0.13)	4.04	8.60
Leased	2.67	0.94	(0.36)	3.25	1.40	0.81	(0.23)	1.98	1.27
Office equipment	199.42	51.45	(3.63)	247.24	65.28	23.80	(1.16)	87.92	159.32
EDP, WP machines and satcom equipment	318.88	103.76	(26.02)	396.62	168.74	71.93	(24.30)	216.37	180.25
Construction equipment	180.74	27.24	(6.88)	201.10	36.47	17.28	(2.53)	51.22	149.88
Electrical installations	606.99	81.17	7.70	695.86	78.45	44.60	(1.02)	122.03	573.83
Communication equipment	79.62	9.83	(0.98)	88.47	31.96	8.02	(0.73)	39.25	49.22
Hospital Equipment	29.79	3.06	(0.89)	31.96	4.80	1.83	(0.20)	6.43	25.53
Laboratory and workshop equipment	120.28	18.75	(0.79)	138.24	15.30	7.61	(0.18)	22.73	115.51
Assets for ash utilisation	39.29	1.42	-	40.71	-	-	-	-	40.71
Less: Adjusted from fly ash utilisation reserve fund	39.29	1.42	-	40.71	-	-	-	-	40.71
Total	1,39,406.72	12,740.73	828.60	1,52,976.05	19,979.15	8,055.58	(349.36)	27,685.37	1,25,290.68

STANDALONE FINANCIAL STATEMENTS

a) The conveyancing of the title to **10,142.09** acres of freehold land of value ₹**1,508.27 crore** (31 March 2019: 10,124 acres of value ₹ 1,478.01 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2019: ₹ 4.55 crore) and also execution of lease agreements for **10,011 acres** of right of use land of value ₹ **1,392.74 crore** (31 March 2019: 10,592 acres of value ₹ 1,543.62 crore) in favour of the Company are awaiting completion of legal formalities.

b) Land includes **284.35 acres** of freehold land of value ₹ **0.52 crore** (31 March 2019: 284.35 acres of value ₹ 0.52 crore), and **1939.55 acres** of right of use land of value ₹ **3.81 crore** (31 March 2019: 1939.55 acres of value ₹ 3.81 crore), the value thereof including periodical lease rent accruing thereon is subject to revision on final settlement with the State Government Authorities with demand of late payment charges, if any.

c) Land right of use does not include value of **33 acre** (31 March 2019: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.

d) Land includes **1,284 acres** of freehold land of value ₹ **128.15 crore** (31 March 2019: 1,236 acres of value ₹ 130.67 crore) and **395 acres** of right of use land of value ₹ **3.10 crore** (31 March 2019: 101 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

e) Land-freehold includes an amount of ₹ **282.92 crore** (31 March 2019: ₹ 282.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

f) Gross block of land under submergence represents ₹ **558.62 crore** (31 March 2019: ₹ 597.94 crore) of freehold land and ₹ **178.83 crore** (31 March 2019: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

g) Possession of land measuring **98 acres** (31 March 2019: 98 acres) consisting of **79 acres** of freehold land (31 March 2019: 79 acres) and **19 acres** of right of use land (31 March 2019: 19 acres) of value ₹ **0.21 crore** (31 March 2019: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 28 - Current liabilities - Other financial liabilities.

h) Refer Note 66 regarding property, plant and equipment under finance lease.

i) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

j) Property, plant and equipment costing ₹ 5,000/- or less , are depreciated fully in the year of acquisition.

k) Refer Note 21 for information on property, plant and equipment pledged as security by the Company.

l) Refer Note 69 (C) (a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

m) Deduction/adjustments from gross block and depreciation and amortization for the year includes:

₹ **Crore**

	Gross block		Depreciation and amortization	
	For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019
Disposal of assets	**(58.40)**	(50.29)	**(45.01)**	(25.37)
Retirement of assets	**(449.02)**	(543.70)	**(351.08)**	(326.44)
Cost adjustments including exchange differences	**3,262.41**	1,494.87	**-**	-
Assets capitalised with retrospective effect/Write back of excess capitalisation	**(124.71)**	-	**-**	-
Others	**(243.64)**	(72.28)	**(254.16)**	2.45
	2,386.64	828.60	**(650.25)**	(349.36)

n) Exchange differences capitalized are disclosed in the 'Addition' column of Capital work-in-progress (CWIP) and allocated to various heads of CWIP in the year of capitalisation through 'Deductions/Adjustments' column of CWIP. Exchange differences in respect of assets already capitalised are disclosed in the 'Deductions/Adjustments' column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through 'Addition' or 'Deductions/Adjustments' column are given below:

₹ **Crore**

	For the year ended 31 March 2020		For the year ended 31 March 2019	
	Exchange differences included in PPE/CWIP	Borrowing costs included in PPE/CWIP	Exchange differences included in PPE/CWIP	Borrowing costs included in PPE/CWIP
Building - Freehold				
Main plant	**51.75**	**89.34**	5.72	111.38
Others	**6.54**	**104.36**	0.35	107.16
Hydraulic works, barrages, dams, tunnels and power channel	**27.91**	**200.56**	18.52	96.67
MGR track and signalling system	**31.82**	**52.64**	-	12.24
Railway siding	**0.60**	**124.08**	-	95.59
Plant and equipment	**1,904.68**	**3,271.83**	760.60	3,648.61
Others including pending allocation	**49.06**	**567.47**	545.99	628.37
Total	**2,072.36**	**4,410.28**	1,331.18	4,700.02

o) Gross carrying amount of the fully depreciated/amortised property, plant and equipment that are still in use:

₹ Crore

	As at 31 March 2020	As at 31 March 2019
Land-Right of use	12.66	11.93
Roads, bridges ,culverts and helipads	30.68	18.28
Main plant building	98.83	68.08
Other building	141.55	88.28
Water supply, drainage and sewerage system	26.84	15.14
MGR track and signalling system	45.85	34.11
Plant and equipment - Owned	2,467.58	2,464.17
Furniture and fixtures	27.82	23.00
Other office equipment	48.46	48.88
EDP, WP machines and satcom equipment	143.16	113.76
Communication equipment	24.24	23.24
Others	98.07	51.11
	3,165.74	2,959.98

Others include temporary erections, railway sidings, earth dam reserviors, construction equipment and electrical installations etc.

p) **Property, plant and equipment subject to operating lease**

The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which are extended, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

	As at 31 March 2020	As at 31 March 2019
Land- Free hold	74.85	74.83
Land- Right of use	0.61	0.74
Roads, bridges, culverts and helipads	13.99	15.98
Main plant building-Freehold	16.38	18.83
Other building-Freehold	42.01	46.68
Water supply, drainage and sewerage system	11.41	11.93
Plant and equipment - Owned	475.40	535.29
Railway siding	2.65	2.90
Electrical installation	6.05	7.20
Others	14.75	15.90
	658.10	730.28

3. Non-current assets - Capital work-in-progress

As at 31 March 2020 ₹ Crore

Particulars	As at 1 April 2019	Additions	Deductions/ adjustments	Capitalized	As at 31 March 2020
Development of land	835.89	80.45	(424.50)	-	**491.84**
Roads, bridges, culverts and helipads	266.99	377.96	72.36	239.52	**477.79**
Piling and foundation	676.81	35.79	-	-	**712.60**
Buildings					
Freehold					
Main plant	2,778.26	445.23	(169.61)	1,490.67	**1,563.21**
Others	2,376.01	850.65	(591.04)	978.09	**1,657.53**
Temporary erections	21.66	9.84	(7.59)	2.83	**21.08**
Water supply, drainage and sewerage system	105.96	48.60	27.14	89.31	**92.39**
Hydraulic works, barrages, dams, tunnels and power channel	3,257.00	643.89	(5.90)	-	**3,894.99**
MGR track and signalling system	891.75	258.19	734.40	1,078.32	**806.02**
Railway siding	2,568.00	871.02	(580.06)	1,413.72	**1,445.24**
Earth dam reservoir	258.58	126.07	66.96	141.85	**309.76**
Plant and equipment - owned	66,367.85	15,054.74	1,146.33	27,619.24	**54,949.68**
Furniture and fixtures	47.82	23.07	40.35	72.21	**39.03**
Office equipment	8.80	2.24	0.62	7.02	**4.64**
EDP/WP machines and satcom equipment	4.19	7.11	(0.40)	4.48	**6.42**
Construction equipment	-	0.97	(0.84)	-	**0.13**
Electrical installations	398.40	272.65	634.16	848.92	**456.29**
Communication equipment	2.35	2.73	(0.13)	2.78	**2.17**
Hospital equipment	0.04	0.11	-	0.04	**0.11**
Laboratory and workshop equipment	0.30	5.18	(0.02)	0.30	**5.16**
Development of coal mines	2,185.52	635.12	(507.91)	871.58	**1,441.15**
	83,052.18	19,751.61	434.32	34,860.88	**68,377.23**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	95.10	0.08	(12.91)	-	**82.27**
Difference in exchange on foreign currency loans	1,569.72	447.21	(615.39)	-	**1,401.54**
Pre-commissioning expenses (net)	464.87	1,097.17	(1,370.93)	-	**191.11**
Expenditure during construction period (net)*	598.20	5,717.05	(18.76)	-	**6,296.49**
Other expenditure directly attributable to project construction	2,085.73	29.67	(1,037.50)	-	**1,077.90**
Less: Allocated to related works	-	5,878.05	-	-	**5,878.05**
	4,813.62	1,413.13	(3,055.49)	-	**3,171.26**
Sub-total	87,865.80	21,164.74	(2,621.17)	34,860.88	**71,548.49**
Less: Provision for unserviceable works	504.94	39.21	(10.39)	-	**533.76**
Construction stores (net of provisions)	3,448.03	1,390.97	(2,786.97)	-	**2,052.03**
Total	**90,808.89**	**22,516.50**	**(5,397.75)**	**34,860.88**	**73,066.76**

As at 31 March 2019

₹ Crore

Particulars	As at 1 April 2018	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2019
Development of land	721.00	222.87	(89.34)	18.64	835.89
Roads, bridges, culverts and helipads	184.31	109.60	(1.58)	25.34	266.99
Piling and foundation	645.05	34.30	(2.54)	-	676.81
Buildings					
Freehold					
Main plant	2,576.64	466.28	266.39	531.05	2,778.26
Others	1,953.67	746.48	117.34	441.48	2,376.01
Temporary erections	21.34	6.21	(1.75)	4.14	21.66
Water supply, drainage and sewerage system	72.85	57.85	27.68	52.42	105.96
Hydraulic works, barrages, dams, tunnels and power channel	2,837.37	420.54	(0.91)	-	3,257.00
MGR track and signalling system	481.31	432.92	(22.48)	-	891.75
Railway siding	1,111.62	1,655.15	(23.94)	174.83	2,568.00
Earth dam reservoir	76.17	161.53	20.88	-	258.58
Plant and equipment - owned	58,720.58	18,952.73	(1,824.57)	9,480.89	66,367.85
Furniture and fixtures	28.44	40.18	9.17	29.97	47.82
Vehicles	0.10	-	-	0.10	-
Office equipment	3.40	6.67	0.01	1.28	8.80
EDP/WP machines and satcom equipment	6.83	5.00	(1.20)	6.44	4.19
Construction equipment	0.22	0.34	(0.14)	0.42	-
Electrical installations	259.61	373.96	(172.72)	62.45	398.40
Communication equipment	0.42	3.18	0.11	1.36	2.35
Hospital equipment	0.01	0.04	-	0.01	0.04
Laboratory and workshop equipment	1.28	0.55	(0.49)	1.04	0.30
Development of coal mines	1,904.70	1,495.81	(1,214.99)	-	2,185.52
	71,606.92	25,192.19	(2,915.07)	10,831.86	83,052.18
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	91.81	3.36	(0.07)	-	95.10
Difference in exchange on foreign currency loans	1,233.35	904.87	(568.50)	-	1,569.72
Pre-commissioning expenses (net)	139.96	550.59	(225.68)	-	464.87
Expenditure during construction period (net)*	534.35	6,524.91	(22.35)	-	7,036.91
Other expenditure directly attributable to project construction	1,884.15	66.09	135.49	-	2,085.73
Less: Allocated to related works	-	6,438.71	-	-	6,438.71
	75,490.54	26,803.30	(3,596.18)	10,831.86	87,865.80
Less: Provision for unserviceable works	451.98	53.60	(0.64)	-	504.94
Construction stores (net of provisions)	3,568.35	(120.32)	-	-	3,448.03
Total	78,606.91	26,629.38	(3,595.54)	10,831.86	90,808.89

* Brought from expenditure during construction period (net) - Note 39

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **24.94 crore** (31 March 2019: ₹ 25.39 crore).

b) Pre-commissioning expenses for the year amount to ₹ **1,260.02 crore** (31 March 2019: ₹ 622.41 crore) and after adjustment of pre-commissioning sales of ₹ **162.85 crore** (31 March 2019: ₹ 71.82 crore) resulted in net pre-commissioning expenditure of ₹ **1,097.17 crore** (31 March 2019: ₹ 550.59 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **635.12 crore** (31 March 2019: ₹ 1,269.79 crore) - [Ref. Note 40] and are after netting off the receipts from coal extracted during the development phase amounting to ₹ **154.14 crore** (31 March 2019: ₹ 1,214.99 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (n).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property,plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2020

₹ Crore

Particulars	**Gross block**				**Amortisation**				**Net block**
	As at 1 April 2019	**Additions**	**Deductions/ adjustments**	**As at 31 March 2020**	**As at 1 April 2019**	**For the year**	**Deductions/ adjustments**	**Upto 31 March 2020**	**As at 31 March 2020**
Software	53.28	31.14	3.26	**87.68**	31.16	27.75	(0.03)	**58.88**	**28.80**
Right of use - Land	165.90	7.76	31.06	**204.72**	20.77	8.71	(4.96)	**24.52**	**180.20**
- Others	203.97	180.90	-	**384.87**	41.28	14.31	-	**55.59**	**329.28**
Total	**423.15**	**219.80**	**34.32**	**677.27**	**93.21**	**50.77**	**(4.99)**	**138.99**	**538.28**

As at 31 March 2019

₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2018	Additions	Deductions/ adjustments	As at 31 March 2019	As at 1 April 2018	For the year	Deductions/ adjustments	Upto 31 March 2019	As at 31 March 2019
Software	34.29	15.04	3.95	53.28	22.15	9.03	(0.02)	31.16	22.12
Right of use - Land	160.55	4.83	0.52	165.90	13.85	6.92	-	20.77	145.13
- Others	203.71	-	0.26	203.97	30.95	10.33	-	41.28	162.69
Total	398.55	19.87	4.73	423.15	66.95	26.28	(0.02)	93.21	329.94

a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

b) Cost of acquisition of the right for drawl of water amounting to ₹ **384.87 crore** (31 March 2019: ₹ 203.97 crore) is included under intangible assets – Right to use - Others.

c) Deductions/adjustments from gross block and amortization for the year includes:

₹ Crore

	Gross block		**Amortisation**	
	For the year ended		**For the year ended**	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019
Cost adjustments	**39.30**	4.73	**(4.97)**	-
Others	**(4.98)**	-	**(0.02)**	(0.02)
Total	**34.32**	4.73	**(4.99)**	(0.02)

d) Gross carrying amount of the fully amortised intangible assets that are still in use :

₹ Crore

	As at 31 March 2020	As at 31 March 2019
Software	**26.95**	17.99
Right of use - land	**5.88**	0.14
	32.83	18.13

5. Non-current assets - Intangible assets under development

As at 31 March 2020

₹ Crore

Particulars	**As at 1 April 2019**	**Additions**	**Deductions/ Adjustments**	**Capitalised**	**As at 31 March 2020**
Right of use - others	147.52	-	-	147.52	-
Exploration and evaluation assets - coal mines	238.96	20.27	33.23	-	**292.46**
Exploratory wells-in-progress	7.65	-	(0.01)	-	**7.64**
Software	11.31	0.04	-	11.29	**0.06**
	405.44	20.31	33.22	158.81	**300.16**
Less: Provision for unserviceable works	7.64	-	-	-	**7.64**
Total	**397.80**	**20.31**	**33.22**	**158.81**	**292.52**

As at 31 March 2019

₹ Crore

Particulars	As at 1 April 2018	Additions	Deductions/ Adjustments	Capitalised	As at 31 March 2019
Right of use - others	237.82	25.23	(115.53)	-	147.52
Exploration and evaluation assets - coal mines	222.94	16.08	(0.06)	-	238.96
Exploratory wells-in-progress	7.72	-	(0.07)	-	7.65
Software	8.52	1.45	11.33	9.99	11.31
	477.00	42.76	(104.33)	9.99	405.44
Less: Provision for unserviceable works	7.64	-	-	-	7.64
Total	469.36	42.76	(104.33)	9.99	397.80

6. Non-current financial assets - Investments in subsidiary and joint venture companies

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)		As at 31 March 2020	As at 31 March 2019
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)					
Subsidiary companies					
NTPC Electric Supply Company Ltd.	80,910	10		**0.08**	0.08
	(80,910)	(10)			
NTPC Vidyut Vyapar Nigam Ltd.	2,00,00,000	10		**20.00**	20.00
	(2,00,00,000)	(10)			
Kanti Bijlee Utpadan Nigam Ltd.	1,56,06,73,705	10		**1,560.67**	1,510.67
	(1,51,06,73,705)	(10)			
Bhartiya Rail Bijlee Company Ltd.	1,74,18,44,615	10		**1,741.84**	1,599.54
	(1,59,95,33,644)	(10)			
Patratu Vidyut Utpadan Nigam Ltd.	38,31,24,000	10		**383.12**	234.12
	(23,41,24,000)	(10)			
Nabinagar Power Generating Company Ltd.	4,41,70,05,500	10		**4,417.01**	3,987.16
	(3,98,71,55,500)	(10)			
NTPC Mining Ltd.	50,000	10		**0.05**	-
	(-)	(-)			
THDC India Limited	2,73,09,412	1000		**7,500.00**	-
	(-)	(-)			
North Eastern Electric Power Corporation Limited	3,60,98,10,400	10		**4,000.00**	-
	(-)	(-)			
				19,622.77	7,351.57
Joint venture companies					
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000	10		**1.00**	1.00
	(20,00,000)	(10)			
NTPC-GE Power Services Private Ltd.	30,00,000	10		**3.00**	3.00
	(30,00,000)	(10)			
NTPC-SAIL Power Company Ltd.	49,02,50,050	10		**490.25**	490.25
	(49,02,50,050)	(10)			
NTPC Tamil Nadu Energy Company Ltd.	1,42,81,06,112	10		**1,428.11**	1,415.61
	(1,41,56,06,112)	(10)			
Ratnagiri Gas & Power Private Ltd.	83,45,56,046	10	834.55		834.55
	(83,45,56,046)	(10)			
Less: Provision for impairment			816.49		775.02
				18.06	59.53
Konkan LNG Limited (Formerly known as Konkan LNG Private Ltd.)	13,97,52,264	10	139.75		139.75
	(13,97,52,264)	(10)			
Less: Provision for impairment			103.47		139.75
				36.28	-
Aravali Power Company Private Ltd.	1,43,30,08,200	10		**1,433.01**	1,433.01
	(1,43,30,08,200)	(10)			
NTPC BHEL Power Projects Private Ltd.	5,00,00,000	10	50.00		50.00
	(5,00,00,000)	(10)			
Less: Provision for impairment			50.00		50.00
				-	-

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2020	As at 31 March 2019
Meja Urja Nigam Private Ltd.	1,58,16,39,800 (1,25,93,29,800)	10 (10)	**1,581.64**	1,259.33
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)	**31.34**	31.34
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	**30.40**	30.40
Energy Efficiency Services Ltd.	46,36,10,000 (24,55,00,000)	10 (10)	**463.61**	245.50
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)	**0.08**	0.08
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)	**0.05**	0.05
Hindustan Urvarak and Rasayan Ltd.	75,10,85,000 (44,03,25,000)	10 (10)	**751.09**	440.32
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**15.20**	15.20
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	5,42,50,000 (3,42,50,000)	100** (100)**	**444.72**	277.83
			6,727.84	5,702.45
Total			**26,350.61**	13,054.02
Aggregate amount of unquoted investments (net of provision for impairment)			**26,350.61**	13,054.02
Aggregate amount of impairment in the value of investments			**969.96**	964.77

a) Investments have been valued as per accounting policy no. C.27.1 (Note 1).

b) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, Government of India (GOI), for the strategic disinvestment of Government of India's shareholding in THDC India Limited (THDCIL) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired 74.496% of paid up share capital in THDCIL , held by GOI for an aggregate consideration of ₹ 7,500 crore, on 27 March 2020. Consequently, THDCIL has become the subsidiary of the Company w.e.f. 27 March 2020.

c) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, GOI, for the strategic disinvestment of GOI's shareholding in North Eastern Electric Power Corporation Limited (NEEPCO) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired entire paid up share capital in NEEPCO, held by GOI for an aggregate consideration of ₹ 4,000 crore, on 27 March 2020. Consequently, NEEPCO has become wholly owned subsidiary of the Company w.e.f. 27 March 2020.

d) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a joint venture of the Company. As NTPC-BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited. Pending withdrawal, provision for impairment loss on the entire investment in NTPC-BHEL of ₹ **50.00 crore** (upto 31 March 2019: ₹ 50.00 crore) has been made based on the un-audited accounts of NTPC-BHEL as at 31 March 2020.

e) The Board of Directors of the Company in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a joint venture of the Company. GOI has accorded its approval for exit of NTPC from the joint venture. The decison of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (JV Partner) & TELK. The government of Kerala has requested NTPC to review the decision. The matter is under examination.

f) The Company has an investment of ₹ **834.55 crore** as at 31 March 2020 (31 March 2019: ₹ 834.55 crore) in the equity shares of Ratnagiri Gas and Power Private Ltd. (RGPPL), a joint venture of the Company. During the year, an assessment of impairment of the investment in RGPPL was carried out by an independent expert and the provision for impairment loss on the investment in RGPPL has been increased to ₹ **816.49 crore** (31 March 2019: ₹ 775.02 crore). Also refer Note 56.

g) The Company has an investment of ₹ **139.75 crore** as at 31 March 2020 (31 March 2019: ₹ 139.75 crore) in the equity shares of Konkan LNG Ltd. (KLL), a joint venture of the Company. During the year, an assessment of impairment of the investment in KLL was carried out by an independent expert and the provision for impairment loss on the investment in KLL amounting to ₹ **36.28 crore** (31 March 2019: Nil) has been written back and the provision has been updated to ₹ **103.47 crore** (31 March 2019: ₹ 139.75 crore). Also refer Note 56.

h) NTPC Mining Ltd has been incorporated on 29 August 2019 as a wholly owned subsidiary of the Company for taking up coal mining business.

i) Restrictions for the disposal of investments held by the Company and commitments towards certain subsidiary & joint venture companies are disclosed in Note 69 (C) (b) and (c).

7. Non-current financial assets - Other Investments

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2020	As at 31 March 2019
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**46.50**	88.14
			46.50	88.14
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78
Co-operative societies			**#**	#
Total			**50.28**	91.92
Aggregate amount of quoted investments at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**46.50**	88.14
Aggregate amount of unquoted investments			**3.78**	3.78

\# Equity shares of ₹ **30,200**/- (31 March 2019: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.27.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI is awaited for exit by NTPC Limited.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). As the Company was formed by a directive from the GOI, approval of the Ministry of Steel, GOI is awaited for exit by NTPC Limited. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Company is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'.

f) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2019-20, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Loans (Considered good, unless otherwise stated)		
Related parties		
Unsecured	**147.68**	116.61
Employees (including accrued interest)		
Secured	**261.93**	229.26
Unsecured	**167.37**	174.33
Others		
UnSecured	**23.28**	24.18
Total	**600.26**	544.38
a) Due from directors and officers of the Company		
Directors	**0.01**	0.01
Officers	**-**	-
b) Loans to related parties include:		
Key management personnel	**0.01**	0.01
Kanti Bijli Utapadan Nigam Ltd. (Subsidiary company)	**128.67**	110.00
National High Power Test Laboratory Private Ltd. (Joint venture company)	**18.40**	6.00
NTPC Education and Research Society	**0.60**	0.60

c) Other loans represent loan of ₹ **23.28 crore** (31 March 2019: ₹ 24.18 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

9. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Share application money pending allotment in		
Subsidiary companies		
Kanti Bijlee Utpadan Nigam Limited	**50.00**	
Bhartiya Rail Bijlee Company Ltd.	**32.28**	121.59
Patratu Vidyut Utpadan Nigam Ltd.	**115.00**	-
	197.28	121.59
Joint venture companies		
Meja Urja Nigam Private Limited	**-**	60.00
	-	60.00

STANDALONE FINANCIAL STATEMENTS

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Claims recoverable	**771.36**	739.54
Finance lease receivables (Refer Note 66)	**409.14**	470.96
Mine closure deposit	**47.38**	32.20
Total	**1,425.16**	1,424.29

a) The shares against the share application money pending allotment are expected to be allotted in due course.

b) Claims recoverable includes ₹ **749.01 crore** (31 March 2019: ₹ 719.71 crore) towards the cost incurred upto 31 March 2020 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **439.57 crore** (31 March 2019: ₹ 413.40 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for others (Note 30). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

c) The Company had ascertained that the Power Purchse Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 32).

d) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

10. Other non-current assets

₹ Crore

Particulars		As at 31 March 2020	As at 31 March 2019
Capital advances			
(Considered good unless otherwise stated)			
Secured		**17.83**	21.65
Unsecured			
Covered by bank guarantee		**1,796.85**	1,737.16
Others		**2,999.59**	3,235.64
Considered doubful		**44.70**	45.04
Less: Allowance for bad and doubtful advances		**44.70**	45.04
		4,814.27	4,994.45
Advances other than capital advances			
Security deposits		**91.36**	81.55
Advances to contractors and suppliers			
Unsecured	**2,082.05**		2,149.72
Considered doubful	**112.57**		112.57
Less: Allowance for bad and doubtful advances	**112.57**		112.57
		2,082.05	2,149.72

₹ Crore

Particulars		As at 31 March 2020	As at 31 March 2019
Advance tax and tax deducted at source	**14,385.69**		15,989.67
Less: Provision for tax	**12,784.45**		11,447.77
		1,601.24	4,541.90
Deferred foreign currency fluctuation asset		**2,404.42**	1,370.53
Deferred payroll expenditure		**129.28**	131.15
Total		**11,122.62**	13,269.30

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and (-) ₹ **255.22 crore** (31 March 2019: (-) ₹ 120.25 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 32).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**15.81**	21.82
NTPC BHEL Power Projects Private Ltd.	**128.11**	139.52
Aravali Power Company Private Ltd.	**-**	0.09

c) Capital advances include ₹ **224.29 crore** (31 March 2019: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under arbitration. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the arbitration proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **2,063.56 crore** (31 March 2019: ₹ 2,097.65 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. During the year, one of the projects has achieved COD. Freight rebate amount in consonance with the agreement clauses, is under verification by the Railways and the said advance will be adjusted upon receipt of the claim amount from Railways.

e) Capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

11. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Coal	**5,505.67**	3,569.62
Fuel oil	**508.62**	399.88
Naphtha	**128.38**	127.66
Stores and spares	**3,793.24**	3,307.09
Chemicals and consumables	**151.40**	138.57
Loose tools	**11.12**	9.30
Steel scrap	**18.68**	18.09
Others	**785.23**	668.99
	10,902.34	8,239.20
Less: Provision for shortages	**23.87**	111.85
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**146.61**	139.33
Total	**10,731.86**	7,988.02

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Inventories include material-in-transit		
Coal	**324.13**	285.01
Stores and spares	**44.28**	34.23
Chemicals and consumables	**1.58**	2.21
Loose tools	**0.03**	0.04
Others	**2.77**	1.92

a) Inventory items have been valued as per accounting policy no. C.9 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 21 and 48 (b) for information on inventories pledged as security by the Company.

d) Refer Note 48 (a) for information on inventories consumed and recognised as expense during the year.

e) Paragraph 32 of Ind AS 2 - Inventories provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Company is operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

12. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Trade receivables		
Unsecured, considered good	**15,668.11**	8,433.86
Credit impaired	**0.20**	0.34
	15,668.31	8,434.20
Less: Provision for credit impaired trade receivables	**0.20**	0.34
Total	**15,668.11**	8,433.86

a) Based on arrangements between Company, banks and benificiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net of bills discounted amounting to ₹ **10,692.34 crore** (31 March 2019 ₹ 9,998.75 crore). Also refer Note 69 A(c).

b) Amounts receivable from related parties are disclosed in Note 53.

13. Current financial assets - Cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Balances with banks in current accounts	**19.63**	22.83
Cheques and drafts on hand	**0.67**	1.48
Others (stamps on hand)	**0.07**	0.07
Total	**20.37**	24.38

14. Current financial assets - Bank balances other than cash and cash equivalents

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**629.86**	631.86
Earmarked balances with banks#	**1,558.88**	1,488.10
Total	**2,188.74**	2,119.96
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	**111.00**	332.00
Fly ash utilisation reserve fund*	**588.48**	636.63

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
DDUGJY Scheme of the GOI**	**802.49**	466.16
Unpaid dividend account balance	**19.35**	17.68
Amount deposited as per court orders	**5.00**	5.00
Unpaid interest/refund account balance - Bonds	**5.22**	4.69
Payment Security Fund - MNRE	**27.30**	25.89
Unpaid interest on public deposit	**0.03**	0.03
Security with government authorities	**0.01**	0.02
Total	**1,558.88**	1,488.10

* Refer Note 20 (d) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 28 (c) and 29 (a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Company from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Company on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Company.

15. Current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Unsecured	**65.04**	67.61
Employees		
Secured	**73.18**	67.61
Unsecured	**169.45**	169.68
Others		
UnSecured	**0.89**	0.89
Total	**308.56**	305.79
a) Due from Directors and Officers of the Company		
Directors	**0.02**	0.11
Officers	**-**	-
b) Loans to related parties include:		
Key management personnel	**0.02**	0.11
Patratu Vidyut Utpadan Nigam Ltd. (Subsidiary company)	**-**	7.00
Kanti Bijlee Utpadan Nigam Ltd. (Subsidiary company)	**64.33**	60.50
National High Power Test Laboratory Private Ltd. (Joint venture company)	**0.69**	-

c) Other loans represent loans of ₹ **0.89 crore** (31 March 2019: ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employees are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company.

16. Current assets - Other financial assets

₹ Crore

Particulars		As at 31 March 2020	As at 31 March 2019
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**344.78**	342.11
Employees			
Unsecured	**10.45**		12.93
Considered doubtful	**0.06**		0.06
Less: Allowance for bad and doubtful advances	**0.06**		0.06
		10.45	12.93
Others			
Unsecured		**16.93**	-
		372.16	355.04
Claims recoverable			
Unsecured, considered good	**50.19**		45.73
Considered doubtful	**0.12**		15.07
Less: Allowance for doubtful claims	**0.12**		15.07
		50.19	45.73
Unbilled revenue		**11,025.15**	7,870.83
Hedging cost recoverable from beneficiaries		**-**	5.93
Derivative MTM asset		**-**	1.28
Finance lease receivables		**55.23**	49.04
Others		**26.40**	3.99
Total		**11,529.13**	8,331.84

a) Unbilled revenue is net of credits to be passed to beneficiaries at the time of billing and includes ₹ **8,064.11 crore** (31 March 2019: ₹ 6,961.66 crore) billed to the beneficiaries after 31 March for energy sales.

b) Advance to related parties include:

Subsidiary companies	**243.58**	212.76
Joint venture companies	**81.55**	52.50

c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**1.10**	0.83
Aravali Power Company Private Ltd.	**4.83**	2.25
NTPC BHEL Power Projects Private Ltd.	**7.02**	6.44
Meja Urja Nigam Private Ltd.	**7.97**	13.97
Bangladesh India Friendship Power Company Private Ltd.	**-**	0.60

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

17. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2020	As at 31 March 2019
Security deposits (unsecured)		**1,826.13**	1,480.21
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**729.65**	2,043.55
Employees			
Unsecured		**2.67**	6.07
Contractors and suppliers			
Secured	-		1.39
Unsecured	**782.59**		7,020.15
Considered doubtful	**3.23**		3.38
Less: Allowance for bad and doubtful advances	**3.23**		3.38
		782.59	7,021.54
Others			
Unsecured		**44.84**	104.29
		1,559.75	9,175.45
Interest accrued on			
Advance to contractors		**35.26**	45.60
Claims recoverable			
Unsecured, considered good	**4,732.50**		4,095.57
Considered doubtful	**125.00**		134.55
Less: Allowance for doubtful claims	**125.00**		134.55
		4,732.50	4,095.57
Assets held for disposal		**90.84**	100.81
Deferred payroll expenses		**23.78**	26.06
Others		**110.15**	6.19
Total		**8,378.41**	14,929.89

a) Security deposits (unsecured) include ₹ **21.37 crore** (31 March 2019: ₹ 23.48 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **494.47 crore** (31 March 2019: ₹ 299.79 crore) deposited with Courts, ₹ **199.74 crore** (31 March 2019: ₹ 188.44 crore) deposited with LIC for making annuity payments to the land oustees, ₹ **361.74 crore** (31 March 2019: ₹ 275.05 crore) deposited with the Water Resource Department, Govt. of Chhattisgarh for drawl of water and ₹ **500.00 crore** (31 March 2019: ₹ 356.31 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 57 (iii).

b) Advances - Contractors and suppliers - unsecured includes an amount of ₹ **0.60 crore** (31 March 2019: ₹ 5,769.00 crore) paid to Indian Railways to be adjusted against freight payable on coal transportation, pursuant to the agreement entered into with Indian Railways, Ministry of Railways, GOI.

c) Advances - Others include prepaid expenses amounting to ₹ **40.65 crore** (31 March 2019: ₹ 104.06 crore).

d) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.01**	0.01
NTPC BHEL Power Projects Private Ltd.	**1.33**	1.33
Aravali Power Company Private Ltd.	**19.05**	19.05

e) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

f) Asset held for disposal includes an amount of ₹ **89.31 crore** (31 March 2019: ₹ 98.90 crore) in respect of one of the power stations which has since been shut down in compliance to order of Delhi Polution Control Committee (DPCC) dated 25 July 2018. The operations of the station was permanently discontinued w.e.f.15 October 2018 and the assets of the power station are in the process of disposal and/or being utilised at other locations of the Company.

STANDALONE FINANCIAL STATEMENTS

18. Regulatory deferral account debit balances

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
On account of		
Exchange differences	**1,271.27**	68.19
Employee benefits expense	**759.40**	759.40
Deferred tax	**6,265.24**	2,399.12
Ash transportation cost	**826.85**	179.29
Total	**9,122.76**	3,406.00

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.4 (Note 1). Refer Note 64 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations,2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Company has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

19. Equity share capital

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Equity share capital		
Authorised		
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2019)	**10,000.00**	10,000.00
Issued, subscribed and fully paid up		
9,89,45,57,280 shares of par value ₹ 10/- each (9,89,45,57,280 shares of par value ₹10/- each as at 31 March 2019)	**9,894.56**	9,894.56

a) Reconciliation of the shares outstanding at the beginning and at the end of the year:

₹ Crore

Particulars	Number of shares	
	31 March 2020	31 March 2019
At the beginning of the year	**9,89,45,57,280**	8,24,54,64,400
Issued during the year - Bonus shares	**-**	1,64,90,92,880
Outstanding at the end of the year	**9,89,45,57,280**	9,89,45,57,280

b) Terms and rights attached to equity shares:

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) Dividends:

₹ Crore

Particulars	Paid during the year ended	
	31 March 2020	31 March 2019
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2019 of ₹ 2.50 (31 March 2018: ₹ 2.39) per equity share	**2,473.64**	1,970.67
Interim dividend for the year ended 31 March 2020 of ₹ 0.50 (31 March 2019: ₹ 3.58) per equity share	**494.73**	2,951.88

(ii) Dividends not recognised at the end of the reporting period	31 March 2020	31 March 2019
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ 2.65 (31 March 2019: ₹ 2.50) per equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**2,622.06**	2,473.64

d) Details of shareholders holding more than 5% shares in the Company:

Particulars	As at 31 March 2020		As at 31 March 2019	
	No. of shares	%age holding	No. of shares	%age holding
- President of India*	**5,04,80,97,508**	**51.02**	5,58,11,67,271	56.41
- Life Insurance Corporation of India (including shares held in various Funds/Schemes)	**1,03,26,64,560**	**10.44**	1,13,84,46,831	11.51
- ICICI Prudential Mutual Fund	**73,55,85,649**	**7.43**	54,53,42,820	5.51

* Includes 3,10,46,970 (0.32%) shares held by GoI in CPSE ETF Account as at the previous year ended 31 March 2019.

e) **Shares allotted as fully paid up by way of bonus shares:**

The Company had issued 1,64,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

20. Other equity

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Capital reserve	**50.08**	50.08
Securities premium	**2,228.46**	2,228.46
Bonds/debentures redemption reserve	**7,011.43**	7,902.43
Fly ash utilisation reserve fund	**588.48**	636.63
General reserve	**90,182.53**	83,682.53
Retained earnings	**3,664.48**	3,022.42
Reserve for equity instruments through OCI	**(50.58)**	(8.94)
Total	**1,03,674.88**	97,513.61

(a) **Capital reserve**

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance and closing balance	**50.08**	50.08

Capital reserve represents amount received by the Company during 2001-02 as consideration under settlement for withdrawal from an erstwhile JV project. There is no movement in the capital reserve balance during the year. This amount will be utilised as per the provisions of the Companies Act,2013.

(b) Securities premium

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance and closing balance	**2,228.46**	2,228.46

Securities premium is used to record the premium on issue of shares/securities. This amount will be utilised in accordance with the provisions of the Companies Act, 2013. There is no movement in the balance of securities premium during the year.

(c) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	**7,902.43**	7,274.56
Add: Transfer from retained earnings	-	1,732.37
Less: Transfer to retained earnings	**891.00**	1,104.50
Closing balance	**7,011.43**	7,902.43

Ministry of Corporate Affairs has notified Companies (Share Capital and Debentures) Amendment Rules, 2019 on 16 August 2019. As per the amendment, Debenture Redemption Reserve (DRR) is not required to be created in case of Companies whose securities are listed. Accordingly, the Company has not created any Bonds/Debenture Redemption Reserve during the year. Further, the outstanding balance of Bonds / Debenture Redemption Reserve created up to 31 March 2019 shall be written back as and when the respective bonds / debentures are redeemed.

(d) Fly ash utilisation reserve fund

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	**636.63**	631.21
Add: Transferred during the year:		
Revenue from operations	**165.45**	172.02
Other income	**35.50**	40.65
Less: Utilised during the year:		
Capital expenditure	**4.81**	1.42
Employee benefits expense	-	18.42
Other expenses	**210.97**	178.65
Tax Expense	**33.32**	8.76
Closing balance	**588.48**	636.63

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

During the year, proceeds of ₹ **165.45 crore** (31 March 2019: ₹ 172.02 crore) from sale of ash/ash products, ₹ **35.50 crore** (31 March 2019: ₹ 40.65 crore) towards income on investment have been transferred to fly ash utilization reserve fund. An amount of ₹ **249.10 crore** (31 March 2019: ₹ 207.25 crore) has been utilized from the fly ash utilization reserve fund on expenses incurred for activities as specified in the aforesaid notification of MOEF.

The fund balance of ₹ **588.48 crore** (31 March 2019: ₹ 636.63 crore) has been kept in 'Bank balances other than cash & cash equivalents' (Note 14). Refer Note 18 & 64 for ash transportation cost.

(e) General reserve

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	**83,682.53**	80,831.63
Add : Transfer from retained earnings	**6,500.00**	4,500.00
Less : Utilised for issuance of Bonus Shares	**-**	1,649.10
Closing balance	**90,182.53**	83,682.53

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act, 2013. The Company had issued 1,64,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares during the previous year ended 31 March 2019 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

(f) Retained earnings

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	**3,022.42**	2,508.57
Add: Profit for the year as per statement of profit and loss	**10,112.81**	11,749.89
Transfer from bonds/debentures redemption reserve	**891.00**	1,104.50
Less: Transfer to bonds/debentures redemption reserve	**-**	1,732.37
Transfer to general reserve	**6,500.00**	4,500.00
Final dividend paid	**2,473.64**	1,970.67
Tax on final dividend paid	**506.62**	400.96
Interim dividend paid	**494.73**	2,951.88
Tax on interim dividend paid	**101.18**	599.53
	3,950.06	3,207.55
Items of other comprehensive income recognised directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	**(285.58)**	(185.13)
Closing balance	**3,664.48**	3,022.42

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act, 2013.

(g) Reserve for equity instruments through OCI

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	**(8.94)**	7.80
Add: Fair value gain/(loss) on equity instruments for the year	**(41.64)**	(16.74)
Closing balance	**(50.58)**	(8.94)

The Company has elected to recognize changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The Company transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognized.

21. Non-current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[X]	**188.98**	188.96
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[X]	**171.74**	171.72
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VII]	**319.93**	319.80
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VII]	**410.39**	410.22
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,009.35**	4,010.36
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[XI]	**720.70**	720.46
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[X]	**133.48**	133.46
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[X]	**49.91**	49.90
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[XI]	**4,522.50**	-
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement) [III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement) [VI]	**4,069.62**	4,068.88
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VII]	**256.14**	256.04
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VII]	**93.73**	93.69
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[XI]	**696.89**	696.67

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[XI]	**836.60**	836.51
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[XI]	**1,072.62**	1,072.80
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[XI]	**511.80**	511.81
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[X]	**112.02**	111.99
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[X]	**68.21**	68.19
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VIII]	**313.13**	313.11
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VIII]	**1,047.85**	1,047.48
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.54**	751.34
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VII]	**500.03**	499.83
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VII]	**213.92**	213.84
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VII]	**542.08**	542.07
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.02
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VII]	**217.46**	217.46
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹ 5.00 and ₹ 5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[IX]	**10,323.61**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VII]	**301.79**	301.79

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**508.36**	508.14
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VII]	**406.96**	406.91
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[XI]	**3,277.51**	-
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement)[XI]	**716.36**	716.09
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[X]	**1,146.01**	1,145.73
8.33% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 February 2021 (Fifty Ninth Issue - Private Placement)[XI]	**660.46**	660.12
8.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 19 January 2021 (Thirty Seventh Issue - Private placement)[III]	**317.20**	317.17
8.18% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 December 2020 (Fifty Eight Issue - Private Placement)[XI]	**306.12**	306.02
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 March 2020 (Thirty Third Issue- Private Placement)[III]	**-**	209.97
8.78% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 9 March 2020 (Thirty First Issue- Private Placement)[III]	**-**	531.27
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**294.50**	368.12
7.89% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 6 May 2019 (Thirtieth Issue - Private Placement)[III]	**-**	701.82
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VII]	**69.42**	74.75
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VII]	**69.46**	74.80

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)[III]	**64.04**	69.37
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**64.22**	69.56
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**64.17**	69.51
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**89.73**	97.20
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	**58.66**	63.99
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	**58.52**	63.84
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	**93.61**	102.12
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	**116.96**	127.59
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	**74.50**	81.95
8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9 September 2011 and ending on 9 March 2021 (Twenty Fourth Issue - Private Placement)[IV]	**51.06**	102.12

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5 August 2011 and ending on 5 February 2021 (Twenty Third Issue - Private Placement)[IV]	**51.03**	102.07
8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 July 2011 and ending on 2 January 2021 (Twenty Second Issue - Private Placement)[IV]	**51.01**	102.02
7.7125% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 August 2010 and ending on 2 February 2020 (Twenty First Issue - Private Placement)[V]	**-**	101.90
	41,619.18	35,659.44
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**3,026.26**	2,771.92
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,220.99**	3,937.18
4.250 % Fixed rate notes due for repayment on 26 February 2026	**3,800.85**	3,482.35
4.375 % Fixed rate notes due for repayment on 26 November 2024	**3,860.77**	3,541.49
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,415.75**	-
4.750 % Fixed rate notes due for repayment on 3 October 2022	**3,803.00**	3,570.43
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**2,128.81**	2,127.39
7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021	**2,090.59**	2,087.83
5.625 % Fixed rate notes due for repayment on 14 July 2021	**3,848.76**	3,530.47
	30,195.78	25,049.06
Term loans		
From Banks		
Unsecured		
Foreign currency loans	**9,923.06**	10,245.60
Rupee term loans	**62,632.60**	47,237.27
From Others		
Unsecured		
Foreign currency loans (guaranteed by GOI)	**1,902.42**	1,893.26
Other foreign currency loans	**2,890.91**	2,966.25
Rupee term loans	**4,668.69**	5,570.58

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Lease obligations		
Secured	**21.97**	1.40
Unsecured	**807.70**	185.01
	1,54,662.31	1,28,807.87
Less: Current maturities of		
Bonds-secured	**1,542.00**	1,782.00
Foreign currency loans from banks - unsecured	**1,252.86**	2,568.74
Rupee term loans from banks - unsecured	**1,966.91**	1,726.61
Foreign currency loans from others - unsecured (guaranteed by GOI)	**207.24**	185.95
Other foreign currency loans from others - unsecured	**389.31**	534.48
Rupee term loans from others - unsecured	**690.19**	898.52
Lease obligations - secured	**8.75**	0.75
Lease obligations - unsecured	**97.66**	35.35
Interest accrued but not due on borrowings	**1,968.69**	1,377.39
Total	**1,46,538.70**	1,19,698.08

a) **Details of terms of repayment and rate of interest**

i) Unsecured foreign currency loans (guaranteed by GOI) - Others carry fixed rate of interest ranging from 1.80% p.a. to 2.30% p.a. and are repayable in 13 to 22 semi annual installments as of 31 March 2020.

ii) Unsecured foreign currency loans – Banks include loans of ₹ **132.59 crore** (31 March 2019: ₹ 243.97 crore) which carry fixed rate of interest of 1.88% p.a. and loans of ₹ **9,790.47 crore** (31 March 2019: ₹ 10,001.63 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M JPY LIBOR. These loans are repayable in 3 to 17 semi-annual/annual installments as of 31 March 2020, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iii) Unsecured foreign currency loans – Others include loans of ₹ **2,641.92 crore** (31 March 2019: ₹ 2,906.14 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **248.99 crore** (31 March 2019: ₹ 60.11 crore) which carry floating rate of interest linked to 6M EURIBOR/6M JPY LIBOR. These loans are repayable in 3 to 18 semi annual installments as of 31 March 2020, commencing after moratorium period if any, as per the terms of the respective loan agreements.

iv) Unsecured rupee term loans from banks and others carry interest rate ranging from 6.571% p.a. to 8.30% p.a. with monthly/half-yearly rests. These loans are repayable in quarterly/half-yearly/yearly installments as per the terms of the respective loan agreements. The repayment period extends from a period of 7 to 15 years after a moratorium period of 3 to 6 years.

b) The lease obligations are repayable in installments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

<u>Details of securities</u>

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of the title deeds of the immovable properties pertaining to Sipat Super Thermal Power Project.

V Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai, (II) Hypothecation of all the present and future movable assets (excluding receivables) of Barh Super Thermal Power Project on first pari-passu charge basis, ranking pari passu with charge already created in favour of Trustee for other Series of Bonds and (III) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Ramagundam Super Thermal Power Station by extension of charge already created.

VI Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VII Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VIII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

IX Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

X Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

XI Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

XII The secured lease obligations are secured against assets taken on lease.

XIII Security cover mentioned at Sl. No. I to XI is above 100% of the debt securities outstanding.

22. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	10.35	6.41
- creditors other than micro and small enterprises	57.66	41.76
Total	**68.01**	48.17

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 67.

b) Amounts payable to related parties are disclosed in Note 53.

23. Non-current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Payable for capital expenditure		
- micro and small enterprises	13.14	10.85
- other than micro and small enterprises	636.10	1,245.07
Deposits from contractors and others	1.64	1.64
Others	1.36	56.73
Total	**652.24**	1314.29

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 67.
b) Others include ₹ **Nil** (31 March 2019: ₹ 55.21 crore) being the amount payable to the Department of Water Resource, Government of Odisha pursuant to the Resolution No. 11011 dated 18 May 2015.
c) Amounts payable to related parties are disclosed in Note 53.

24. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Provision for employee benefits	**635.69**	588.74

Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 50.

25. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Deferred tax liability		
Difference in book depreciation and tax depreciation	**19,505.52**	14,536.74
Less: Deferred tax assets		
Provisions	**1,022.88**	1,455.48
Statutory dues	**325.21**	277.25
Leave encashment	**403.55**	321.28
MAT credit entitlement	**9,639.70**	8,257.38
Others	**20.20**	25.21
Total	**8,093.98**	4,200.14

a) Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.
b) The Company has been recognising MAT credit entitlement available to the Company in future as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.
c) Disclosures as per Ind AS 12 - 'Income Taxes' are provided in Note 49.
d) Others mainly include deferred tax assets on account of payments related to voluntary retirement schemes.

Movement in deferred tax balances

As at 31 March 2020

₹ Crore

Particulars	As at 1 April 2019	Recognised in statement of profit and loss	Recognised in OCI	Others	As at 31 March 2020
Deferred tax liability					
Difference in book depreciation and tax depreciation	14,536.74	5,104.14	-	(135.36)	19,505.52
Less: Deferred tax assets					
Provisions	1,455.48	(431.89)	-	(0.71)	1,022.88
Statutory dues	277.25	47.96	-	-	325.21
Leave encashment	321.28	82.27	-	-	403.55
MAT credit entitlement	8,257.38	1,382.32	-	-	9,639.70
Others	25.21	(5.01)	-	-	20.20
Net tax (assets)/liabilities	4,200.14	4,028.49	-	(134.65)	8,093.98

STANDALONE FINANCIAL STATEMENTS

As at 31 March 2019

₹ Crore

Particulars	Net balance As at 1 April 2018	Recognised in statement of profit and loss	Recognised in OCI	Others	Net balance As at 31 March 2019
Deferred tax liability					
Difference in book depreciation and tax depreciation	11,996.40	2,646.65	-	(106.31)	14,536.74
Less: Deferred tax assets					
Provisions	1,103.19	353.43	-	(1.14)	1,455.48
Statutory dues	542.84	(265.59)	-	-	277.25
Leave encashment	273.35	47.93	-	-	321.28
MAT credit entitlement	-	8,257.38	-	-	8,257.38
Others	29.86	21.33	-	(25.98)	25.21
Net tax (assets)/liabilities	10,047.16	(5,767.83)	-	(79.19)	4,200.14

26. Current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Loans repayable on demand		
From banks		
Unsecured		
Cash credit	**12.86**	-
Unsecured		
Cash credit	**1,217.35**	2.90
Other loans		
Unsecured		
Commercial paper	**12,819.15**	15,373.19
Total	**14,049.36**	15,376.09

(a) Secured loans from banks repayable on demand are secured by first (hypothecation) charge on stock / stores / spares and other current assets (excluding receivables) paripassu with other consortium banks and trustees for bond holders and first (hypothecation) charge on receivables ranking pari passu with consortium banks.

(b) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2020 amounting to ₹ **130.85 crore** (31 March 2019 : ₹126.81 crore)

(c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

27. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	**495.70**	353.41
- creditors other than micro and small enterprises	**8,504.93**	7,197.53
Total	**9,000.63**	7,550.94

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 67.

b) Amounts payable to related parties are disclosed in Note 53.

28. Current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Current maturities of non-current borrowings		
Bonds - Secured	**1,542.00**	1,782.00
From Banks		
Unsecured		
Foreign currency loans	**1,252.86**	2,568.74
Rupee term loans	**1,966.91**	1,726.61
From Others		
Unsecured		
Foreign currency loans (guaranteed by GOI)	**207.24**	185.95
Other foreign currency loans	**389.31**	534.48
Rupee term loans	**690.19**	898.52
	6,048.51	7,696.30
Current maturities of lease obligations - Secured	**8.75**	0.75
Current maturities of lease obligations - Unsecured	**97.66**	35.35
Interest accrued but not due on borrowings	**1,968.69**	1,377.39
Unpaid dividends	**19.35**	17.69
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**5.55**	5.01
Unpaid bond refund money-Tax free bonds	**0.24**	0.26
Book overdraft	**-**	10.54
Payable to customers	**40.53**	162.27
Payable for capital expenditure		
- micro and small enterprises	**209.82**	216.84
- other than micro and small enterprises	**13,211.64**	13,393.09
Hedging gain payable to beneficiaries	**-**	7.21
Other payables		
Deposits from contractors and others	**171.05**	190.69
Payable to employees	**954.73**	772.08
Payable to solar Payment Security Fund	**27.30**	25.89
Others	**951.73**	990.72
Total	**23,715.74**	24,902.27

a) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 21.

b) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund has been transferred.

c) 'Other payables - Others' mainly includes ₹ **410.27 crore** (31 March 2019: ₹ 472.27 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹ **380.48 crore** (31 March 2019: ₹ 319.74 crore) payable to the Department of Water Resource, Government of Odisha and amount payable to hospitals, etc.

d) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

e) Disclosures as required under the Companies Act,2013 / MSMED Act, 2006 are provided in Note 67.

f) Amounts payable to related parties are disclosed in Note 53.

29. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Advances from customers and others	**611.81**	183.45
Other payables		
Statutory dues	**659.09**	500.89
Total	**1,270.90**	684.34

(a) Advance received for the DDUGJY (including interest thereon) of ₹ **460.98 crore** (31 March 2019: ₹ 58.28 crore) is included in 'Advance from customers and others'. Refer Note 28 (c). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 10.

30. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Provision for		
Employee benefits	**1,523.26**	1,244.92
Obligations incidental to land acquisition	**3,506.01**	3,499.74
Tariff adjustment	**190.68**	98.77
Others	**1,610.27**	1,996.93
Total	**6,830.22**	6,840.36

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 50.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 57.

c) Provision for others mainly comprise ₹**101.05 crore** (31 March 2019: ₹ 85.14 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 59), ₹ **1,506.83 crore** (31 March 2019: ₹ 1,908.43 crore) towards provision for cases under litigation and ₹ **2.39 crore** (31 March 2019: ₹ 3.36 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

31. Deferred revenue

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
On account of		
Income from foreign currency fluctuation	**2,672.30**	1,602.20
Government grants	**570.24**	537.17
Total	**3,242.54**	2,139.37

a) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.15 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

b) Government grants represent unamortised portion of grant received. This includes ₹ **543.61 crore** (31 March 2019: ₹ 535.38 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities. Also Refer Note 47 with regard to adjustment of grant due to rectification in respect of depreciation on solar/wind power projects.

32. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Energy sales (including electricity duty)		**93,937.48**	86,420.90
Sale of energy through trading		**2,903.59**	2,894.74
Consultancy, project management and supervision fee		**245.17**	215.96
Lease rentals on assets on operating lease		**156.18**	233.63
Sale of Captive coal to Subsidiary company		**200.91**	-
		97,443.33	89,765.23
Sale of fly ash/ash products	**165.45**		172.02
Less: Transferred to fly ash utilisation reserve fund	**165.45**		172.02
		-	-
Other operating revenues			
Interest from beneficiaries		**127.09**	90.02
Energy internally consumed		**76.02**	64.07
Interest income on assets under finance lease		**59.90**	70.84
Recognised from deferred revenue - government grant		**(5.95)**	40.58
Provisions for tariff adjustments written back		**-**	276.69
		257.06	542.20
Total		**97,700.39**	90,307.43

a) (i) The CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of projects declared commercial w.e.f. 1 April 2019 and projects where tariff applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in the tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019. The amount provisionally billed is ₹ **91,339.38 crore** (31 March 2019: ₹ 88,278.09 crore).

(ii) Sales have been provisionally recognized at ₹ **91,491.55 crore** (31 March 2019: ₹ 89,007.64 crore) on the said basis.

b) Sales include ₹ **1,768.88 crore** (31 March 2019: (-) ₹ 0.02 crore) on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004. The current year amount is on account of income tax liability determined under Vivad se Vishwas Scheme notified under Direct Tax Vivad se Vishwas Act 2020. Sales also include ₹**79.97 crore** (31 March 2019: ₹ 82.68 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019. Also refer Note 49(II)(b).

c) Sales include ₹ **31.59 crore** (31 March 2019: (-) ₹ 2,775.82 crore) pertaining to previous years recognized based on the orders issued by the CERC/Appellate Tribunal for Electricity (APTEL).

d) Pending notification of separate Regulations by CERC for determining input price of coal from captive mines, coal extracted from Company's captive mines under operation have been provisionally accounted considering the notified price of Coal India Ltd. for equivalent grade of coal, as provided in the CERC Tariff Regulations,2019. The supply of coal from such mines under operation to a subsidiary company are priced as per these principles and disclosed as ' Sale of captive coal to subsidiary company'.

e) Energy sales include electricity duty amounting to ₹ **989.29 crore** (31 March 2019: ₹ 904.35 crore).

f) Energy sales are net of rebate to beneficiaries amounting to ₹ **433.84 crore** (31 March 2019: ₹ 815.80 crore).

g) Other operating revenue includes ₹ **76.02 crore** (31 March 2019: ₹ 64.07 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 38.

h) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover from /pay to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ **127.09 crore** (31 March 2019: ₹ 90.02 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 38.

i) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extened, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease.

j) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition date to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

k) 'Recognized from deferred revenue-government grant' includes impact of reduction in recognition of grant for the period upto 31 March 2019 amounting to ₹ 33.32 crore corresponding to reduction in depreciation. Refer Note 47.

33. Other income

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Interest from			
Financial assets at amortised cost			
Loan to subsidiary companies		**24.18**	24.30
Loan to employees		**64.47**	64.81
Deposits with banks		**26.24**	39.87
Deposits with banks out of fly ash utilisation reserve fund	**35.50**		40.65
Less : Transferred to fly ash utilisation reserve fund	**35.50**		40.65
		-	-
Deposits with banks - DDUGJY funds	**24.24**		27.04
Less : Transferred to DDUGJY advance from customers	**24.24**		27.04
		-	-
Advance to contractors		**46.46**	41.83
Income tax refund		**55.58**	-
Others		**25.20**	24.82
Dividend from			
Non-current investments in			
Subsidiary companies		**-**	20.00
Joint venture companies		**205.60**	99.39
Equity instruments designated at fair value through OCI		**4.80**	4.80
Other non-operating income			
Late payment surcharge from beneficiaries		**1,633.20**	1,299.28
Hire charges for equipment		**1.90**	1.56
Sale of scrap		**66.28**	123.26
Gain on sale of current investments measured at fair value through profit or loss		**2.80**	3.48
Miscellaneous income		**183.44**	138.84
Profit on de-recognition of property, plant and equipment		**12.25**	2.72
Provisions written back			
Impairment of investments in joint venture companies		**36.28**	-
Doubtful loans, advances and claims		**24.91**	20.39
Shortage in inventories		**20.81**	8.40
Obsolescence in inventories		**6.73**	4.17
Arbitration cases		**374.18**	1.93
Others		**8.13**	4.64
		2,823.44	1,928.49
Less: Transferred to expenditure during construction period (net) - Note 39		**44.18**	50.07
Transferred to expenditure during development of coal mines (net) - Note 40		**1.24**	6.29
Total		**2,778.02**	1,872.13

a) 'Interest from others' includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land losers.
b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) 'Provisions written back - Arbitration cases' include an amount of ₹ **356.31 crore** (31 March 2019: Nil) pertaining to dispute pertaining to movement of coal by the operator. Refer Note 57(iii)(b).
d) 'Provisions written back - Others' include provision for shortage in construction stores and shortage in property, plant and equipment.

34. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Coal	**51,609.68**	48,970.01
Gas	**1,988.36**	3,026.39
Naptha	**0.57**	28.28
Oil	**643.21**	469.06
Total	**54,241.82**	52,493.74

35. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Salaries and wages	**4,951.96**	4,837.92
Contribution to provident and other funds	**578.68**	758.69
Staff welfare expenses	**568.66**	595.92
	6,099.30	6,192.53
Less: Allocated to fuel inventory	**284.93**	274.56
Transferred to expenditure during construction period (net)- Note 39	**705.85**	903.26
Transferred to expenditure during development of coal mines (net) - Note 40	**66.17**	97.10
Transferred to fly ash utilisation reserve fund	**-**	18.42
Reimbursements for employees on deputation	**116.75**	119.30
Total	**4,925.60**	4,779.89

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 50.

36. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Finance costs on financial liabilities measured at amortised cost		
Bonds	**3,215.53**	2,762.43
Foreign currency term loans	**369.11**	411.07
Rupee term loans	**4,340.87**	4,016.98
Foreign currency bonds/notes	**1,426.43**	1,314.71
Cash credit	**35.30**	60.15
Unwinding of discount on vendor liabilities	**118.09**	99.58
Commercial papers	**865.54**	553.91
	10,370.87	9,218.83
Interest on non financial items	**21.33**	1.98
Exchange differences regarded as an adjustment to borrowing costs	**764.38**	156.43
Other borrowing costs		
Guarantee fee	**22.68**	28.74
Others	**12.99**	10.78
	35.67	39.52
Sub-total	**11,192.25**	9,416.76
Less: Transferred to expenditure during construction period (net) - Note 39	**4,182.54**	4,430.26
Transferred to expenditure during development of coal mines (net) - Note 40	**227.74**	269.76
Total	**6,781.97**	4,716.74

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans / bonds/ notes.
b) Refer Note 66 w.r.t. Interest expense relating to lease obligations.

37. Depreciation and amortization expense

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
On property, plant and equipment - Note 2	**9,589.88**	8,055.58
On intangible assets - Note 4	**50.77**	26.28
	9,640.65	8,081.86
Less:		
Allocated to fuel inventory	**562.90**	453.29
Transferred to expenditure during construction period (net) - Note 39	**201.13**	117.71
Transferred to expenditure during development of coal mines (net) - Note 40	**34.75**	51.57
Adjustment with deferred revenue from deferred foreign currency fluctuation	**219.02**	204.93
Total	**8,622.85**	7,254.36

a) Refer Note 66 w.r.t. Depreciation expense of right of use assets.

38. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Power charges	**440.33**		842.98
Less: Recovered from contractors and employees	**35.77**		30.59
		404.56	812.39
Water charges		**708.57**	566.49
Cost of captive coal produced		**1,349.68**	786.40
Stores consumed		**78.86**	86.31
Rent	**7.84**		14.02
Less: Recoveries	**0.01**		0.47
		7.83	13.55
Repairs and maintenance			
Buildings	**291.72**		268.26
Plant and equipment	**2,638.88**		2,443.04
Others	**374.55**		358.64
		3,305.15	3,069.94
Load dispatch centre charges		**47.20**	34.01
Insurance		**142.91**	120.77
Interest to beneficiaries		**17.07**	-
Rates and taxes		**127.20**	99.40
Water cess and environment protection cess		**17.37**	3.96
Training and recruitment expenses	**48.19**		43.05
Less: Receipts	**0.36**		1.92
		47.83	41.13
Communication expenses		**74.69**	74.27
Travelling expenses		**249.55**	252.55
Tender expenses	**7.93**		6.84
Less: Receipt from sale of tenders	**1.04**		2.31
		6.89	4.53

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Payment to auditors		4.88	4.40
Advertisement and publicity		18.75	20.52
Electricity duty		938.24	904.28
Security expenses		908.18	832.27
Entertainment expenses		69.12	56.76
Expenses for guest house	53.93		46.47
Less: Recoveries	0.95		0.69
		52.98	45.78
Education expenses		59.42	54.79
Donation		8.00	8.00
Ash utilisation and marketing expenses		858.73	342.60
Directors sitting fee		0.73	0.73
Professional charges and consultancy fee		99.28	84.57
Legal expenses		49.41	46.14
EDP hire and other charges		36.71	27.07
Printing and stationery		6.14	9.99
Oil and gas exploration expenses		0.14	0.47
Hiring of vehicles		100.22	102.40
Reimbursement of LC charges on sales realisation		-	0.01
Net loss/(gain) in foreign currency transactions and translations		953.52	(55.94)
Cost of hedging		(0.99)	(0.63)
Derivatives MTM loss/(gain) (net)		1.28	2.46
Horticulture expenses		60.09	54.74
Hire charges of helicopter/aircraft		0.90	12.36
Hire charges of construction equipment		14.34	11.52
Transport vehicle running expenses		6.70	7.58
Demurrage charges		-	0.40
Loss on de-recognition of property, plant and equipment		59.96	173.84
Miscellaneous expenses		128.30	181.21
		11,020.39	8,894.02
Less: Allocated to fuel inventory		1,923.25	560.43
Transferred to expenditure during construction period (net) - Note 39		660.26	1,124.63
Transferred to expenditure during development of coal mines (net) - Note 40		82.37	857.75
Transferred to derivative MTM loss/(gain) recoverable/(payable) from/to beneficiaries		1.28	2.46
Transferred to fly ash utilisation reserve fund		210.97	187.41
Transferred to corporate social responsibility expenses		47.97	44.23
		8,094.29	6,117.11
Corporate Social Responsibility (CSR) expenses		303.79	281.45

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Provisions for		
Tariff adjustments	**91.91**	45.36
Impairment of investments	**41.48**	162.42
Obsolescence in inventories	**12.24**	35.98
Shortages in inventories	**20.24**	98.83
Unserviceable capital works	**39.21**	53.60
Unfinished minimum work programme for oil and gas exploration	**15.91**	11.98
Arbitration cases	**39.23**	454.41
Shortages in construction stores	**1.12**	1.86
Doubtful loans, advances and claims	**2.44**	285.27
Others	**1.95**	0.36
	265.73	1,150.07
Total	**8,663.81**	7,548.63

a) During the development stage of mine, transfer price of coal extracted from Company's captive mine has been determined considering the notified price of Coal India Ltd. for equivalent grade of coal. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 40).

b) Details in respect of payment to auditors:

As auditor		
Audit fee	**1.91**	1.76
Tax audit fee	**0.65**	0.61
Limited review	**1.14**	1.05
In other capacity		
Other services (certification fee)	**0.51**	0.63
Reimbursement of expenses	**0.67**	0.35
Total	**4.88**	4.40

Payment to the auditors includes ₹ **0.33 crore** (31 March 2019: ₹ 0.24 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹**17.07 crore** (31 March 2019: ₹ Nil) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions for arbitration cases includes an amount of ₹ **0.16 crore** (31 March 2019: 394.07 crore) pertaining to the dispute with the operator referred in Note 57(iii)(b) estimated and provided / updated against the award pronounced by the arbitral tribunal for which the Company has filed an appeal before Hon'ble High Court of Delhi.

f) Provisions for shortages in stores include provision for shortage of coal observed on physical verification, beyond the Company's norms, amounting to ₹ **0.24 crore** (31 March 2019: ₹ 75.32 crore).

g) Provisions - Others include provision for doubtful debts and shortages in property, plant and equipment.

39. Expenditure during construction period (net) *

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
A. Employee benefits expense			
Salaries and wages		**575.35**	727.58
Contribution to provident and other funds		**56.92**	102.76
Staff welfare expenses		**73.58**	72.92
Total (A)		**705.85**	903.26
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**1,122.28**	1,260.04
Foreign currency term loans		**129.13**	193.27
Rupee term loans		**1,827.64**	2,106.39
Foreign currency bonds/notes		**531.84**	648.45
Unwinding of discount on vendor liabilities		**57.46**	81.75
Exchange differences regarded as an adjustment to borrowing costs		**493.08**	124.71
Other borrowing costs - others		**21.11**	15.65
Total (B)		**4,182.54**	4,430.26
C. Depreciation and amortization expense		**201.13**	117.71
D. Other expenses			
Power charges	**286.61**		721.15
Less: Recovered from contractors and employees	**7.31**		6.06
		279.30	715.09
Water charges		**31.72**	1.76
Rent		**1.39**	2.29
Repairs and maintenance			
Buildings	**6.18**		3.91
Plant and equipment	**0.37**		0.66
Others	**94.15**		111.32
		100.70	115.89
Insurance		**1.64**	1.28
Rates and taxes		**33.87**	10.46
Communication expenses		**8.67**	11.26
Travelling expenses		**36.43**	46.33
Tender expenses		**7.17**	0.70
Advertisement and publicity		**0.35**	0.65
Security expenses		**88.93**	102.40
Entertainment expenses		**5.69**	6.10
Expenses for guest house		**6.86**	5.67
Professional charges and consultancy fee		**7.27**	12.32
Legal expenses		**7.49**	6.65
EDP hire and other charges		**2.00**	2.34
Printing and stationery		**0.47**	1.03
Miscellaneous expenses		**40.31**	82.41
Total (D)		**660.26**	1,124.63

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
E. Less: Other income		
Interest from advances to contractors	**25.77**	25.77
Interest others	**14.39**	14.64
Hire charges for equipment	**0.29**	1.14
Sale of scrap	**0.23**	4.04
Miscellaneous income	**3.50**	4.48
Total (E)	**44.18**	50.07
F. Net actuarial losses on defined benefit plans	**11.45**	(0.88)
Grand total (A+B+C+D-E+F) **	**5,717.05**	6,524.91

* Other than for expenditure during development of coal mines- (Note 40)
** Carried to capital work-in-progress - (Note 3)

40. Expenditure during development of coal mines (net)

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
A. Employee benefits expense			
Salaries and wages		**52.90**	77.11
Contribution to provident and other funds		**4.89**	9.44
Staff welfare expenses		**8.38**	10.55
Total (A)		**66.17**	97.10
B. Finance costs			
Finance costs on financial liabilities measured at amortized cost			
Bonds		**64.07**	67.56
Rupee term loans		**154.67**	201.97
Unwinding of discount on vendor liabilities		**8.92**	0.09
Other borrowing costs - others		**0.08**	0.14
Total (B)		**227.74**	269.76
C. Depreciation and amortization expense		**34.75**	51.57
D. Other expenses			
Power charges	**1.43**		0.87
Less: Recovered from contractors and employees	**0.03**		0.13
		1.40	0.74
Rent		**0.44**	1.28
Repairs and maintenance			
Buildings	**0.65**		0.86
Plant and equipment			0.55
Others	**4.45**		2.42
		5.10	3.83
Cost of captive coal produced		**46.23**	785.42
Insurance		**0.09**	0.04
Rates and taxes		**0.95**	0.81
Communication expenses		**1.30**	1.96

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Travelling expenses	**3.68**	5.52
Advertisement and publicity	**0.46**	0.71
Security expenses	**6.65**	19.80
Entertainment expenses	**0.77**	0.91
Expenses for guest house	**0.74**	1.31
Professional charges and consultancy fee	**5.81**	7.51
Legal expenses	**0.11**	0.35
EDP hire and other charges	**0.38**	0.68
Printing and stationery	**0.15**	0.42
Miscellaneous expenses	**8.11**	26.46
Total (D)	**82.37**	857.75
E. Less: Other income		
Interest from advances to contractors	**0.69**	4.83
Interest others	**0.33**	1.20
Miscellaneous income	**0.22**	0.26
Total (E)	**1.24**	6.29
F. Net actuarial losses on defined benefit plans	**1.06**	(0.10)
Grand total (A+B+C+D-E+F) *	**410.85**	1,269.79

* Carried to capital work-in-progress - (Note 3)

41. Due to outbreak of COVID-19 globally and in India, the Company has made an initial assessment of its likely adverse impact on business and its associated financial risks.The Company is in the business of generation and sale of electricity which is an essential service as emphasized by the Ministry of Power (MOP), Government of India (GOI). By taking a number of proactive steps and keeping in view the safety of all its stakeholders, the Company has ensured the availability of its power plants to generate power and has continued to supply power during the period of lockdown.

On the directions of MOP, the Central Electricity Regulatory Commission (CERC) issued an order dated 3 April 2020 whereby it directed that Late Payment Surcharge (LPSC) shall apply at a reduced rate of 12% p.a. instead of the normal rate of 18% p.a. if any delayed payment beyond 45 days from the date of presentation of the bills falls between 24 March 2020 and 30 June 2020. Accordingly, the LPSC for the year 2020-21 is expected to be lower by ₹ 58.00 crore approximately. Further as per the directions of MOP dated 15 & 16 May 2020, issued in accordance with the announcement of GOI under the Atmanirbhar Bharat special economic and comprehensive package, the Company has decided to defer the capacity charges of ₹2,064.00 crore to DISCOMs for the lock-down period on account of COVID-19 pandemic for the power not scheduled by the DISCOMs, to be payable without interest after the end of the lockdown period in three equal monthly instalments and has allowed a rebate of ₹ 1,363.00 crore on the capacity charges billed during the lock-down period to DISCOMs on account of COVID-19, in the financial year 2020-21. These amounts are provisional and may vary due to reconciliation of related data. Due to the above, there is no material impact on the profits of the Company for the year ended 31 March 2020.

The Company believes that the impact due to the outbreak of COVID-19 is likely to be short-term in nature and does not anticipate any medium to long-term risks in the Company's ability to continue as a going concern and meeting its liabilities as and when they fall due.

Impact assessment of COVID-19 is a continuing process considering the uncertainty involved thereon. The company will continue to closely monitor any material changes to the future economic conditions.

42. a) The Company has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Company sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the

parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

43. The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are sub-judice at various courts. In case the Company gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

44. The environmental clearance ("clearance") granted by the Ministry of Environment and Forest, Government of India (MoEF) for one of the Company's project consisting of three units of 800 MW each, was challenged before the National Green Tribunal (NGT). The NGT disposed off the appeal, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and for referring the matter to the Expert Appraisal Committee ("Committee") for its re-scrutiny, which shall complete the process within six months from the date of NGT order. NGT also directed that the environmental clearance shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier. The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice. All the units of the project have been declared commercial in the earlier years. The carrying cost of the project as at 31 March 2020 is ₹ **15,662.28 crore** (31 March 2019: ₹ 15,598.80 crore). Management is confident that the approval for the project shall be granted, hence no provision is considered necessary.

45. The Company is executing a hydro power project in the state of Uttrakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttrakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2020 is ₹ **163.40 crore** (31 March 2019: ₹ 163.33 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no provision is considered necessary.

46. Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) Consequent to applicability of Ind AS 116-'Leases' w.e.f. 1 April 2019, the accounting policies relating to leases (C.19) have been modified.

ii) Certain other changes have also been made in the policies nos. A, B.3, B.4, C.1, C.3, C.5, C.6, C.8, C.11, C.12, C.13, C.14, C.15, C.16, C.18, C.20, C.27, D.10 and D.11 for improved disclosures. There is no impact on the financial statements due to these changes, however, the policy numbers have been rearranged in the current year as required.

b) Reclassifications and comparative figures

Certain reclassifications have been made to the comparative period's financial statements to enhance comparability with the current year's financial statements.

As a result, certain line items have been reclassified in the balance sheet and statement of cash flows, the details of which are as under:

Items of balance sheet before and after reclassification as at 31 March 2019

₹ Crore

Sl. No.	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Other current assets (Note 17)	15,056.70	(126.81)	14,929.89
	Borrowings - Current (Note 26)	15,502.90	(126.81)	15,376.09

Items of statement of cash flows before and after reclassification for the year ended 31 March 2019

₹ Crore

Sl. No.	Particulars	Amount before reclassification	Reclassification	Amount after reclassification
1	Cash flow from operating activities	16,030.47	126.81	16,157.28
	Cash flow from investing activities	(20,894.22)	-	(20,894.22)
	Cash flow from financing activities	4,827.65	(126.81)	4,700.84

STANDALONE FINANCIAL STATEMENTS

47. The Company was hitherto charging depreciation on all solar and wind power plants following the rates and methodology notified by CERC Tariff Regulations. During the year, on review it was observed that some of the solar / wind power plants of the Company are set up under competitive bidding route and hence CERC Tariff Regulations are not applicable to such plants.

Keeping in view the above, during the year the Company has assessed the useful life of those assets through technical evaluation, for charging depreciation / amortisation of property, plant and equipment. Consequently, the depreciation / amortisation on these assets has been computed retrospectively based on change in useful lives and methodology with cumulative impact given in the current year after rectifying the useful lives and methodology. Due to the above rectification, depreciation and amortisation expenses for the year and the corresponding deferred revenue on account of government grant are lower by ₹ **322.40 crore** (including ₹ 223.18 crore for the period upto 31 March 2019) and ₹ **47.70 crore** (including ₹ 33.32 crore for the period upto 31 March 2019), respectively. Since the impact on account of above rectification is not material to the financial statements, the comparative amounts for the prior periods have not been restated.

48. Disclosure as per Ind AS 2 'Inventories'

(a) Amount of inventories consumed and recognized as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Fuel cost	**54,241.82**	52,493.74
Others (included in Note 38 - Other expenses)	**1,330.91**	1,198.91
Total	**55,572.73**	53,692.65

(b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2020 is ₹ **10,731.86 crore** (31 March 2019: ₹ 5,138.41 crore).

49. Income taxes related disclosures

(I) Disclosure as per Ind AS 12 'Income taxes'

(a) Income tax expense

i) Income tax recognised in the statement of profit and loss

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Current tax expense		
Current year	**2,493.29**	2,955.00
Taxes for earlier years	**2,660.17**	(105.88)
Pertaining to regulatory deferral account balances (A)	**1,022.31**	(1,055.13)
Total current tax expense (B)	**6,175.77**	1,793.99
Deferred tax expense		
Origination and reversal of temporary differences	**5,410.81**	2,489.55
Less: MAT credit entitlement	**1,382.32**	8,257.38
Total deferred tax expense (C)	**4,028.49**	(5,767.83)
Income tax expense (D=B+C-A)	**9,181.95**	(2,918.71)
Pertaining to regulatory deferral account balances	**1,022.31**	(1,055.13)
Total tax expense including tax on movement in regulatory deferral account balances	**10,204.26**	(3,973.84)

ii) **Income tax recognised in other comprehensive income**

₹ Crore

Particulars	**For the year ended**					
	31 March 2020			31 March 2019		
	Before tax	**Tax expense/ (benefit)**	**Net of tax**	Before tax	Tax expense/ (benefit)	Net of tax
- Net actuarial losses on defined benefit plans	**(346.04)**	**(60.46)**	**(285.58)**	(235.98)	(50.85)	(185.13)
- Net gains/(losses) on fair value of equity instruments	**(41.64)**	**-**	**(41.64)**	(16.74)	-	(16.74)
	(387.68)	**(60.46)**	**(327.22)**	(252.72)	(50.85)	(201.87)

iii) **Reconciliation of tax expense and the accounting profit multiplied by India's domestic tax rate**

₹ Crore

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Profit before tax including movement in regulatory deferral account balances	**20,317.07**	7,776.05
Tax using the Company's domestic tax rate of 34.944 % (31 March 2019 - 34.944%)	**7,099.60**	2,717.26
Tax effect of:		
Non-deductible tax expenses	**2.61**	250.67
Tax free income	**(36.76)**	(26.76)
Deferred tax expenses / (income)	**4,028.49**	(5,767.83)
Previous year tax liability	**2,660.17**	(105.88)
Minimum alternate tax adjustments	**(3,549.85)**	(1,041.30)
Total tax expense recognized in the statement of profit and loss	**10,204.26**	(3,973.84)

(b) **Tax losses carried forward**

There are no unused tax losses to be carried forward as on 31 March 2020 and 31 March 2019.

(c) **Dividend distribution tax on proposed dividend not recognised at the end of the reporting period**

For the year ended 31 March 2020, the Directors have recommended the payment of final dividend amounting to ₹ **2,622.06 crore** (31 March 2019: ₹ 2,473.64 crore). The dividend distribution tax on this proposed dividend amounting to ₹ **Nil** (31 March 2019: ₹ 506.62 crore) has not been recognised since the proposed dividend is subject to the approval of share holders in the ensuing annual general meeting. Further, the dividend distribution tax has been withdrawn w.e.f. 1 April 2020 pursuant to the amendment made in the Finance Act, 2020.

(II) **Other disclosures**

(a) In pursuance to Section 115BAA of the Income Tax Act, 1961 announced by Government of India through Taxation Laws (Amendment) Act, 2019, the company has an irrevocable option of shifting to a lower tax rate along with consequent reduction in certain tax incentives including lapse of the accumulated MAT credit. The company has not opted for this option after evaluating the same and continues to recognize the taxes on income as per the earlier provisions.

(b) During the year, the GOI has introduced Vivad se Vishwas Scheme (VsVs) through 'The Direct Tax Vivad Se Vishwas Act, 2020'. The Company has decided to settle its pending Income Tax disputes by opting for the VsVs scheme. The Company has created additional tax provision amounting to ₹ 2,661.47 crore keeping in view the terms & conditions of the scheme. Accordingly, the amount being disclosed under contingent liabilities towards disputes with Income Tax Authorities together with possible reimbursements, has been considered as Nil (Refer Note 69) . Further, the company is in the process of completion of procedural formalities under the scheme and the same will be settled after reconciliation of dues with the income tax department.

(c) In the previous year, for the first time the Company recognized cumulative MAT credit entitlement available to the Company amounting to ₹ 8,257.38 crore, as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability. Out of the above, an amount of ₹7,615.10 crore was recognized as payable to beneficiaries through regulatory deferral account balances.

50. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Company for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Company is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. An amount of ₹ **95.59 crore** (31 March 2019: ₹ 207.93 crore) for the year is recognized as expense on this account and charged to the statement of profit and loss.

(ii) Defined benefit plans:

A. Provident fund

The Company pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Company has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Company has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Net defined benefit (asset)/liability - Current	**(75.05)**	(44.88)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Opening balance	**9,089.80**	8,225.71	**9,134.68**	8,281.07	**(44.88)**	(55.36)
Current service cost recognised in statement of profit and loss	**310.00**	344.37	-	-	**310.00**	344.37
Interest cost/(income)	**704.46**	616.93	**(704.46)**	(616.93)	-	-
Total	**1,014.46**	961.30	**(704.46)**	(616.93)	**310.00**	344.37
Remeasurement loss/(gain):						
Actuarial loss/(gain) arising from:						
Demographic assumptions	**0.05**	-	-	-	**0.05**	-
Financial assumptions	**1.24**	(0.20)	-	-	**1.24**	(0.20)
Experience adjustment	**42.87**	133.61	-	-	**42.87**	133.61
Return on plan assets excluding interest income	-	-	**(74.33)**	(122.93)	**(74.33)**	(122.93)
Total	**44.16**	133.41	**(74.33)**	(122.93)	**(30.17)**	10.48
Other						
Contribution by participants	**822.48**	886.20	**822.48**	886.20	-	-
Contribution by employer	-	-	**310.00**	344.37	**(310.00)**	(344.37)
Benefits paid	**1,266.84**	1,116.82	**1,266.84**	1,116.82	-	-
Closing balance	**9,704.06**	9,089.80	**9,779.11**	9,134.68	**(75.05)**	(44.88)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Company has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **75.05 crore** (31 March 2019: ₹ 44.88 crore) determined through actuarial valuation. Accordingly, Company has not recognised the surplus as an asset, and the actuarial gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Company.

B. Gratuity and pension

a) The Company has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act,1972, as amended.

b) The Company has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities.

The existing schemes stated at (a) and at one of the power stations at (b) above are funded by the Company and are managed by separate trusts. Pension scheme of another power station in respect of employees taken from erstwhile State Government Power Utility is unfunded. The liability for gratuity and the pension schemes as above is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Net defined benefit (asset)/liability :		
Gratuity (funded)	**164.37**	-
Pension (funded)	**203.54**	168.72
Pension (non-funded)	**388.29**	358.68
Total	**756.20**	527.40
Break-up		
Non-current	**363.47**	335.61
Current	**392.73**	191.79

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Opening balance	**2,542.21**	2,586.42	**2,014.81**	1,507.91	**527.40**	1,078.51
Included in profit or loss for the year:						
Current service cost	**100.40**	94.85	**-**	-	**100.40**	94.85
Past service cost	**-**	-	**-**	-	**-**	-
Interest cost (income)	**197.01**	196.57	**(148.38)**	(115.09)	**48.63**	81.48
Total amount recognised in profit or loss for the year	**297.41**	291.42	**(148.38)**	(115.09)	**149.03**	176.33
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**(1.16)**	-	**-**	-	**(1.16)**	-
Financial assumptions	**159.68**	(24.64)	**-**	-	**159.68**	(24.64)
Experience adjustment	**(22.09)**	54.53	**-**	-	**(22.09)**	54.53
Return on plan assets excluding interest income	**-**	-	**(11.89)**	(28.56)	**(11.89)**	(28.56)
Total amount recognised in other comprehensive income	**136.43**	29.89	**(11.89)**	(28.56)	**124.54**	1.33
Out of the above an amount of ₹ **4.38 crore** (31 March 2019: (-) ₹11.75 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by employer	**-**	-	**-**	699.29	**-**	(699.29)
Benefits paid	**343.79**	365.52	**299.02**	336.04	**44.77**	29.48
Closing balance	**2,632.26**	2,542.21	**1,876.06**	2,014.81	**756.20**	527.40

Out of the above net liability , an amount of ₹ **176.26 crore** (31 March 2019: ₹ 54.84 crore) has been adjusted with the amount recoverable from the trust.

C. Post-Retirement Medical Facility (PRMF)

The Company has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Company's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Net defined benefit (asset)/liability - Current (funded)	253.02	-

Movement in net defined benefit (asset)/liability ₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Opening balance	1,635.86	1,350.61	1,635.86	1,200.73	-	149.88
Included in profit or loss:						
Current service cost	42.26	40.36	-	-	42.26	40.36
Past service cost	-	-	-	-	-	-
Interest cost/(income)	126.78	102.65	(115.76)	(91.00)	11.02	11.65
Total amount recognised in profit or loss	169.04	143.01	(115.76)	(91.00)	53.28	52.01
Included in other comprehensive income:						
Remeasurement loss/(gain):						
Actuarial loss/(gain) arising from:						
Demographic assumptions	(0.98)	-	-	-	(0.98)	-
Financial assumptions	114.14	(16.19)	-	-	114.14	(16.19)
Experience adjustment	159.44	242.43	-	-	159.44	242.43
Return on plan assets excluding interest income	-	-	(40.26)	(5.56)	(40.26)	(5.56)
Total amount recognised in other comprehensive income	272.60	226.24	(40.26)	(5.56)	232.34	220.68
Out of the above an amount of ₹8.13 crore (31 March 2019:₹10.77 crore) has been transferred to expenditure during construction period / development of coal mines.						
Other						
Contribution by participants	-	-	32.60	16.02	(32.60)	(16.02)
Contribution by employer	-	-	-	406.55	-	(406.55)
Benefits paid	116.88	84.00	116.88	84.00	-	-
Closing balance	1,960.62	1,635.86	1,707.60	1,635.86	253.02	-

Out of the above net liability , an amount of ₹ **113.30 crore** (31 March 2019: ₹ 22.36 crore) has been adjusted with the amount recoverable from the trust.

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Net defined benefit (asset)/liability (non-funded) :	190.12	174.76
Non-current	168.22	153.70
Current	21.90	21.06

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2020	As at 31 March 2019
Opening balance	174.76	148.93
Included in profit or loss:		
Current service cost	9.92	8.21
Past service cost	-	-
Interest cost /(income)	13.54	11.32
Total amount recognised in profit or loss	23.46	19.53
Included in other comprehensive income:		
Remeasurement loss/(gain):		
Actuarial loss/(gain) arising from:		
Demographic assumptions	(0.06)	-
Financial assumptions	11.51	(1.69)
Experience adjustment	(9.78)	14.66
Return on plan assets excluding interest income	-	-
Total amount recognised in other comprehensive income	1.67	12.97
Other		
Contributions paid by the employer	-	-
Benefits paid	9.77	6.67
Closing balance	190.12	174.76

E. Plan assets

Plan assets comprise the following :

₹ Crore

Particulars	As at 31 March 2020			As at 31 March 2019		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	4,516.05	-	4,516.05	3,975.85	-	3,975.85
Central government securities	1,838.96	-	1,838.96	1,851.20	-	1,851.20
Corporate bonds and term deposits	4,275.18	73.73	4,348.91	4,151.54	74.20	4,225.74
Money market instruments/liquid mutual fund	0.59	-	0.59	5.92	-	5.92
Equity and equity linked investments	114.34	-	114.34	193.94	-	193.94
Investments with insurance companies	-	2,599.46	2,599.46	-	2,377.88	2,377.88
Total (excluding accrued interest)	10,745.12	2,673.19	13,418.31	10,178.45	2,452.08	12,630.53

As at 31 March 2020, an amount of ₹ **280.00 crore** (31 March 2019: ₹ 350.00 crore) is included in the value of plan assets (in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,095.10 crore** (31 March 2019: ₹ 980.08 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	As at 31 March 2020	As at 31 March 2019
Discount rate	6.75%	7.75%
Expected return on plan assets		
Gratuity	6.75%	7.75%
Pension	6.75%	7.75%
PRMF	6.75%	7.75%
Annual increase in costs	6.50%	6.50%
Salary escalation rate	6.50%	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	As at 31 March 2020		As at 31 March 2019	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	(156.74)	167.38	(135.01)	144.47
Annual increase in costs (0.5% movement)	72.75	(68.58)	61.27	(57.70)
Salary escalation rate (0.5% movement)	96.57	(91.08)	85.67	(80.84)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to government bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The Company has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Company intends to maintain the above investment mix in the continuing years.

b) Changes in discount rate

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' assets holdings.

c) Inflation risks

In the pension plans, the pensions in payment are not linked to inflation, so this is a less material risk.

d) Life expectancy

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Company ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Company's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Company actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Company has not changed the processes used to manage its risks from previous periods. The Company uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets consist of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2020					
Gratuity and pension	**288.21**	**266.40**	**677.77**	**1,399.88**	**2,632.26**
Post-retirement medical facility (PRMF)	**115.97**	**143.31**	**512.21**	**1,189.13**	**1,960.62**
Provident fund	**1,132.40**	**955.20**	**2,660.28**	**4,956.18**	**9,704.06**
Other post-employment benefit plans	**21.90**	**20.28**	**53.77**	**94.17**	**190.12**
Total	**1,558.48**	**1,385.19**	**3,904.03**	**7,639.36**	**14,487.06**
31 March 2019					
Gratuity and pension	307.22	348.51	623.57	1,262.91	2,542.21
Post-retirement medical facility (PRMF)	97.87	96.11	261.54	1,180.34	1,635.86
Provident fund	998.65	884.70	2,421.18	4,785.27	9,089.80
Other post-employment benefit plans	21.06	18.58	51.13	83.99	174.76
Total	1,424.80	1,347.90	3,357.42	7,312.51	13,442.63

Expected contributions to post-employment benefit plans for the year ending 31 March 2021 are ₹ **526.54 crore.**

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **15.19 years** (31 March 2019: 15.17 years).

(iii) Other long term employee benefit plans

A. Leave

The Company provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Company which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days. However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **235.44 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2019: ₹ 137.17 crore).

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **10.74 crore** (31 March 2019: ₹ 7.38 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

51. Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **21.91 crore** (31 March 2019: credited to Statement of profit and loss ₹ 20.59 crore).

52. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **4,410.28 crore** (31 March 2019: ₹ 4,700.02 crore).

53. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of related parties:

i) Subsidiary companies:

1. Bhartiya Rail Bijlee Company Ltd.
2. Kanti Bijlee Utpadan Nigam Ltd.
3. NTPC Vidyut Vyapar Nigam Ltd.
4. NTPC Electric Supply Company Ltd.
5. Patratu Vidyut Utpadan Nigam Ltd.
6. Nabinagar Power Generating Company Ltd. (Joint venture company upto 29 June 2018)
7. NTPC Mining Ltd. (w.e.f. 29 August 2019)
8. THDC India Ltd. (w.e.f. 27 March 2020)
9. North Eastern Electric Power Corporation Ltd. (w.e.f. 27 March 2020)

ii) Joint ventures companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Ratnagiri Gas & Power Private Ltd.
6. Aravali Power Company Private Ltd.
7. NTPC BHEL Power Projects Private Ltd.
8. Meja Urja Nigam Private Ltd.
9. Transformers and Electricals Kerala Ltd.
10. National High Power Test Laboratory Private Ltd.
11. Energy Efficiency Services Ltd.
12. CIL NTPC Urja Private Ltd.
13. Anushakti Vidhyut Nigam Ltd.
14. Hindustan Urvarak & Rasayan Ltd.
15. Konkan LNG Ltd. (previously Konkan LNG Private Ltd.)
16. Trincomalee Power Company Ltd.
17. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO, a Subsidiary of the Company

1. KSK Dibbin Hydro Power Private Ltd

iii) Key Management Personnel (KMP):

Whole Time Directors

Mr. Gurdeep Singh	Chairman and Managing Director	
Mr. A.K.Gupta	Director (Commercial)	
Mr. Prakash Tiwari	Director (Operations)	
Mr. A.K.Gautam[1]	Director (Finance)	W.e.f. 18 October 2019
Mr. Saptarshi Roy	Director (Human Resources)	Upto 31 March 2020
Mr. S.K.Roy	Director (Projects)	Upto 30 November 2019
Mr. P.K.Mohapatra	Director (Technical)	Upto 31 July 2019

STANDALONE FINANCIAL STATEMENTS

Mr. K.Sreekant[2]	Director (Finance)	W.e.f. 29 March 2018 to 2 November 2018 and W.e.f. 12 February 2019 to 12 August 2019
Independent Directors		
Dr. Gauri Trivedi	Non-executive Director	Upto 15 November 2019
Mr. Seethapathy Chander	Non-executive Director	Upto 12 June 2019
Mr. M.P.Singh	Non-executive Director	
Mr. Pradeep Kumar Deb	Non-executive Director	
Mr. Shashi Shekhar	Non-executive Director	
Mr. Subhash Joshi	Non-executive Director	
Mr. Vinod Kumar	Non-executive Director	
Dr. K.P.K.Pillay	Non-executive Director	W.e.f. 30 July 2018
Dr. Bhim Singh	Non-executive Director	W.e.f. 30 July 2018
Government Nominee Directors		
Mr. Vivek Kumar Dewangan	Non-executive Director	W.e.f. 28 April 2018
Mr. Ashish Upadhyaya	Non-executive Director	W.e.f. 22 January 2020
Ms. Archana Agarwal	Non-executive Director	W.e.f. 7 August 2018 upto 22 April 2019
Mr. Aniruddha Kumar	Non-executive Director	Upto 30 July 2018
Chief Financial Officer and Company Secretary		
Mr. Sudhir Arya	Chief Financial Officer	Upto 30 July 2019
Ms. Nandini Sarkar	Company Secretary	W.e.f. 1 August 2018
Mr. K.P.Gupta	Company Secretary	Upto 31 July 2018

1. Chief Financial Officer w.e.f. 1 August 2019
2. Holding additional charge, in addition to Director (Finance), Power Grid Corporation of India Ltd.

iv) Post employment benefit plans:

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust

v) Entities under the control of the same government:

The Company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding majority of shares (Note 19). Pursuant to Paragraph 25 and 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. Transactions with these parties are carried out at market terms at arm length basis. The Company has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Ltd., Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd.

vi) Others:

1. NTPC Education and Research Society
2. NTPC Foundation

b) Transactions with the related parties are as follows:

₹ Crore

Particulars	Subsidiary Companies		Joint venture Companies	
	For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019
i) Sales/purchase of goods and services				
- Contracts for works/services for services received by the Company	-	-	1,286.34	1,381.41
- Contracts for works/services for services provided by the company	45.41	43.34	41.55	37.33
- Sale/purchase of goods	2,134.29	1,795.27	38.77	92.47
ii) Sales/purchase of assets	0.50	4.30	3.26	14.34
iii) Deputation of employees	125.66	62.06	223.34	199.87
iv) Dividend received	-	20.00	205.60	99.39
v) Equity contributions made	846.90	698.69	970.57	222.69
vi) Loans granted	143.00	30.00	12.40	-
vii) Interest on loan	24.18	24.30	0.79	0.60
viii) Guarantees received	-	-	18.01	13.99

Note: Refer Note 69 C(b) and (c) for other commitments with subsidiary and joint venture companies

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Transactions with post employment benefit plans		
- Contributions made during the year	824.28	852.01
Compensation to Key management personnel		
- Short term employee benefits	5.07	7.93
- Post employment benefits	0.13	0.15
- Other long term benefits	0.27	0.33
- Termination benefits	1.51	0.35
- Sitting fee	0.73	0.73
Total compensation to key management personnel	7.71	9.49

Transactions with the related parties under the control of the same government:

₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the Company	For the year ended 31 March 2020	For the year ended 31 March 2019
1	Bharat Coking Coal Ltd.	Purchase of coal	1,830.89	1,248.12
2	Central Coalfields Ltd.		4,331.63	2,906.89
3	Eastern Coalfields Ltd.		9,545.38	7,979.87
4	Mahanadi Coalfields Ltd.		4,691.21	4,464.44
5	Northern Coalfields Ltd.		9,895.57	9,429.26
6	South Eastern Coalfields Ltd.		4,903.98	5,328.59
7	Western Coalfields Ltd.		1,035.50	572.32
8	Coal India Ltd.		33.96	288.81
9	Singareni Collieries Company Ltd.		5,855.21	6,854.74
10	Bharat Heavy Electricals Ltd.	Purchase of equipment and erection services	1,004.40	2,245.50
		Purchase of spares	482.12	565.69
		Receipt of maintenance services	1,102.75	1,048.25

₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the Company	For the year ended 31 March 2020	For the year ended 31 March 2019
11	GAIL (India) Ltd.	Purchase of natural gas	**2,226.82**	2,304.37
12	Indian Oil Corporation Ltd.	Purchase of oil products	**1,058.86**	683.17
13	Bharat Petroleum Corporation Ltd.	Purchase of natural gas and oil products	**260.67**	203.36
14	Steel Authority of India Ltd.	Purchase of steel and iron products	**237.15**	202.21
15	REC Ltd.	Consultancy services provided by the Company	**40.29**	0.69
16	RITES Ltd	Receipt of maintenance services	**631.91**	1,085.81
17	Other entities	Purchase of equipments and erection services	**365.55**	209.94
		Purchase of spares	**35.02**	31.25
		Receipt of maintenance services	**273.89**	345.30
		Consultancy and other services provided by the Company	**52.87**	42.39

₹ Crore

Transactions with others listed at (a)(vi) above	For the year ended 31 March 2020	For the year ended 31 March 2019
- Contracts for works/services for services received by the Company	**60.88**	12.43

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Amount recoverable towards loans from		
- Subsidiary companies	**193.00**	177.50
- Joint venture companies	**19.09**	6.00
- Key management personnel	**0.03**	0.12
- Others	**0.60**	0.60
Amount recoverable other than loans from		
- Subsidiary companies	**579.59**	436.84
- Joint venture companies	**109.33**	99.70
- Post employment benefit plans	**37.42**	77.20
- Others	**0.42**	0.14
Amount payable to		
- Joint venture companies	**382.28**	409.57
- Post employment benefit plans	**230.54**	132.18

d) **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	For the year ended 31 March 2020	For the year ended 31 March 2019
Contracts for works/services for services received by the Company			
Utility Powertech Ltd.	Joint Venture Company	**1,099.16**	1,006.00
NTPC BHEL Power Projects Private Ltd.	Joint Venture Company	**99.28**	137.34
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**79.35**	223.51
Contracts for works/services for services provided by the Company			
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**20.82**	26.26
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**10.86**	4.57
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**8.69**	6.46
NTPC SAIL Power Company Ltd	Joint Venture Company	**14.18**	11.10
Meja Urja Nigam Private Limited	Joint Venture Company	**12.05**	13.10
Sale of goods			
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**1,873.19**	1,795.27
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**260.20**	-
Purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture Company	**38.01**	41.68
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint Venture Company	**50.00**	20.00
Aravali Power Company Private Ltd.	Joint Venture Company	**146.83**	71.65
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**-**	20.00
Energy Efficiency Services Ltd.	Joint Venture Company	**4.47**	4.01
Utility Powertech Ltd.	Joint Venture Company	**4.00**	3.50
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**0.30**	0.23
Equity contributions made			
Bhartiya Rail Bijlee Company Ltd.	Subsidiary Company	**53.00**	121.59
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**100.00**	75.00
Patratu Vidyut Utpadan Nigam Ltd.	Subsidiary Company	**264.00**	110.00
Nabinagar Power Generating Company Ltd.	Subsidiary Company	**429.85**	392.10
Meja Urja Nigam Private Ltd.	Joint Venture Company	**262.31**	110.00
Energy Efficiency Services Ltd.	Joint Venture Company	**218.11**	-
NTPC Mining Ltd	Subsidiary Company	**0.05**	-
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint Venture Company	**166.89**	-
NTPC Tamil Nadu Energy Company Ltd.	Joint Venture Company	**12.50**	5.62
Hindustan Urvarak & Rasayan Ltd.	Joint Venture Company	**310.76**	107.07
Loans granted			
Kanti Bijlee Utpadan Nigam Ltd.	Subsidiary Company	**83.00**	30.00
NTPC Vidyut Vyapar Nigam Ltd.	Subsidiary Company	**60.00**	-
National High Power Test Laboratory Private Ltd.	Joint Venture Company	**12.40**	-
Guarantees received			
Utility Powertech Ltd.	Joint Venture Company	**17.80**	13.60
NTPC-GE Power Services Private Ltd.	Joint Venture Company	**0.21**	0.39

e) Terms and conditions of transactions with the related parties

i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

ii) The Company is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd. (UPL), a 50:50 joint venture between the Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Company has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

iii) The Company is seconding its personnel to subsidiary and joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the Company towards superannuation and employee benefits are recovered from these companies.

iv) Loans granted to subsidiaries and joint venture companies are detailed below:

Sl. No.	Name of the subsidiary (S)/ joint venture (JV) company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	Kanti Bijlee Utpadan Nigam Ltd. (S)	**121.00**	10% (quarterly rest)	The loan has been fully repaid / adjusted during the year.	To facilitate progress of ongoing expansion and meeting debt service requirements.	2016-17
		193.00	10% (quarterly rest)	Repayable in six equal semi-annual installments from 30 September 2020.	To sustain ongoing operation activities and meet debt servicing requirements.	2017-18
		150.00	10% (quarterly rest)	Repayable in six equal quarterly installments from 31 December 2021. Loan not yet drawn till 31 March 2020.	For loan repayment, interest payment and to discharge statutory obligations.	2019-20
2	Patratu Vidyut Utpadan Nigam Ltd. (S)	**50.00**	10% (quarterly rest)	The loan has been fully repaid / adjusted during the year.	To sustain ongoing O&M and R&M activities.	2016-17
3	National High Power Test Laboratory Private Ltd. (JV)	**18.40**	10% (quarterly rest)	Principal and interest repayable in twenty semi-annual installments from 30 September 2022 .	For repayment of loans / contractual obligations	2019-20
4	NTPC Vidyut Vypar Nigam Ltd. (S)	**90.00**	10 % (quarterly rest)	Out of the loan granted, an amount of ₹ 60.00 Crore was paid which has been fully repaid / adjusted during the year.	For meeting short term working capital requirement	2019-20

v) Consultancy services provided by the Company to subsidiary and joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

vi) Outstanding balances of subsidiary and joint venture companies at the year-end are unsecured and settlement occurs through banking transaction. These balances other than loans are interest free. The Company has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

vii) Refer Note 56 (b) & (c) in respect of impairment loss on investment in Ratnagiri Gas & Power Private Ltd.and certain other joint venture companies.

viii) Refer Note 69 (C) towards restrictions on disposal of investment and commitment towards further investments in the subsidiary and joint venture companies.

54. Disclosure as per Ind AS 27 'Separate financial statements'

a) Investment in subsidiary companies:*

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2020	As at 31 March 2019
NTPC Electric Supply Company Ltd.	India	100.00	100.00
NTPC Vidyut Vyapar Nigam Ltd.	India	100.00	100.00
Kanti Bijlee Utpadan Nigam Ltd.	India	100.00	100.00
Bhartiya Rail Bijlee Company Ltd.	India	74.00	74.00
Patratu Vidyut Utpadan Nigam Ltd.	India	74.00	74.00
Nabinagar Power Generating Company Ltd.	India	100.00	100.00
NTPC Mining Ltd.	India	100.00	-
THDC India Ltd.	India	74.496	-
North Eastern Electric Power Corporation Ltd.	India	100.00	-

b) Investment in joint venture companies:*

Company name	Country of incorporation	Proportion of ownership interest	
		As at 31 March 2020	As at 31 March 2019
Utility Powertech Ltd.	India	50.00	50.00
NTPC-GE Power Services Private Ltd.	India	50.00	50.00
NTPC-SAIL Power Company Ltd.	India	50.00	50.00
NTPC Tamil Nadu Energy Company Ltd.	India	50.00	50.00
Ratnagiri Gas & Power Private Ltd.	India	25.51	25.51
Konkan LNG Ltd. (formerly Konkan LNG Private Ltd.)	India	14.82	14.82
Aravali Power Company Private Ltd.	India	50.00	50.00
NTPC BHEL Power Projects Private Ltd.	India	50.00	50.00
Meja Urja Nigam Private Ltd.	India	50.00	50.00
Transformers and Electricals Kerala Ltd.	India	44.60	44.60
National High Power Test Laboratory Private Ltd.	India	20.00	20.00
Energy Efficiency Services Ltd.	India	47.15	36.36
CIL NTPC Urja Private Ltd.	India	50.00	50.00
Anushakti Vidhyut Nigam Ltd.	India	49.00	49.00
Hindustan Urvarak and Rasayan Ltd.	India	29.67	29.67
Trincomalee Power Company Ltd.	Srilanka	50.00	50.00
Bangladesh-India Friendship Power Company Private Ltd.	Bangladesh	50.00	50.00

* Equity investments in subsidiary and joint venture companies are measured at cost as per the provisions of Ind AS 27 on 'Separate Financial Statements'.

55. Disclosure as per Ind AS 33 'Earnings per share'

(i) Basic and diluted earnings per share (in ₹)

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
From operations including movement in regulatory deferral account balances (a) **[A/D]**	**10.22**	11.88
From regulatory deferral account balances (b) **[B/D]**	**4.88**	(3.88)
From operations excluding movement in regulatory deferral account balances (a)-(b) **[C/D]**	**5.34**	15.76
Nominal value per share	**10.00**	10.00

(ii) Profit attributable to equity shareholders (used as numerator) (₹ Crore)

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
From operations including movement in regulatory deferral account balances (a) **[A]**	**10,112.81**	11,749.89
From regulatory deferral account balances (b) **[B]**	**4,828.84**	(3,841.34)
From operations excluding movement in regulatory deferral account balances (a)-(b) **[C]**	**5,283.97**	15,591.23

(iii) Weighted average number of equity shares (used as denominator) (Nos.)

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance of issued equity shares	**9,89,45,57,280**	8,24,54,64,400
Bonus equity shares issued during financial year 2018-19*	**-**	1,64,90,92,880
Weighted average number of equity shares for Basic and Diluted EPS **[D]**	**9,89,45,57,280**	9,89,45,57,280

*The Company had issued 1,64,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares during the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

56. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets was carried out and based on such assessment, the Company has accounted impairment losses as under:

a) For the Company, the recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) is value in use and amounts to ₹ **2,39,455.07 crore** (31 March 2019: ₹ 1,64,752.24 crore). The discount rate used for the computation of value in use for the generating plant is **8.00 %** (31 March 2019: 9.33%) and for solar plant is **7.78 %** (31 March 2019: 8.49%).

b) The Company has investments in M/s Ratnagiri Gas & Power Pvt. Ltd. (RGPPL), a joint venture of the Company. RGPPL had incurred losses during last few years which has resulted in erosion of net worth of RGPPL. Also, value of RGPPL's assets had declined significantly more than would be expected as a result of the passage of time or normal use. Further, Power Block (CGU) of RGPPL is not operating at its installed capacity from last many years. The recoverable amount of this investment was assessed at ₹ 59.53 crore and accordingly the Company had provision for impairment of ₹ 775.02 crore in respect of such investment as at 31 March 2019. During the year, the assessment of impairment of its investment in RGPPL has been carried out by an independent expert, impact of which is explained below:

Recoverable amount is based on the value in use as its fair value less cost of disposals cannot be estimated.

Recoverable amount of investment in RGPPL has been assessed at ₹ 18.06 crore and is based on the present value of future cash flows expected to be derived from gas based power plant of RGPPL till 31 March 2039. The period is based on the estimated useful life of the power plant. Decrease in recoverable amount of investment in RGPPL is due to decrease in the value in use as compared to the previous year. This has led to addition in provision for impairment by ₹ **41.47 crore** in the current year (31 March 2019: impairment provision of ₹ 157.97 crore).

Following are the key assumptions used to determine the recoverable amount of investment:

- Capacity : 1,967 MW (31 March 2019: 1,967 MW)
- Auxiliary consumption : 2.00% (31 March 2019: 2.50%)
- Plant Load Factor (PLF) : 25.40% (31 March 2019: 25.40%)
- Tariff : INR 5.5/kwh (31 March 2019: INR 5.5/kwh) (gross of transmission charges and losses)

No growth rates have been assumed and the past experience have been considered for future cash flows which are expected to be derived.

The post-tax discount rate used for the future cash flows is 11.50% (31 March 2019: 11.20%).

Also refer Note 6 (f) in this regard.

c) The Company has investments of ₹ 139.75 crore in Konkan LNG Ltd. (KLL) (formerly Konkan LNG Private Ltd.), a joint venture of the Company. KLL had incurred losses during last few years which has resulted in erosion of net worth of KLL. Also, value of KLL's assets had declined significantly more than would be expected as a result of the passage of time or normal use. The recoverable amount of this investment was assessed at ₹ Nil and accordingly the Company had provision for impairment of ₹ 139.75 crore in respect of such investment as at 31 March 2019. During the year, the assessment of impairment of its investment in KLL has been carried out by an independent expert, impact of which is explained below:

Recoverable amount is based on the value in use as its fair value less cost of disposals cannot be estimated.

Recoverable amount of investment in KLL has been assessed at ₹ 36.28 crore and is based on the present value of future cash flows expected to be derived from the LNG terminal of KLL till 31 March 2037. The period is based on the estimated contract life of 25 years This has led to reduction in provision for impairment to the extent of ₹ 36.28 crore. As such provision for impairment of investments in KLL has been updated to ₹ **103.47 crore** as at 31 March 2020 (31 March 2019: ₹ 139.75 crore).

Following are the key assumptions used to determine the recoverable amount of investment:

- Breakwater work is expected to be completed by 2023.

-Currently, the LNG Terminal has total cargo capacity of 30 ships per year which is expected to increase to 80 ships per year from FY 2024 i.e., after the completion of breakwater facility in FY 2023.

-Capacity Utilization has been considered as 80% (i.e. 24 cargoes) by FY 2023 and thereafter, after commissioning of new facility, an approximation of 55% (i.e. 44 cargoes) capacity utilization which will increase up to 70% (i.e. 56 cargoes) capacity utilization by FY 2029 & years onwards throughout the remaining life of the Project.

-The post-tax discount rate used for the future cash flows is 11.30%.

No impairment assessment of investment in KLL was carried out as at 31 March 2019.

Also refer Note 6 (g) in this regard.

d) In respect of investment in NTPC BHEL Power Project Pvt.Ltd. , provision for impairment on investments has been recognised at ₹ **50.00 crore** (31 March 2019: ₹ 50.00 crore). Also refer Note 6 d).

57. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movements in provisions:

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Others		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Carrying amount at the beginning of the year	**3,499.74**	3,465.00	**98.77**	330.10	**1,996.93**	1,357.08	**5,595.44**	5,152.18
Additions during the year	**494.97**	746.65	**91.91**	45.36	**205.63**	603.40	**792.51**	1,395.41
Amounts used during the year	**(488.47)**	(445.51)	**-**	-	**(210.28)**	(1.94)	**(698.75)**	(447.45)
Reversal/adjustments during the year	**(0.23)**	(266.40)	**-**	(276.69)	**(382.01)**	38.39	**(382.24)**	(504.70)
Carrying amount at the end of the year	**3,506.01**	3,499.74	**190.68**	98.77	**1,610.27**	1,996.93	**5,306.96**	5,595.44

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/ demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/government authorities.

ii) Provision for tariff adjustment

Billing upto 31 March 2019 was done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2014. Provision for tariff adjustment of ₹ **91.91 crore** (31 March 2019: ₹45.36 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders. Further, consequent to the dismissal of the Company's appeal against the said CERC order by the Hon'ble Supreme Court of India, provision for tariff adjustments of ₹ **Nil** (31 March 2019: ₹ 276.69 crore) was adjusted by corresponding adjustment in revenue from operations.

iii) Provision - Others

(a) Provision for others comprise ₹ **101.05 crore** (31 March 2019: ₹ 85.14 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to block AA-ONN-2003/2 [Refer Note 59 (b)], ₹ **1,506.83 crore** (31 March 2019: ₹ 1,908.43 crore) towards provision for cases under litigation and ₹ **2.39 crore** (31 March 2019: ₹ 3.36 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019. In the previous year, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety. Considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets', Significant Accounting Policies of the Company and the principle of conservatism, an amount of ₹ 394.07 crore was estimated and provided for as at 31 March 2019 and balance amount of ₹ 1,875.73 crore was disclosed as contingent liability, along with applicable interest.

During the year, against the appeal of the Company, Hon'ble High Court vide its order dated 23 September 2019 held that subject to deposit of ₹ 500 crore by the Company with the Registrar General of the Court within six weeks, execution of the impugned award shall remain stayed till the next date of hearing and upon handing over the entire infrastructure in terms of the contract by the operator to the Company, the Registrar General shall release the amount to the operator against a bank guarantee. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also, directed release of ₹ 500 crore to the operator by the Registrar General subject to the outcome of this application of the Company for formal handing over of the infrastructure. On 17 January 2020, unconditional BG was submitted by the operator to Registrar General and ₹500 crore was released to operator by the Hon'ble High Court. Further,₹ 356.31 crore paid to operator has been booked to fuel cost and the corresponding provision has been reversed during the current year.

As per orders of Hon'ble High Court, formal handing over of the infrastructure has started on 20 January 2020 at the project site. However, due to certain law and order issues initially and further due to COVID-19 pandemic, Local Commissioner's visit has been deferred.The handing over of the infrastructure facility has not yet completed.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **37.92 crore** as at 31 March 2020 (31 March 2019 : ₹ 394.07 crore) and the balance amount of ₹ **2,014.84 crore** (31 March 2019: ₹ 1,875.73 crore) has been disclosed as contingent liability.

Also Refer Note 66 and 69.

iv) In respect of provision for cases under litigation, outflow of econmic benefits is dependent upon the final outcome of such cases.

v) In all these cases, outflow of economic benefits is expected within next one year.

vi) Sensitivity of estimates on provisions:

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the Company to compute the possible effect of changes in assumptions and estimates used in recognizing these provisions.

vii) Contingent liabilities and contingent assets

Disclosure with respect to claims against the Company not acknowledged as debts and contingent assets are made in Note 69.

58. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure charged to revenue during the year is ₹ **134.36 crore** (31 March 2019: ₹ 51.42 crore).

59. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ Crore

Particulars	As at 31 March 2020 (Unaudited)	As at 31 March 2019 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49
Capital commitments [Unfinished Minimum Work Programme (MWP)]	-	-

₹ Crore

Particulars	For the year ended 31 March 2020 (Unaudited)	For the year ended 31 March 2019 (Unaudited)
Expenses	-	0.43

For the year ended 31 March 2020 and 31 March 2019, there are no income and operating/investing cash flow from exploration activities.

The exploration activities in block KG-OSN-2009/4 were suspended w.e.f. 11 January 2012 due to non-clearance by the Ministry of Defence, GOI. Subsequently, DGH vide letter dated 29 April 2013 has informed ONGC that the block is cleared conditionally wherein block area is segregated between No Go zone, High-risk zone and Permitted zone. As the permitted area is only 38% of the total block area the consortium has submitted proposal to DGH for downward revision of MWP of initial exploration period. DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area in lieu of MoD proportionate reduced 317 Sq. Km. 3D survey, 589 LKM of 2D survey and drilling of 2 wells.

ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard.

b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 101.04 crore from ₹ 85.14 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **16.03 crore** (31 March 2019: ₹ 12.10 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ Crore

Particulars	As at 31 March 2020 (Unaudited)	As at 31 March 2019 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**103.32**	87.29

Provision of ₹ **8.26 crore** as at 31 March 2020 (31 March 2019: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory.

For the year ended 31 March 2020 and 31 March 2019, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities and expenses is as under:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Assets	**6.11**	6.13
Liabilities	**0.25**	0.27

₹ **Crore**

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Expenses	**0.01**	0.39
Operating cash flows from exploration activities	**-**	0.40

Provision of ₹ **6.07 crore** as at 31 March 2020 (31 March 2019 : ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2020 and 31 March 2019, there are no income and investing cash flow from exploration activities.

d **i)** Coal production commenced from Pakri-Barwadih coal block (PB), during FY 19-20, about 9.42 MMT coal have been extracted from PB mine. Exploration and evaluation activities are taking place at under ground mine area/dip side area of PB block. At Dulanga and Talaipalli coal mine extraction has already started and at Chatti-Bariatu and Kerandari coal mining projects land acquisition and other mine development activities are in progress. these mines are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'.

ii) Exploration and evaluation activities are in progress at Banai, Bhalumuda and Mandakini - B coal blocks allotted by the GOI. As advised by MoC, separate mining plans for Banai and Bhalamuda blocks are under preparation by CMPDIL. In respect of Mandakini-B coal block, Mining Plan approved by MoC and Feasibility Report has been prepared by CMPDIL. Mining infrastructure development activities are in progress. Section-7 (CBA Act) notification has been issued by MoC.

iii) In the previous year, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS, to NTPC on 2 September 2019.

Assets and liabilities of coal exploration and evaluation activities as mentioned at d)(ii) and (iii) are as under:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Assets	**292.46**	238.95
Liabilities	**7.15**	10.25

For the year ended 31 March 2020 and 31 March 2019, there are no income, expenses and operating cash flows from coal exploration activities.

60. Disclosure as per Ind AS 108 'Operating Segments'

A. General Information

The Company has two reportable segments, as described below, which are the Company's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Company's reportable segments:

Generation of energy : Generation and sale of bulk power to State Power Utilities.

Others : It includes providing consultancy, project management and supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Company's Board. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Segment revenue						
Sale of energy/consultancy, project management and supervision fee *	**94,093.66**	86,654.53	**4,874.48**	3,110.70	**98,968.14**	89,765.23
Other income	**2,490.26**	2,047.85	**116.63**	130.81	**2,606.89**	2,178.66
	96,583.92	88,702.38	**4,991.11**	3,241.51	**1,01,575.03**	91,943.89
Intersegment elimination					**(1,524.81)**	-
Unallocated corporate interest and other income					**428.19**	235.67
Total	**96,583.92**	88,702.38	**4,991.11**	3,241.51	**1,00,478.41**	92,179.56
Segment result (including net movements in regulatory deferral account balances)**	**27,606.70**	**13,724.83**	**569.02**	389.72	**28,175.72**	14,114.55
Unallocated corporate interest and other income					**428.19**	235.67
Unallocated corporate expenses, interest and finance costs					**8,286.84**	6,574.17
Profit before tax					**20,317.07**	7,776.05
Income tax expense (including tax on net movements in regulatory deferral account balances)					**10,204.26**	(3,973.84)
Profit after tax					**10,112.81**	11,749.89

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Depreciation and amortisation expense	**8,444.24**	7,180.68	**34.82**	0.29	**8,479.06**	7,180.97
Non-cash expenses other than depreciation and amortisation	**157.25**	634.23	**26.28**	14.32	**183.53**	648.55
Capital expenditure	**20,062.57**	24,936.53	**1,538.52**	1,032.47	**21,601.09**	25,969.00

₹ Crore

Particulars	Generation of energy		Others		Total	
	As at		As at		As at	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Segment assets	**2,11,353.34**	1,63,073.92	**6,685.20**	4,661.17	**2,18,038.54**	1,67,735.09
Unallocated corporate and other assets					**1,09,628.91**	1,23,015.87
Total assets	**2,11,353.34**	1,63,073.92	**6,685.20**	4,661.17	**3,27,667.45**	2,90,750.96
Segment liabilities	**18,410.27**	15,748.31	**3,841.80**	2,869.85	**22,252.07**	18,618.16
Unallocated corporate and other liabilities					**1,91,845.94**	1,64,724.63
Total liabilities	**18,410.27**	15,748.31	**3,841.80**	2,869.85	**2,14,098.01**	1,83,342.79

* Includes ₹ **31.59 crore** (31 March 2019: (-) ₹ 2,775.82 crore) for sales related to earlier years.

** Generation segment result would have been ₹ **27,575.11 crore** (31 March 2019: ₹ 13,515.08 crore) without including the sales related to earlier years amounting to ₹ **31.59 crore** (31 March 2019: (-) ₹ 2,775.82 crore) and related expenses amounting to ₹ **Nil** (31 March 2019: (-) ₹ 2,985.57 crore).

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Segment assets (A)	**2,18,038.54**	1,67,735.09
Unallocated corporate and other assets:		
Non current investments	**26,400.89**	13,145.94
Capital work in progress including intangible assets under development	**73,359.28**	91,206.69
Capital advances	**4,814.27**	4,994.45
Cash and cash equivalents and other bank balances	**2,199.60**	2,125.14
Other current assets	**155.85**	6,254.76
Other unallocable assets	**2,699.02**	5,288.89
Total unallocated corporate and other assets (B)	**1,09,628.91**	1,23,015.87
Total Assets (A+B)	**3,27,667.45**	2,90,750.96
Segment liabilities (A)	**22,252.07**	18,618.16
Unallocated corporate and other liabilities:		
Non current borrowings	**1,54,662.31**	1,28,807.87
Deferred tax liability	**8,093.98**	4,200.14
Borrowings current	**14,049.36**	15,376.09
Capital liabilities	**14,070.70**	14,865.85
Other unallocable liabilities	**969.59**	1,474.68
Total unallocated corporate and other liabilities (B)	**1,91,845.94**	1,64,724.63
Total Liabilities (A+B)	**2,14,098.01**	1,83,342.79

Reconciliation of profit after tax

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Segment result (including net movements in regulatory deferral account balances) (A)	**28,175.72**	14,114.55
Unallocated corporate interest and other income (B)		
Dividend from non-current investments	**210.40**	124.19
Interest income	**129.92**	88.33
Miscellaneous income	**87.87**	23.15
Sub-total (B)	**428.19**	235.67
Unallocated corporate expenses, interest and finance costs (C)		
Finance costs	**6,781.97**	4,716.74
Employee benefits expense	**741.25**	843.29
Depreciation and amortisation expense	**143.79**	73.39
Other expenses	**619.83**	940.75
Sub total (C)	**8,286.84**	6,574.17
Profit before tax (including net movements in regulatory deferral account balances) (A+B-C)	**20,317.07**	7,776.05
Income tax expense (including tax on net movements in regulatory deferral account balances)	**10,204.26**	(3,973.84)
Profit after tax	**10,112.81**	11,749.89

The operations of the Company are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Company's total revenues, are as under:

Name of the customer	For the year ended			
	31 March 2020		31 March 2019	
	Amount (₹ Crore)	**%age**	Amount (₹ Crore)	%age
Maharashtra State Electricity Distribution Company Ltd.	**10,379.87**	**10.62**	9,506.31	10.54

61. Financial Risk Management

The Company's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Company's operations. The Company's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Company also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Company is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Company's activities make it susceptible to various risks. The Company has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Company, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the Company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Company. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Company primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Company has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility, the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Company in case of non payment of dues and non-establishment of LC.

In addition to above, MoP vide its communications dated 28 June 2019 and subsequent clarifications, further emphasised on ensuring availability of suitable payment security mechanism to be maintained by DISCOMs. Further, to liquidate the outstanding dues of the discoms towards the generating companies, GOI has announced a Scheme for offering ₹90,000 crore in soft loans under the Aatmanirbhar Bharat package. The Discoms are expected to take the benefit of the this Scheme and pay their outstanding dues.

These payment security mechanisms have served the Company well over the years. The Company has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Company has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Company's right to consideration for sale effected but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Company limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Company does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Company has given loans to employees, subsidiary companies, joint venture company and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Company held cash and cash equivalents of ₹ **20.37 crore** (31 March 2019: ₹ 24.38 crore). The cash and cash equivalents are held with banks with high rating.

Balances with banks and financial institutions, other than cash and cash equivalents

The Company held balances with banks and financial institutions, including earmarked balances, of ₹ **2,188.74 crore** (31 March 2019: ₹ 2,119.96 crore). In order to manage the risk, Company places deposits with only high rated banks/ institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**26,400.89**	13,145.94
Non-current loans	**600.26**	544.38
Other non-current financial assets*	**1,227.88**	1,242.70
Cash and cash equivalents	**20.37**	24.38
Bank balances other than cash and cash equivalents	**2,188.74**	2,119.96
Current loans	**308.56**	305.79
Other current financial assets**	**503.98**	461.01
Total (A)	**31,250.68**	17,844.16
Financial assets for which loss allowance is measured using life-time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables	**15,668.11**	8,433.86
Unbilled revenue	**11,025.15**	7,870.83
Total (B)	**26,693.26**	16,304.69
Total (A+B)	**57,943.94**	34,148.85

* Excluding share application money pending allotment (Refer Note 9)

** Excluding unbilled revenue (Refer Note 16)

(ii) Provision for expected credit losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The Company has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) Financial assets for which loss allowance is measured using life-time expected credit losses as per simplified approach

The Company has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) Ageing analysis of trade receivables

The ageing analysis of the trade receivables is as below:

₹ Crore

Ageing	Not due	0-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	More than 120 days past due	Total
Gross carrying amount as at 31 March 2020	**4,751.62**	**2,993.12**	**1,718.48**	**1,015.49**	**507.90**	**4,681.70**	**15,668.31**
Gross carrying amount as at 31 March 2019	6,015.48	582.77	552.66	502.92	159.14	621.23	8,434.20

STANDALONE FINANCIAL STATEMENTS

(iv) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of financial assets during the year is as follows:

₹ Crore

Particulars	Investments	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2018	806.82	0.34	0.07	0.12	807.35
Impairment loss recognised	162.42	-	-	14.95	177.37
Amounts written off / written back	-	-	0.01	-	0.01
Balance as at 31 March 2019	969.24	0.34	0.06	15.07	984.71
Impairment loss recognised	41.48	-	-	-	41.48
Amounts written off / written back	36.28	0.14	-	14.95	51.37
Balance as at 31 March 2020	**974.44**	**0.20**	**0.06**	**0.12**	**974.82**

Based on historic default rates, the Company believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Company's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Company's reputation.

The Company has an appropriate liquidity risk management framework for the management of short, medium and long-term funding and liquidity management requirements. The Company manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Company's Treasury department is responsible for managing the short-term and long-term liquidity requirements of the Company. Short-term liquidity situation is reviewed daily by the Treasury department. The Board of directors has established policies to manage liquidity risk and the Company's Treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long-term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically, the Company ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC Regulations, tariff inter-alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Company maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Company had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Fixed-rate borrowings		
Foreign currency loans	-	3,207.17
Floating-rate borrowings		
Cash credit	**2,767.13**	3,500.00
Term loans	**8,145.00**	4,845.00
Foreign currency loans	**3,993.15**	45.01
Total	**14,905.28**	11,597.18

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2020 **₹ Crore**

Contractual maturities of financial liabilities	**Contractual cash flows**					
	3 months or less	**3-12 months**	**1-2 years**	**2-5 years**	**More than 5 years**	**Total**
Non-derivative financial liabilities						
Secured bonds	453.67	2,282.66	1,194.50	17,666.00	20,025.33	**41,622.16**
Rupee term loans from banks	1,045.20	1,259.27	3,406.16	14,857.19	42,064.78	**62,632.60**
Rupee term loans from others	34.87	673.52	898.52	2,645.11	416.67	**4,668.69**
Finance lease obligations	85.27	59.45	76.04	154.81	2,273.72	**2,649.29**
Foreign currency notes	189.88	180.03	5,803.00	13,028.70	11,066.90	**30,268.51**
Unsecured foreign currency loans from banks and financial institutions	176.39	1,511.08	1,166.79	2,074.26	8,051.70	**12,980.22**
Unsecured foreign currency loans (guaranteed by GOI)	-	210.64	207.24	621.71	862.83	**1,902.42**
Commercial paper and cash credit	12,680.21	1,500.00	-	-	-	**14,180.21**
Trade and other payables	17,095.85	6,701.86	609.28	795.67	2,159.29	**27,361.95**

31 March 2019 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	954.20	1,636.84	1,542.00	10,414.26	21,115.08	35,662.38
Rupee term loans from banks	307.89	1,431.96	2,031.03	11,463.76	32,002.63	47,237.27
Rupee term loans from others	262.49	657.60	898.52	2,678.80	1,073.17	5,570.58
Finance lease obligations	5.04	32.92	36.85	49.74	682.68	807.23
Foreign currency notes	185.10	255.22	-	10,977.00	13,709.80	25,127.12
Unsecured foreign currency loans from banks and financial institutions	197.69	2,979.63	1,520.13	2,380.07	6,258.49	13,336.01
Unsecured foreign currency loans (guaranteed by GOI)	-	189.28	185.95	557.86	960.17	1,893.26
Commercial paper and cash credit	15,502.90	-	-	-	-	15,502.90
Trade and other payables	12,293.11	9,869.62	1,419.41	822.60	567.20	24,971.94
Derivative financial liabilities						
Full currency swaps	-	15.77	-	-	-	15.77

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Company's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of Directors is responsible for setting up of policies and procedures to manage market risks of the Company. All such transactions are carried out within the guidelines set by the risk management committee.

Currency risk

The Company is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2020 and 31 March 2019 are as below:

31 March 2020 **₹ Crore**

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	-	-	-	-	-
Cash and cash equivalents	0.35	-	-	0.07	0.42
Other financial assets	1.35	-	0.83	0.54	2.72
Total	**1.70**	**-**	**0.83**	**0.61**	**3.14**
Financial liabilities					
Foreign currency bonds	21,800.90	4,240.85	-	4,226.76*	30,268.51
Unsecured foreign currency loans from banks and financial institutions	4,316.67	1,458.58	9,107.39	-	14,882.64
Trade payables and other financial liabilities	1,974.02	915.34	94.85	8.63	2,992.84
Total	**28,091.59**	**6,614.77**	**9,202.24**	**4,235.39**	**48,143.99**

* ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹2,000.00 crore-₹ denominated USD settled Masala bonds.

31 March 2019 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.05	-	-	1.18	1.23
Cash and cash equivalents	0.53	-	-	3.67	4.20
Other financial assets	1.09	-	-	0.49	1.58
Total	1.67	-	-	5.34	7.01
Financial liabilities					
Foreign currency bonds	16,940.30	3,960.07	-	4,226.76*	25,127.13
Unsecured foreign currency loans from banks and financial institutions	6,760.64	1,652.09	6,832.31	-	15,245.04
Trade payables and other financial liabilities	2,414.27	818.14	106.16	140.22	3,478.79
Total	26,115.21	6,430.30	6,938.47	4,366.98	43,850.96

* ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹2,000.00 crore-₹ denominated USD settled Masala bonds.

Out of the above, an amount of ₹ **Nil** (31 March 2019: ₹ 15.77 crore) is hedged by derivative instruments. In respect of the balance exposure, gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, Euro, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Company for construction of power plants with vendors awarded through ICB (International Competitive Bidding) are denominated in third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Company has sought an opinion from the Expert Advisory Committee (EAC) of The Institute of Chartered Accountants of India (ICAI) w.r.t. applicability of provisions of Ind AS 109-'Financial Instruments' for accounting of embedded derivatives in such contracts. Pending receipt of opinion from EAC, the company has not considered such transactions as an embedded derivative. On receipt of opinion from EAC, appropriate action shall be taken in this regard.

Interest rate risk

The Company is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Company is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Company manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date, the interest rate profile of the Company's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	31 March 2020	31 March 2019
Financial Assets:		
Fixed-rate instruments		
Loans to related parties	**212.72**	184.22
Loans to others	**24.17**	25.07
Bank deposits	**2,131.83**	2,066.65
Total	**2,368.72**	2,275.94
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**41,619.18**	35,659.44
Foreign currency loans/notes*	**34,872.71**	30,092.43
Rupee term loans	**118.52**	152.39
Commercial paper and cash credit	**13,819.32**	15,502.90
Lease obligations	**829.67**	186.41
	91,259.40	81,593.57
Variable-rate instruments		
Foreign currency loans/notes	**10,039.45**	10,061.74
Rupee term loans	**67,182.77**	52,655.46
Cash credit	**230.04**	-
	77,452.26	62,717.20
Total	**1,68,711.66**	1,44,310.77

* Includes ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹ 2,000 crore ₹ denominated USD settled Masala bonds (31 March 2019: includes ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹ 2,000 crore ₹ denominated USD settled Masala bonds).

Fair value sensitivity analysis for fixed-rate instruments

The Company's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

Particulars	Profit or loss	
	50 bp increase	50 bp decrease
31 March 2020		
Foreign currency loans/notes	**(43.65)**	**43.65**
Rupee term loans	**(271.25)**	**271.25**
Cash credit	**(2.72)**	**2.72**
	(317.62)	**317.62**
31 March 2019		
Foreign currency loans/notes	(42.00)	42.00
Rupee term loans	(246.87)	246.87
	(288.87)	288.87

Of the above mentioned increase in the interest expense, an amount of ₹ **162.47 crore** (31 March 2019: ₹ 148.40 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

62. Fair Value Measurements

a) Financial instruments by category

₹ Crore

Particulars	31 March 2020			31 March 2019		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments						
- Equity instruments	**3.78**	**46.50**	**26,350.61**	3.78	88.14	13,054.02
Trade Receivables	**-**	**-**	**15,668.11**	-	-	8,433.86
Loans	**-**	**-**	**908.82**	-	-	850.17
Cash and cash equivalents	**-**	**-**	**20.37**	-	-	24.38
Other bank balances	**-**	**-**	**2,188.74**	-	-	2,119.96
Finance lease receivables	**-**	**-**	**464.37**	-	-	520.00
Derivative financial assets	**-**	**-**	**-**	1.28	-	-
Other financial assets*	**-**	**-**	**12,292.64**	-	-	9,053.26
	3.78	**46.50**	**57,893.66**	5.06	88.14	34,055.65
Financial liabilities						
Borrowings	**-**	**-**	**1,53,832.64**	-	-	1,28,621.46
Commercial paper and cash credit	**-**	**-**	**14,049.36**	-	-	15,376.09
Finance lease obligations	**-**	**-**	**829.67**	-	-	186.41
Trade payables	**-**	**-**	**9,068.64**	-	-	7,599.11
Payable for capital expenditure	**-**	**-**	**14,070.70**	-	-	14,865.85
Other financial liabilities	**-**	**-**	**2,173.67**	-	-	2,240.92
	-	**-**	**1,94,024.68**	-	-	1,68,889.84

* Excluding share application money pending allotment (Refer Note 9)

b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Company has classified its financial instruments into the three levels prescribed under the Ind AS. An explanation of each level follows underneath the table.

₹ **Crore**

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2020	**Level 1**	**Level 2**	**Level 3**	**Total**
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	**46.50**	-	-	**46.50**
Investments in unquoted equity instruments	-	-	**3.78**	**3.78**
	46.50	-	**3.78**	**50.28**

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2019	Level 1	Level 2	Level 3	Total
Financial assets:				
Derivative financial assets				
- Principal only swaps	-	-	1.28	1.28
Investments in quoted equity instruments - PTC India Ltd.	88.14	-	-	88.14
Investments in unquoted equity instruments	-	-	3.78	3.78
	88.14	-	5.06	93.20

The Company has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the Company's Audit Committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows.

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2020 and 31 March 2019.

c) **Valuation technique used to determine fair value:**

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

d) **Fair value of financial assets and liabilities measured at amortised cost**

₹ Crore

Particulars	Level	As at 31 March 2020		As at 31 March 2019	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Investments in subsidiary and joint venture companies	3	**26,350.61**	**26,350.61**	13,054.02	13,054.02
Loans	3	**908.82**	**919.25**	850.17	849.29
Finance lease receivables	3	**464.37**	**464.37**	520.00	520.00
Claims recoverable	3	**821.55**	**821.55**	785.27	785.27
Trade receivables	3	**15,668.11**	**15,668.11**	8,433.86	8,433.86
Cash and cash equivalents	1	**20.37**	**20.37**	24.38	24.38
Bank balances other than cash and cash equivalents	1	**2,188.74**	**2,188.74**	2,119.96	2,119.96
Other financial assets	3	**11,668.37**	**11,668.37**	8,450.86	8,450.86
		58,090.94	**58,101.37**	34,238.52	34,237.64
Financial liabilities					
Bonds/Debentures	1	**8,898.25**	**9,920.36**	-	-
	2	**204.60**	**248.22**	6,138.41	6,217.39
	3	**32,516.33**	**36,676.63**	29,521.03	30,974.07
Foreign currency notes	1	**-**	**-**	3,541.49	3,671.86
	2	**21,755.39**	**21,700.87**	13,355.17	13,805.42
	3	**8,440.39**	**9,070.10**	8,152.40	8,658.54
Foreign currency loans	3	**14,716.39**	**15,051.46**	15,105.11	15,297.59
Rupee term loans	3	**67,301.29**	**67,302.42**	52,807.85	52,805.40
Lease obligations	3	**829.67**	**829.67**	186.41	186.41
Borrowings - current	1	**14,049.36**	**14,049.36**	15,376.09	15,376.09
Trade payables and payable for capital expenditure	3	**23,139.34**	**23,115.52**	22,464.96	22,362.57
Other financial liabilities	3	**2,173.67**	**2,173.67**	2,240.92	2,240.92
		1,94,024.68	**2,00,138.28**	1,68,889.84	1,71,596.26

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, investment in subsidiary and joint venture companies, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

63. Capital Management

The Company's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and
- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Company is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Company monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Company is not subject to externally imposed capital requirements.

The Company monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current borrowings (including current maturities and interest accrued there on) and current borrowings less cash and cash equivalents. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Borrowings	**1,68,711.67**	1,44,183.96
Less: Cash and cash equivalents	**20.37**	24.38
Net Debt	**1,68,691.30**	1,44,159.58
Total Equity	**1,13,569.44**	1,07,408.17
Net Debt to Equity Ratio	**1.49**	1.34

64. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) **Nature of rate regulated activities**

The Company is mainly engaged in generation and sale of electricity. The price to be charged by the Company for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Company to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences on foreign currency loans for opearting stations shall be recoverable from / payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/ debit to ' Net Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹ **1,202.93 crore** for the year ended as at 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: (-) ₹ 35.38 crore accounted as 'Regulatory deferral account debit balance'.)

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity limit from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act,1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This has been taken up with CERC through truing up tariff petition. An amount of ₹ **Nil** for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: ₹ 118.26 crore).

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **4,000.77 crore** (31 March 2019: (-) ₹ 5,160.22 crore) for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Company before CERC for reimbursement of the expenditure on transportation of ash, has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ **647.56 crore** (31 March 2019: ₹ 179.29 crore) for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance'.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(i) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply

(ii) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions

(iii) other risks including currency or other market risks, if any

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) Regulatory deferral account debit balance - Note 18

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ **Crore**

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
A. Opening balance	**3,406.00**	8,381.66
B. Addition during the year	**5,851.26**	(4,898.05)
C. Adjustments during the year	**(134.39)**	(79.19)
D. Amount collected/refunded during the year	**(0.11)**	1.58
E. Regulatory deferral account balances recognised in the statement of profit and loss (B+D)	**5,851.15**	(4,896.47)
F. Closing balance (A+C+E)	**9,122.76**	3,406.00

b) Net movements in regulatory deferral account balances [I]	**5,851.15**	(4,896.47)
c) Tax on net movements in regulatory deferral account balances [II]	**1,022.31**	(1,055.13)
d) Total amount recognized in the statement of profit and loss during the year [I-II]	**4,828.84**	(3,841.34)

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

65. Disclosure as per Ind AS 115, 'Revenue from contracts with customers'

I. Nature of goods and services

The revenue of the Company comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(a) Revenue from energy sales

The major revenue of the Company comes from energy sales. The Company sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	**Nature, timing of satisfaction of performance obligations and significant payment terms**
Energy sales	The Company recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(b) **Revenue from energy trading, consultancy and other services**

(i) **Sale of Energy through trading**

The Company is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of energy through trading	The Company recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Company. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(ii) **Consultancy and other services**

The Company undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Company recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Company. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Operation and maintenance services	The Company recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Company. The revenue from opertion and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Company. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Company recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Company and the Company has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA Scheme)	The Company recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Company transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

(iii) **Sale of captive coal to subsidiary company**

The revenue also includes revenue from sale of captive coal to subsidiary.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of captive coal:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Sale of captive coal to subsidiary company	The Company recognises revenue from contracts for sale of captive coal to subsidiary company when control of the goods is transferred to customers. The tariff for computing revenue from sale of captive coal to subsidiary company is determined in terms of CERC Tariff Regulations applicable for input price of coal from captive mines. The amounts are billed as and when goods are transferred and are payable as per agreed proceedures.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ **Crore**

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Geographical markets						
India	**94,093.66**	86,654.53	**3,349.67**	3,108.66	**97,443.33**	89,763.19
Outside India	**-**	-	**-**	2.04	**-**	2.04
	94,093.66	86,654.53	**3,349.67**	3,110.70	**97,443.33**	89,765.23
Timing of revenue recognition						
Products and services transferred over time	**94,093.66**	86,654.53	**3,349.67**	3,110.70	**97,443.33**	89,765.23
	94,093.66	86,654.53	**3,349.67**	3,110.70	**97,443.33**	89,765.23

III. Reconciliation of revenue recognised with contract price:

₹ **Crore**

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Contract price	**97,877.17**	90,581.03
Adjustments for:		
Rebates	**(433.84)**	(815.80)
Revenue recognised	**97,443.33**	89,765.23

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to unbilled revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables, unbilled revenue and advances from customers / payable to beneficiaries:

₹ **Crore**

Particulars	As at 31 March 2020		As at 1 April 2019	
	Current	**Non-current**	Current	Non-current
Trade receivables	**15,668.11**	**-**	8,433.86	-
Unbilled revenue	**11,025.15**	**-**	7,870.83	-
Advances from customers / payable to beneficiaries	**652.34**	**-**	345.72	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **31.59 crore** (31 March 2019 : (-) ₹ 2775.82 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **747.23 crore** (31 March 2019: ₹ 715.45 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Company.

VI. Practical expedients applied as per Ind AS 115:

a. The company has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Company does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Company has not adjusted any of the transaction prices for the time value of money.

VII. The Company has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

66. Disclosure as per Ind AS 116 'Leases'

(A) Transition to Ind AS 116

(a) Effective 1 April 2019, the Company adopted Ind AS 116 'Leases' and applied the standard to all lease contracts existing on 1 April 2019, using the modified retrospective method. Accordingly, the comparatives as at and for the year ended 31 March 2019 have not been restated. On the date of initial application, the Company recorded the lease liability at the present value of the remaining lease payments discounted at the incremental borrowing rate at the date of initial application and a corresponding right-of-use asset adjusted for the amount of prepaid or accrued payments on the lease.

(b) The Company has applied the following practical expedients on initial application of Ind AS 116:

(i) Applied a single discount rate to a portfolio of leases of similar assets in similar economic environment with a similar end date.

(ii) Applied the exemption not to recognize right-of-use assets and liabilities for leases with less than 12 months of lease term on the date of initial application.

(iii) Excluded the initial direct costs, if any, from the measurement of the right-of-use asset at the date of initial application.

(iv) Elected to use the practical expedient not to apply this Standard to contracts that were not previously identified as containing a lease applying Ind AS 17. Accordingly, Ind AS 116 is applied only to contracts that were previously identified as leases under Ind AS 17.

(v) Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

(c) On transition to Ind AS 116, the Company has recognised lease liabilities and equivalent amount of right-of-use assets amounting to ₹ 11.14 crore. Further, land, buildings, plant & equipment and vehicles amounting to ₹ 5,125.10 crore have been classified/reclassified and presented as Right-of-use assets on the Balance Sheet.

(d) On transition to Ind AS 116, the weighted average incremental borrowing rate applied to lease liabilities recognised under Ind AS 116 is 8.29%.

(e) The lease liabilities as at 1 April 2019 can be reconciled to the operating lease commitments as of 31 March 2019, as follows:

₹ Crore

Particulars	Amount
Operating lease commitments as at 31 March 2019 (future minimum lease payments in respect of non-cancellable leases)	6.40
Less: Effect of discounting on above	1.27
Discounted recognised lease liabilities as at 1 April 2019	5.13
Discounted recognised lease liabilities as at 1 April 2019 (Pertaining to cancellable leases commitments as on 31 March 2019)**	6.01
Total lease liabilities recognised as at 1 April 2019	11.14

** The lease liability pertain to cancellable leases commitments as on 31 March 2019 which were not required to be disclosed under erstwhile Ind AS 17.

(B) Company as Lessee

(i) The Company's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Company has taken electrical vehicles on operating lease for a period of six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Company has taken certain vehicles (other than electrical) on lease for a period of four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Company has purchase option for such vehicles at the end of the lease term.

(e) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 57 (iii)(b).

(f) The Company acquires land on leasehold basis for a period generally ranging from 25 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease liablities' at their present values. The Right-of-use land is amortised considering the signifcant accounting policies of the Company.

In respect of leases at (d), (e) & (f) above, the carrying amount of the right-of-use asset and the lease liability at the date of initial application is the carrying amount of the lease asset and lease liability immediately before that date measured applying Ind AS 17.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year :

₹ Crore

Particulars	For the Year ended 31 March 2020
Opening Balance	186.41
- Additions in lease liabilities	648.21
- Interest cost during the year	37.82
- Payment of lease liabilities	(42.77)
Closing Balance	829.67
Current	106.41
Non Current	723.26

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2020
3 months or less	85.27
3-12 Months	59.45
1-2 Years	76.04
2-5 Years	154.81
More than 5 Years	2273.72
Lease liabilities as at 31 March 2020	2649.29

(iv) The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Particulars	For the Year ended 31 March 2020
Depreciation and amortisation expense for right-of-use assets	276.93
Interest expense on lease liabilities	37.82
Expense relating to short-term leases	10.55

(v) The following are the amounts disclosed in the cash flow statement:

₹ Crore

Particulars	For the Year ended 31 March 2020
Cash Outlow from leases	53.32

(C) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in Statement of profit and loss:

₹ Crore

Partculars	For the year ended 31 March 2020	For the year ended 31 March 2019
i) Finance income on the net investment in the lease	59.90	70.84
ii) Income relating to variable lease payments not included in the measurement of the net investment in the lease	899.19	982.05

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Less than one year	108.54	112.10
Between one and two years	108.54	112.10
Between two and three years	108.54	112.10
Between three and four years	108.54	112.10
Between four and five years	214.16	112.10
More than five years	-	217.41
Total minimum lease payments	648.32	777.91
Less amounts representing unearned finance income	183.95	257.91
Present value of minimum lease payments	464.37	520.00

b) **Operating leases**

The Company had classified the arrangement with its customer for two power stations (one thermal and one gas) as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Thermal Power Station

Power Purchase Agreements (PPA) signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree.

(ii) Gas Power Station

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in Statement of profit and loss in respect of the above stations:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Lease Income	156.18	233.63
Income relating to variable lease payments that do not depend on an index or a rate	973.13	982.95

STANDALONE FINANCIAL STATEMENTS

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Less than one year	**156.18**	229.91
Between one and two years	**19.58**	229.91
Between two and three years	**19.58**	92.48
Between three and four years	**19.58**	92.48
Between four and five years	**3.91**	92.47
More than five years	**-**	78.33
	218.83	815.58

67. Information in respect of micro and small enterprises as at 31 March 2020 as required by Schedule III to the Companies Act,2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars	31 March 2020	31 March 2019
a) Amount remaining unpaid to any supplier:		
Principal amount	**729.01**	587.50
Interest due thereon	-	0.29
b) Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	-	-
c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	0.01
d) Amount of interest accrued and remaining unpaid	-	0.07
e) Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

68. Disclosure as required by Schedule V of the SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015:

A. Loans and advances in the nature of loans:

1. To Subsidiary companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Kanti Bijlee Utpadan Nigam Ltd.	193.00	170.50	253.50	231.00
Patratu Vidyut Utpadan Nigam Ltd.	-	7.00	7.00	41.75
NTPC Vidyut Vyapar Nigam Ltd.	-	-	60.00	-

2. To Joint venture companies

₹ Crore

Name of the Company	Outstanding balance as at		Maximum amount outstanding during the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019
National High Power Test Laboratory Private Ltd.	18.40	6.00	18.40	6.00

3. To Firms/companies in which directors are interested : ₹ Nil

B. Investment by the loanee (as detailed above) in the shares of NTPC and its subsidiaries : ₹ Nil

69. Contingent liabilities and commitments

A. Contingent liabilities

a. Claims against the Company not acknowledged as debts

(i) Capital works

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Company for ₹ **11,611.59 crore** (31 March 2019: ₹ 11,460.55 crore) seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Company as being not admissible in terms of the provisions of the respective contracts.

The Company is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of ₹ **422.96 crore** (31 March 2019: ₹ 374.63 crore) has been estimated."

(iii) Fuel suppliers

Pending resolution of the issues with the coal companies, an amount of ₹ **2,997.23 crore** (31 March 2019: ₹ 3,009.74 crore) towards grade slippage pursuant to third party sampling has been estimated by the Company as contingent liability. Further, an amount of ₹ **1,223.20 crore** (31 March 2019: ₹ 878.52 crore) towards surface transportation charges, custom duty on service margin on imported coal etc. has been estimated by the Company as contingent liability.

The Company is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others

In respect of claims made by various State/Central Government departments/Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, contingent liability of ₹ **834.00 crore** (31 March 2019: ₹ 427.24 crore) has been estimated.

(v) **Possible reimbursement in respect of (i) to (iii) above**

The contingent liabilities referred to in (i) above, include an amount of ₹ **Nil** (31 March 2019: ₹ 682.19 crore) relating to the hydro power project stated in Note 9(b) - Other financial assets, for which Company envisages possible reimbursement from the GOI in full. In respect of balance claims included in (i) and in respect of the claims mentioned at (ii) above, payments, if any, by the Company on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **4,149.16 crore** (31 March 2019: ₹ 3,639.64 crore).

b. **Disputed tax matters**

Disputed income tax/sales tax/excise and other tax matters pending before various Appellate Authorities amount to ₹ **612.54 crore** (31 March 2019: ₹ 8,047.86 crore). Many of these matters were adjudicated in favour of the Company but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Company estimate possible reimbursement of ₹ **483.97 crore** (31 March 2019: ₹ 3,922.55 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹**21.28 crore** (31 March 2019: ₹ 2,513.94 crore). Also refer Note 49 (II)(b).

c. **Others**

Contingent liability in respect of bills discounted with banks against trade receivables amounts to ₹ **10,692.34 crore** (31 March 2019 ₹ 9,998.99 crore) (Refer Note-12). In case of any claim on the Company from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Other contingent liabilities amount to ₹ **2,443.92 crore** (31 March 2019: ₹ 2,233.08 crore) which includes claim of ₹**2,014.84 crore** (31 March 2019: ₹ 1,875.73 crore) not accepted by the Company. Refer Note 57 (iii)(b).

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

B. **Contingent assets**

(i) While determining the tariff for some of the Company's power stations, CERC has disallowed certain capital expenditure incurred by the Company. The Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) CERC Tariff Regulations provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond specified number of days from the date of presentation of bill. However, in view of significant uncertainties in the ultimate collection from some of the beneficiaries against partial bills as estimated by the management, an amount of ₹ **105.27 crore** as on 31 March 2020 (31 March 2019: ₹ 63.72 crore) has not been recognised.

C. **Commitments**

a) Estimated amount of contracts remaining to be executed on capital account (property, plant and equipment and intangible assets) and not provided for as at 31 March 2020 is ₹ **50,428.89 crore** (31 March 2019: ₹ 38,806.34 crore). Details of the same are as under:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Property, plant and equipment	**50,351.63**	38,779.75
Intangible assets	**77.26**	26.59
Total	**50,428.89**	38,806.34

b) In respect of investments of ₹ **19,799.92 crore** including share application money pending allotment of ₹ **197.28 crore** (31 March 2019: ₹ 7,453.08 crore including share application money pending allotment of ₹ 121.59 crore) in subsidiary companies, the Company has restrictions for their disposal as at 31 March 2020 as under:

₹ Crore

Name of the Subsidiary	**Period of restrictions for disposal of investments as per related agreements**	**Amount invested as at**	
		31 March 2020	31 March 2019
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,721.13
Kanti Bijlee Utpadan Nigam Ltd.	5 years from the date of commercial operation. Further, as per loan agreement, minimum equity of 51% shall be maintained at all times until final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	**1,610.67**	1,510.67

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2020	31 March 2019
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**498.12**	234.12
Nabinagar Power Generating Company Ltd.	NTPC shall not transfer/assign or pledge shares until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	**4,417.01**	3,987.16
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	-
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	-
Total		**19,799.92**	7,453.08

c) In respect of investments of ₹ **2,904.47 crore** including share application money pending allotment of ₹ **Nil** (31 March 2019: ₹ 2,164.50 crore including share application money pending allotment of ₹ 60.00 crore) in the joint venture companies, the Company has restrictions for their disposal as at 31 March 2020 as under:

₹ Crore

Name of the Joint Venture Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2020	31 March 2019
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later. Also refer Note 6 (e).	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed. Also refer Note 6 (d).	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later.	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.20**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**444.72**	277.83
Meja Urja Nigam Private Ltd.	5 years from the date of incorporation (i.e. 02.04.2008) or commercial operation whichever is later.	**1,581.64**	1,319.33
Hindustan Urvarak and Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years).	**751.09**	440.32
Total		**2,904.47**	2,164.50

STANDALONE FINANCIAL STATEMENTS

d) In respect of other investments of ₹ **1.40 crore** (31 March 2019: ₹ 1.40 crore), the Company has restrictions for their disposal as at 31 March 2020 as under:

₹ **Crore**

Name of the Company	Period of restrictions for disposal of investments as per related agreements	Amount invested as at	
		31 March 2020	31 March 2019
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later. Also refer Note 7(c).	**1.40**	1.40
Total		**1.40**	1.40

e) The Company has commitments of ₹ **4,487.78 crore** (31 March 2019: ₹ 4,438.76 crore) towards further investment in the subsidiary companies as at 31 March 2020.

f) The Company has commitments of ₹ **2,900.40 crore** (31 March 2019: ₹ 3,504.83 crore) towards further investment in the joint venture entities as at 31 March 2020.

g) The Company has commitments of ₹ **507.79 crore** (31 March 2019: ₹ 507.79 crore) towards further investment in other investments as at 31 March 2020.

h) The Company has commitments of bank guarantee of 0.50 % of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. (a joint venture company) to a cumulative amount of ₹ **75.00 crore** (31 March 2019: ₹ 75.00 crore).

i) The Company has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 Crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 Crore** (31 March 2019: ₹ Nil).

j) Company's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 59.

k) Jhabua Power Limited (JPL), having an operational thermal power capacity of 1 x 600 MW was admitted to National Company Law Tribunal (NCLT) on 27 March 2019, and is presently undergoing Corporate Insolvency Resolution Process in NCLT. Invitation for Expression of Interest for submission of Resolution Plan for JPL was published by Resolution Professional on 19 August 2019. Subsequently, The Board of Directors of the Company had accorded in-principle approval for submission of Resolution Plan for acquisition of JPL. Subsequently, the Company has submitted the Resolution Plan to Resolution Professional on due date of 30 December 2019. Resolution Plan is currently under negotiation with Resolution Professional / Committee of Creditors.

l) Company's commitment in respect of lease agreements has been disclosed in Note 66.

70. Corporate Social Responsibility Expenses (CSR)

As per Section 135 of the Companies Act, 2013 read with guidelines issued by Department of Public Enterprises, GOI, the Company is required to spend, in every financial year, at least two per cent of the average net profits of the Company made during the three immediately preceding financial years in accordance with its CSR Policy. The details of CSR expenses for the year are as under:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
A. Amount required to be spent during the year	**252.68**	237.01
B. Amount spent during the year on:		
a) Construction/acquisition of any asset	**1.13**	4.01
b) On purposes other than (a) above	**303.79**	281.45
Total	**304.92**	285.46

i) Amount spent during the year ended 31 March 2020:

₹ **Crore**

Particulars	**In cash**	**Yet to be paid in cash**	**Total**
a) Construction/acquisition of any asset	**1.10**	**0.03**	**1.13**
b) On purposes other than (a) above	**294.30**	**9.49**	**303.79**

ii) Amount spent during the year ended 31 March 2019:

₹ Crore

Particulars	In cash	Yet to be paid in cash	Total
a) Construction/acquisition of any asset	3.91	0.10	4.01
b) On purposes other than (a) above	268.57	12.88	281.45

C. Break-up of the CSR expenses under major heads is as under:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
1. Eradicating Hunger and Poverty, Health Care and Sanitation	**47.83**	70.10
2. Education and Skill Development	**124.57**	132.03
3. Empowerment of Women and other Economically Backward Sections	**1.53**	1.55
4. Environmental Sustainability	**73.20**	42.51
5. Art & Culture	**2.36**	0.85
6. Sports	**2.51**	3.61
7. Rural Development	**40.02**	34.81
8. Disaster management, including relief, rehabilitation and reconstruction activities	**12.90**	-
Total	**304.92**	285.46

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

These are the notes referred to in Balance Sheet and Statement of Profit and Loss

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S.K.Khattar)
Partner
M No.084993

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

INDEPENDENT AUDITORS' REPORT

To
The Members of NTPC Limited

Report on the Audit of the Standalone Financial Statements

Opinion

We have audited the Standalone Financial Statements of NTPC Limited ("the Company"), which comprise the Balance Sheet as at 31 March 2020, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows for the year then ended and notes to the financial statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Standalone Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Standalone Financial Statements give the information required by the Companies Act, 2013 ("the Act") in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the state of affairs (financial position) of the Company as at 31 March, 2020, and its profit (financial performance including other comprehensive income), changes in equity and its cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Standalone Financial Statements section of our report. We are independent of the Company in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the Standalone Financial Statements under the provisions of the Act and the Rules thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter

We draw attention to the following matters in the notes to the Standalone Financial Statements:

(a) Note No. 32(a) regarding billing and accounting of sales on provisional basis.

(b) Note No. 44 in respect of one of the projects of Company consisting of three units of 800MW each, where the order of National Green Tribunal (NGT) on the matter of environmental clearance for the project has been stayed by the Hon'ble Supreme Court of India, the matter is sub-judice and the units have since been declared commercial.

(c) Note No. 57(iii)(b) with respect to appeal filed by the company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the company and the related provision made/disclosure of contingent liability as mentioned in the said note.

(d) Note No. 41 which describe the assessment of the impact of Covid-19 pandemic by the management on the business and its associated financial risks.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Standalone Financial Statements of the current period. These matters were addressed in the context of our audit of the Standalone Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. We have determined the matters described below to be the key audit matters to be communicated in our report.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
1.	**Recognition and Measurement of revenue from Sale of Energy** The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April 2019 sales has been provisionally recognised considering the applicable CERC Tariff Regulations 2019. This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgemental. (Refer Note No. 32 to the Standalone Financial Statements, read with the Significant Accounting Policy No. C.15)	We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures: - Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy. - Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019 Based on the above procedure performed, the recognition and measurement of revenue from sale of energy are considered to be adequate and reasonable.
2.	**Impairment assessment of Property, Plant and Equipment (PPE)** The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment. We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units), (Refer Note No. 56(a) to the Standalone Financial Statements, read with the Accounting Policy No. C.20)	We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE. We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc. We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions. Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.

Sr. No.	Key Audit Matter	How our audit addressed the Key Audit Matter
3.	**Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability** The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961. We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 18,25,49 & 64 to the Standalone Financial Statements, read with the Accounting Policy No. C.4 and C.18)	We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and corresponding liability of the same in Regulatory Deferral Account including the management's judgement. We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations /assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance attributable to the said MAT credit, payable to the beneficiaries in subsequent periods. Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, are considered adequate and reasonable.
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 69 to the Standalone Financial Statements, read with the Accounting Policy No. C.13)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities are considered to be adequate and reasonable.

Information other than the Standalone Financial Statements and Auditors' Report thereon

The Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the Corporate Governance Report, and the information included in the Directors' Report including Annexures, Management Discussion and Analysis, Business Responsibility Report and other company related information (but does not include the Standalone Financial

Statements and our auditors' report thereon), which are expected to be made available to us after the date of this auditors' report.

Our opinion on the Standalone Financial Statements does not cover the other information and we do not and will not express any form of assurance conclusion thereon.

In connection with our audit of the Standalone Financial Statements, our responsibility is to read the other information identified above when it becomes available and, in doing so, consider whether the other information is materially inconsistent with the Standalone Financial Statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

When we read other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of management and those charged with governance for the Standalone Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Act with respect to the preparation of these Standalone Financial Statements that give a true and fair view of the financial position, financial performance, total comprehensive income, changes in equity and cash flows of the Company in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended. This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Company and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Standalone Financial Statements, that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the Standalone Financial Statements, management is responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Company or to cease operations, or has no realistic alternative but to do so.

The Board of Directors is also responsible for overseeing the Company's financial reporting process.

Auditors' Responsibilities for the Audit of the Standalone Financial Statements

Our objectives are to obtain reasonable assurance about whether the Standalone Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Standalone Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the company has adequate Internal Financial Controls system in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditors' report to the related disclosures in the Standalone Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditors' report. However, future events or conditions may cause the Company to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Standalone Financial Statements, including the disclosures, and whether the Standalone Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Standalone Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditors' report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

1. As required by the Companies (Auditor's Report) Order, 2016 ("the Order") issued by the Central Government of India in terms of Section 143(11) of the Act, and on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, we give in "Annexure 1" a statement on the matters specified in paragraphs 3 and 4 of the said Order, to the extent applicable.

2. We are enclosing our report in terms of Section 143(5) of the Act, on the basis of such checks of the books and records of the Company as we considered appropriate and according to the information and explanations given to us, in the "Annexure 2" on the directions issued by the Comptroller and Auditor General of India.

3. As required by Section 143(3) of the Act, we report that:

   (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.

   (b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books.

   (c) The Balance Sheet, the Statement of Profit and Loss (including Other Comprehensive Income), the Statement of Changes in Equity and the Statement of Cash Flows dealt with by this Report are in agreement with the books of account.

   (d) In our opinion, the aforesaid Standalone Financial Statements comply with the Indian Accounting Standards prescribed under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.

   (e) Being a Government Company pursuant to the Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Company.

   (f) With respect to the adequacy of the Internal Financial Controls with reference to the Standalone Financial Statement of the Company and the operating effectiveness of such controls, refer to our separate report in "Annexure 3".

(g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable on the Company.

(h) With respect to the other matters to be included in the Auditors' Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, as amended, in our opinion and to the best of our information and according to the explanations given to us:

I. The Company has disclosed the impact of pending litigations on its financial position in its Standalone Financial Statements. Refer Note No. 69 to the Standalone Financial Statements;

II. The Company has made provision, as required under the applicable law or Indian accounting standards, for material foreseeable losses, if any, on long-term contracts including derivative contracts.

III. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Company.

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 20091382AAAAIQ5307
Place: New Delhi

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S. K. Khattar)
Partner
M. No.084993
UDIN: 20084993AAAABY5299
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
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M. No.025854
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Place: Chennai

For Parakh & Co.
Chartered Accountants
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(Thalendra Sharma)
Partner
M. No.079236
UDIN: 20079236AAAACC4600
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 20057318AAAAAY2503
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 20073488AAAAAN4655
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 20072534AAAAGQ6574
Place: Hazaribagh

Dated : 27 June 2020

Digitally signed by signatory

ANNEXURE 1 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 1 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2020

(i) (a) The Company has generally maintained proper records showing full particulars including quantitative details and situation of fixed assets (Property, Plant & Equipment).

(b) The Company is having a regular programme of physical verification of all fixed assets (Property, Plant & Equipment) over a period of three years, which, in our opinion, is reasonable having regard to the size of the Company and the nature of its fixed assets. No material discrepancies were noticed on such verification.

(c) The title deeds of all the immovable properties are held in the name of the Company except as follows:

Description of Asset	No. of cases	Area in acres	Gross block as on 31.03.2020 (₹ Crore)	Net block as on 31.03.2020 (₹ Crore)	Remarks
Land					As per explanation given to us, the Company is taking appropriate steps for completion of legal formalities
- Freehold	1014	10142	1508.27	1508.27	
- Leasehold	109	10011	1392.74	1191.91	
Building & Structures	2	-	4.97	2.55	

(ii) In our opinion the inventory has been physically verified by the management at reasonable intervals. No material discrepancies were noticed on such physical verification.

(iii) The Company has not granted any loans, secured or unsecured to any companies, firms, limited liability partnership or other parties covered in the register maintained under Section 189 of the Act.

In view of the above, reporting under clause 3 (iii)(a), 3 (iii)(b) and 3 (iii)(c) of the Order is not applicable.

(iv) In our opinion and according to the information and explanations given to us, the Company has complied with the provisions of Section 185 and 186 of the Act, as applicable, in respect of loans advanced to subsidiary companies & joint venture company and investments made in the subsidiary and joint venture companies. The Company has not given any guarantee or provided any security in respect of which the provisions of section 185 and 186 of the Act are applicable.

(v) The Company has not accepted deposits from the public. As such, the directives issued by the Reserve Bank of India, the provisions of Sections 73 to 76 or any other relevant provisions of the Act and the rules framed thereunder are not applicable to the Company. The Company has obtained deposits from the dependents of employees who die or suffer permanent total disability for which the Company has applied to the Ministry of Corporate Affairs, Government of India for continuation of the exemption earlier obtained in respect of applicability of Section 58A of the Companies Act, 1956, which is still awaited (refer Note No. 28 (d) of the Standalone Financial Statements). No order has been passed with respect to Section 73 to 76, by the Company Law Board or National Company Law Tribunal or Reserve Bank of India or any Court or any other Tribunal.

(vi) We have broadly reviewed the accounts and records maintained by the Company pursuant to the Rules made by the Central Government for the maintenance of cost records under sub-section (1) of Section 148 of the Act read with Companies (Cost Records & Audit) Rules, 2014, as amended and we are of the opinion that prima facie the prescribed accounts and records have been made and maintained. We have not, however, made detailed examination of the records with a view to determine whether they are accurate and complete.

(vii) (a) Undisputed statutory dues including provident fund, income tax, sales tax, goods and service tax, service tax, duty of customs, duty of excise, value added tax, cess and other statutory dues have generally been regularly deposited with the appropriate authorities and there are no undisputed statutory dues outstanding as on 31 March 2020 for a period of more than six months from the date they became payable. We have been informed that employees' state insurance is not applicable to the Company.

(b) According to information and explanations given to us, the gross disputed statutory dues of income tax or sales tax or service tax or duty of customs or duty of excise or value added tax amounts to Rs. 10,619.79 crore in aggregate as on 31 March 2020, out of which Rs. 5,300.14 crore has been deposited under protest/adjusted by tax authorities and the balance of Rs. 5,319.65 crore of dues have not been deposited on account of matters pending before appropriate authorities as detailed below:

Sl No.	Name of the statute	Nature of the disputed statutory dues	Period to which the amount relates (Financial Year)	Forum where the dispute is pending	Gross Disputed Amount (Rs. crore)	Amount deposited under protest/ adjusted by Tax Authorities (Rs. crore)	Amount not deposited (Rs. crores)
1	Income Tax Act, 1961	Income Tax / Penalty / TDS @	2003-04, 2004-05	High Court*	581.40	30.25	551.15
			2001-02, 2005-06 to 2011-12	Income Tax Appellate Tribunal*	8,510.38	3,858.49	4,651.89
			2009-10, 2010-11, 2012-13 to 2016-17	Commissioner of Income Tax (Appeals)	1,462.07	1,399.21	62.86
			2013-14 to 2014-15	Assistant Commissioner of Income Tax	0.32	0.13	0.19
			2007-08 to 2018-19	ITO(TDS) / AO	0.20	-	0.20
2	Sales tax and VAT Act of various states	Sales Tax / VAT	1997-98, 2000-01	High Court	2.58	0.05	2.53
			1985-86, 2000-01 to 2011-12, 2013- 14 to 2014-15	Appellate Tribunal / Board of Revenue	32.35	8.33	24.02
			2005-06 to 2008-09	Commissioner of Sales Tax **	2.37	1.17	1.20
			2000-01, 2002-03, 2004-05, 2006-07 2014-15 to 2016-17	Additional Commissioner of Sales Tax ***	6.27	1.86	4.41
			1988-89 to 1997-98, 2011-12, 2015-16	Additional Commissioner of sales Tax (Appeal)	2.13	0.17	1.96
			2001-02 to 2006-07	Deputy Commissioner Sales Tax	11.70	-	11.70
			2000-01, 2005-06	Joint Commissioner of Sales Tax ****	1.05	0.36	0.69
3	Finance Act, 1994	Service Tax	2012-13 to 2015-16	CESTAT	1.19	0.03	1.16
			2009-10 to 2013-14	Commissioner (Appeals)	0.63	0.05	0.58
			2015-16 to 2016-17	Assistant Commissioner Appeals	0.36	0.02	0.34

Sl No.	Name of the statute	Nature of the disputed statutory dues	Period to which the amount relates (Financial Year)	Forum where the dispute is pending	Gross Disputed Amount (Rs. crore)	Amount deposited under protest/ adjusted by Tax Authorities (Rs. crore)	Amount not deposited (Rs. crores)
4	Customs Act, 1962	Custom Duty	2016-17	Commissioner of Customs (Appeal)	0.29	0.02	0.27
			2008-09, 2012-13	CESTAT	4.50	-	4.50
Total					**10,619.79**	**5,300.14**	**5,319.65**

* includes disputed amount of Rs. 6,010.47 crore in respect of certain matters, where the lower Appellate Authority has decided in favour of the company, although the Assessing Officer has disputed the same with appropriate Appellate Authority.

** includes Rs. 2.08 crore and Rs. 0.29 crore towards demand for VAT raised by Sales Tax Officer, which has been stayed by the Hon'ble High Court and Commissioner of sales tax respectively.

*** includes Rs. 5.01 crore towards demand for VAT and CST raised by Sales Tax authority, which has been stayed by Commissioner / Additional Commissioner of sales tax.

**** includes Rs. 1.02 crore towards demand for CST raised by Sales Tax Officer, which has been stayed by the Hon'ble High Court.

@ During the year, the GOI has introduced Vivad Se Vishwas Scheme 2020 (VsVs). The Company has decided to settle its pending Income Tax disputes by opting for the VsVs. The Company is in the process of completion of procedural formalities under the scheme and the same will be settled. (Refer Note No. 49 (II) (b) to the standalone financial statements).

(viii) In our opinion and according to the information and explanations given to us, the Company has not defaulted in repayment of loans or borrowings to financial institutions, banks or dues to debenture holders. The company has not taken any loan from the Government.

(ix) The Company has not raised any money by way of initial public offer or further public offer (including debt instruments). According to the information and explanations given to us, the money raised by the Company by way of term loans have been applied for the purposes for which they were obtained.

(x) According to the information and explanations given to us and as represented by the Management and based on our examination of the books and records of the Company and in accordance with generally accepted auditing practices in India, no case of fraud by the Company or any fraud on the Company by its officers or employees has been noticed or reported during the year.

(xi) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, provisions of clause 3 (xi) of the Order are not applicable to the Company.

(xii) The provisions of clause 3 (xii) of the Order, for Nidhi Company, are not applicable to the Company.

(xiii) The Company has complied with the provisions of Section 177 and 188 of the Act w.r.t. transactions with the related parties, wherever applicable. Details of the transactions with the related parties have been disclosed in the Standalone Financial Statements as required by the applicable Indian Accounting Standards.

(xiv) The Company has not made any preferential allotment or private placement of shares or fully or partly convertible debentures during the year under review. Accordingly, provisions of clause 3 (xiv) of the Order are not applicable to the Company.

(xv) The Company has not entered into any non-cash transactions with the directors or persons connected with them as covered under Section 192 of the Act.

(xvi) According to information and explanation given to us, the Company is not required to be registered under section 45-IA of Reserve Bank of India Act, 1934. Accordingly, provision of clause 3(xvi) of the Order is not applicable to the Company.

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 20091382AAAAIQ5307
Place: New Delhi

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S. K. Khattar)
Partner
M. No.084993
UDIN: 20084993AAAABY5299
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 20025854AAAABK3338
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 20079236AAAACC4600
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 20057318AAAAAY2503
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 20073488AAAAAN4655
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 20072534AAAAGQ6574
Place: Hazaribagh

Dated : 27 June 2020

Digitally signed by signatory

ANNEXURE 2 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 2 under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2020

Sl. No.	Directions u/s 143(5) of the Companies Act, 2013	Auditors' reply on action taken on the directions	Impact on financial statement
1	Whether the Company has system in place to process all the accounting transactions through IT system? If yes, the implications of processing of accounting transactions outside IT system on the integrity of the accounts along with the financial implications, if any, may be stated.	As per the information and explanations given to us, the Company has a system in place to process all the accounting transactions through IT system. SAP-ERP has been implemented for all the processes like Financial Accounting (FI), Controlling (CO), Sales and Distribution (SD), Payroll / Human Capital Management (HCM), Material Management (MM), Commercial billing / Industry Solution Utilities (ISU), etc. Based on the audit procedures carried out and as per the information and explanations given to us, no accounting transactions have been processed /carried outside the IT system. Accordingly, there are no implications on the integrity of the accounts.	Nil
2	Whether there is any restructuring of an existing loan or cases of waiver/write off of debts/ loans/ interest etc. made by a lender to the company due to the company's inability to repay the loan? If yes, the financial impact may be stated.	Based on the audit procedures carried out and as per the information and explanations given to us, there was no restructuring of existing loans or cases of waiver/write off of debts/ loans/ interest etc. made by the lender to the company due to the company's inability to repay the loan.	Nil
3	Whether funds received / receivable for specific schemes from Central / State agencies were properly accounted for/utilized as per its term and conditions? List the cases of deviation.	Based on the audit procedures carried out and as per the information and explanations given to us, the funds received/receivable for specific schemes from Central/State agencies were properly accounted for/utilized as per the respective terms and conditions.	Nil

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 20091382AAAAIQ5307
Place: New Delhi

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S. K. Khattar)
Partner
M. No.084993
UDIN: 20084993AAAABY5299
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 20025854AAAABK3338
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 20079236AAAACC4600
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M. No.057318
UDIN: 20057318AAAAAY2503
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 20073488AAAAAN4655
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 20072534AAAAGQ6574
Place: Hazaribagh

Dated : 27 June 2020

Digitally signed by signatory

ANNEXURE 3 TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 3 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Standalone Financial Statements for the year ended 31 March 2020

Report on the Internal Financial Controls with reference to the Standalone Financial Statement under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act").

We have audited the internal financial controls with reference to the Standalone Financial Statements of NTPC Limited ("the Company") as of 31 March 2020 in conjunction with our audit of the Standalone Financial Statements of the Company for the year ended on that date.

Management's Responsibility for Internal Financial Controls

The Company's management is responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by The Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to Company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to the Standalone Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls, both applicable to an audit of Internal Financial Controls and, both issued by ICAI. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to the Standalone Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to the standalone Financial Statements and their operating effectiveness. Our audit of internal financial control with reference to the Standalone Financial Statements included obtaining an understanding of internal financial control with reference to the Standalone Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditors' judgement, including the assessment of the risks of material misstatement of the Standalone Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls system with reference to the Standalone Financial Statements.

Meaning of Internal Financial Controls with reference to the Standalone Financial Statements

A Company's internal financial control with reference to the Standalone Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Standalone Financial Statements for external purposes in accordance with generally accepted accounting principles. A Company's internal financial control with reference to the Standalone Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the Company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Standalone Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the Company are being made only in accordance with authorizations of management and directors of the Company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the Company's assets that could have a material effect on the Standalone Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to the Standalone Financial Statements

Because of the inherent limitations of internal financial controls with reference to the Standalone Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to the Standalone Financial Statements to future periods are subject to the risk that the internal financial controls with reference to the Standalone Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion, to the best of our information and according to the explanations given to us, the Company has, in all material respects, an adequate internal financial controls with reference to the Standalone Financial Statements in place and such internal financial controls with reference to the Standalone Financial Statements were operating effectively as at 31 March 2020, based on the internal controls over financial reporting criteria established by the Company considering the components of internal controls stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the ICAI.

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M. No.091382
UDIN: 20091382AAAAIQ5307
Place: New Delhi

For S.N.Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(S. K. Khattar)
Partner
M. No.084993
UDIN: 20084993AAAABY5299
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M. No.025854
UDIN: 20025854AAAABK3338
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M. No.079236
UDIN: 20079236AAAACC4600
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M. No.057318
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For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M. No.073488
UDIN: 20073488AAAAAN4655
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M. No.072534
UDIN: 20072534AAAAGQ6574
Place: Hazaribagh

Dated : 27 June 2020

Digitally signed by signatory

Panorama view of NTPC Township

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6) (b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2020

The preparation of financial statements of NTPC Limited for the year ended 31 March 2020 in accordance with the financial reporting framework prescribed under the Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139 (5) of the Act are responsible for expressing opinion on the financial statements under section 143 of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 27.06.2020.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the financial statements of NTPC Limited for the year ended 31 March 2020 under section 143(6)(a) of the Act. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my supplementary audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report under section 143(6)(b) of the Act.

For and on behalf of the
Comptroller & Auditor General of India

(D.K. Sekar)
Director General of Audit (Energy),
Delhi

Place : New Delhi
Dated : 21st August 2020

NTPC Thermal Power Plant

EMPLOYEE COST SUMMARY

₹ Crore

Description	2015-16	2016-17	2017-18	2018-19	2019-20
A. Salary, wages and benefits (Incl. Provident fund and other contributions)	4,105.52	5,114.83	5,469.28	5,596.61	**5,530.64**
B. Other benefits					
1. Welfare expenses	324.16	210.75	308.47	302.11	**257.12**
2. Township	218.16	226.19	245.86	260.94	**281.79**
3. Educational and school facilities	28.61	24.66	33.98	31.12	**31.77**
4. Medical facilities	178.79	185.40	192.03	234.82	**254.44**
5. Subsidised transport	8.26	12.25	11.51	13.32	**13.04**
6. Social and cultural activities	8.72	9.70	7.74	9.31	**9.96**
7. Subsidised canteen	40.78	47.62	62.42	76.48	**86.85**
Total (B)	**807.48**	**716.57**	**862.01**	**928.10**	**934.97**
Total (A+B)	**4,913.00**	**5,831.40**	**6,331.29**	**6,524.71**	**6,465.61**
8. Year end no. of employees	21,633	20,593	19,739	18,359	**17,398**
9. Average no. of employees	22,065	21,113	20,166	19,049	**17,879**
10. Average salary, wages and benefits per employee per annum (₹)	18,60,648	24,22,597	27,12,129	29,38,007	**30,93,372**
11. Average cost of other benefits per employee per annum (₹)	3,65,955	3,39,398	4,27,457	4,87,217	**5,22,943**
12. Average cost of employees remuneration and benefits per annum (₹)	22,26,603	27,61,995	31,39,586	34,25,224	**36,16,315**

Note: 1. Welfare expenses are net of amounts included in Sl. no. 2 to Sl. no. 7.
2. Information for 2016-17 onwards is based on accounts prepared as per Indian Accounting Standards (Ind AS). Previous year information prepared as per the erstwhile applicable Accounting Standard (AS).

A view of NTPC Control Room

Revenue expenditure on Social Overhead for the year ended on 31.03.2020

₹ Crore

S No	Particular	Township	Educational and School Facilities	Medical Facilities	Subsidised Transport	Social and Cultural Activities	Subsidised Canteen	Total	Previous Year
1	Payment to employees	47.65	-	166.82	-	-	-	214.47	243.44
2	Material consumed	15.75	-	6.54	0.02	-	-	22.31	25.34
3	Rates and taxes	1.43	-	-	-	-	-	1.43	2.26
4	Welfare expenses	2.34	29.37	186.94	12.53	9.21	83.68	324.07	306.74
5	Others including repairs & maintenance	211.71	1.18	62.15	0.86	0.16	2.94	279.00	253.31
6	Depreciation	74.46	1.22	3.05	-	0.59	0.24	79.56	65.33
7	**Sub-total (1 to 6)**	**353.34**	**31.77**	**425.50**	**13.41**	**9.96**	**86.85**	**920.84**	**896.41**
8	Less : Recoveries	23.90	-	4.24	0.37	-	-	28.51	26.99
9	**Net expenditure (7-8)**	**329.44**	**31.77**	**421.26**	**13.04**	**9.96**	**86.85**	**892.33**	**869.42**
10	Previous Year	**328.22**	**31.12**	**410.97**	**13.32**	**9.31**	**76.48**	**869.42**	-

Corporate Social Responsibility is a way of life in NTPC

CONSOLIDATED BALANCE SHEET AS AT 31 MARCH 2020

₹ Crore

Particulars	Note No.	As at 31 March 2020	As at 31 March 2019
ASSETS			
Non-current assets			
Property, plant and equipment	2	**1,87,176.46**	1,50,555.42
Capital work-in-progress	3	**98,210.94**	1,17,998.23
Intangible assets	4	**626.33**	429.11
Intangible assets under development	5	**297.53**	398.63
Investments accounted for using the equity method	6	**9,256.31**	8,040.39
Financial assets			
Investments	7	**50.28**	91.92
Loans	8	**511.08**	476.13
Other financial assets	9	**1,227.88**	1,302.70
Other non-current assets	10	**13,726.72**	15,494.22
Total non-current assets		**3,11,083.53**	2,94,786.75
Current assets			
Inventories	11	**11,138.54**	8,251.62
Financial assets			
Trade receivables	12	**20,370.80**	12,363.52
Cash and cash equivalents	13	**589.52**	323.74
Bank balances other than cash and cash equivalents	14	**2,624.77**	2,609.69
Loans	15	**252.67**	248.16
Other financial assets	16	**13,027.80**	9,081.24
Current tax assets (net)	16A	**83.26**	23.21
Other current assets	17	**8,818.51**	15,345.20
Total current assets		**56,905.87**	48,246.38
Regulatory deferral account debit balances	18	**9,397.73**	3,628.03
TOTAL ASSETS		**3,77,387.13**	3,46,661.16
EQUITY AND LIABILITIES			
Equity			
Equity share capital	19	**9,894.56**	9,894.56
Other equity	20	**1,08,944.60**	1,01,461.65
Total equity attributable to owners of the Company		**1,18,839.16**	1,11,356.21
Non-controlling interests	20A	**3,317.19**	2,908.20
Total equity		**1,22,156.35**	1,14,264.41
Liabilities			
Non-current liabilities			
Financial liabilities			
Borrowings	21	**1,76,020.02**	1,47,063.71
Trade payables	22		
Total outstanding dues of micro and small enterprises		**10.35**	6.41
Total outstanding dues of creditors other than micro and small enterprises		**57.75**	41.80
Other financial liabilities	23	**1,404.45**	1,977.80
Provisions	24	**1,169.17**	1,141.73
Deferred tax liabilities (net)	25	**7,617.11**	3,928.11
Total non-current liabilities		**1,86,278.85**	1,54,159.56
Current liabilities			
Financial liabilities			
Borrowings	26	**16,556.23**	17,368.85
Trade payables	27		
Total outstanding dues of micro and small enterprises		**512.24**	365.02
Total outstanding dues of creditors other than micro and small enterprises		**9,596.34**	8,249.30
Other financial liabilities	28	**28,646.96**	40,173.22

₹ Crore

Particulars	Note No.	As at 31 March 2020	As at 31 March 2019
Other current liabilities	29	**1,736.71**	1,079.56
Provisions	30	**7,287.91**	7,308.41
Current tax liabilities (net)	30A	**1.71**	108.19
Total current liabilities		**64,338.10**	74,652.55
Deferred revenue	31	**4,613.83**	3,584.64
TOTAL EQUITY AND LIABILITIES		**3,77,387.13**	3,46,661.16
Significant accounting policies	1		

The accompanying notes 1 to 71 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Balance Sheet referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place:Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

CONSOLIDATED STATEMENT OF PROFIT AND LOSS FOR THE YEAR ENDED 31 MARCH 2020

₹ Crore

Particulars	Note No.	For the year ended 31 March 2020	For the year ended 31 March 2019
Income			
Revenue from operations	32	1,09,464.04	1,00,286.54
Other income	33	2,908.54	2,246.51
Total income		1,12,372.58	1,02,533.05
Expenses			
Fuel cost	34	57,185.62	54,395.78
Electricity purchased for trading		5,185.95	5,288.12
Employee benefits expense	35	5,830.48	5,816.65
Finance costs	36	8,116.85	5,604.65
Depreciation and amortization expense	37	10,356.16	8,669.03
Other expenses	38	9,725.41	8,105.12
Total expenses		96,400.47	87,879.35
Profit before share of profits of joint ventures accounted for using equity method, tax and regulatory deferral account balances		15,972.11	14,653.70
Add: Share of profits of joint ventures accounted for using equity method		405.40	672.17
Profit before tax and regulatory deferral account balances		16,377.51	15,325.87
Tax expense	49		
Current tax			
Current year		2,782.89	3,391.25
Earlier years		2,743.64	(103.81)
Deferred tax		3,821.01	(6,067.38)
Total tax expense		9,347.54	(2,779.94)
Profit before regulatory deferral account balances		7,029.97	18,105.81
Net movement in regulatory deferral account balances (net of tax)	65	4,872.01	(4,071.32)
Profit for the year		11,901.98	14,034.49
Other comprehensive income			
Items that will not be reclassified to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		(372.10)	(238.93)
- Net gains/(losses) on fair value of equity instruments		(41.64)	(16.74)
- Share of other comprehensive income of joint ventures accounted for using the equity method		(0.50)	(1.07)
Income tax on items that will not be classfied to profit or loss			
- Net actuarial gains/(losses) on defined benefit plans		66.52	51.89
Items that will be reclassified to profit or loss			
- Exchange differences on translation of foreign operations		40.00	11.67
Other comprehensive income for the year		(307.72)	(193.18)
Total comprehensive income for the year		11,594.26	13,841.31
Profit attributable to:			
Owners of the Parent Company		11,600.23	13,736.68
Non-controlling interests		301.75	297.81
		11,901.98	14,034.49
Other comprehensive income attributable to:			
Owners of the Parent Company		(303.43)	(192.15)
Non-controlling interests		(4.29)	(1.03)
		(307.72)	(193.18)

₹ Crore

Particulars	Note No.	For the year ended 31 March 2020	For the year ended 31 March 2019
Total comprehensive income attributable to:			
Owners of the Parent Company		**11,296.80**	13,544.53
Non-controlling interests		**297.46**	296.78
		11,594.26	13,841.31
Earnings per equity share attributable to owners of the parent (Par value ₹ 10/- each)	54		
Basic & Diluted (₹) (including net movement in regulatory deferral account balances)		**11.72**	13.88
Basic & Diluted (₹) (excluding net movement in regulatory deferral account balances)		**6.80**	18.00

Significant accounting policies 1

The accompanying notes 1 to 71 form an integral part of these financial statements.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Statement of Profit and Loss referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place:Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY FOR THE YEAR ENDED 31 MARCH 2020

(A) Equity share capital

For the year ended 31 March 2020

₹ Crore

Particulars	**Amount**
Balance as at 1 April 2019	**9,894.56**
Changes in equity share capital during the year	-
Balance as at 31 March 2020	**9,894.56**

For the year ended 31 March 2019

₹ Crore

Particulars	Amount
Balance as at 1 April 2018	8,245.46
Changes in equity share capital during the year (refer Note 19)	1,649.10
Balance as at 31 March 2019	9,894.56

(B) Other equity

For the year ended 31 March 2020

₹ Crore

Particulars	Attributable to owners of the Parent Company										Other equity attributable to owners of the parent company	Non-controlling interests	Total
	Reserves & surplus								Items of other comprehensive income (OCI)				
	Capital reserve	Other capital reserve - common control	Securities premium	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	Corporate Social Responsibility reserve	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2019	72.86	(5,170.26)	2,228.46	8,597.97	638.11	2.39	85,999.15	9,100.33	(8.94)	1.58	1,01,461.65	2,908.20	**1,04,369.85**
Profit for the year	-	-	-	-	-	-	-	11,600.23	-	-	11,600.23	301.75	**11,901.98**
Other comprehensive income	-	-	-	-	-	-	-	(301.79)	(41.64)	40.00	(303.43)	(4.29)	**(307.72)**
Total comprehensive income	-	-	-	-	-	-	-	**11,298.44**	**(41.64)**	**40.00**	**11,296.80**	**297.46**	**11,594.26**
Additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	-	-	-	-	-	-	-	-	-	-	-	150.28	**150.28**
Impact of adjustments in share of net profits of joint ventures accounted for using equity method pertaining to previous years	-	-	-	-	-	-	-	(53.94)	-	-	(53.94)	-	**(53.94)**
Impact of change in ownership interest in subsidiary companies	-	-	-	-	-	-	-	3.82	-	-	3.82	-	**3.82**
Transfer to retained earnings	-	-	-	(897.00)	-	(2.49)	-	899.49	-	-	-	-	-
Transfer from retained earnings	-	-	-	-	-	2.45	6,500.00	(6,502.45)	-	-	-	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 20)	-	-	-	-	(38.39)	-	-	-	-	-	(38.39)	-	**(38.39)**
Final dividend paid for FY 2018-19 (Note 20)	-	-	-	-	-	-	-	(2,606.50)	-	-	(2,606.50)	(32.14)	**(2,638.64)**
Tax on final dividend	-	-	-	-	-	-	-	(533.93)	-	-	(533.93)	(6.61)	**(540.54)**
Interim dividend paid for FY 2019-20 (Note 20)	-	-	-	-	-	-	-	(494.73)	-	-	(494.73)	-	**(494.73)**
Tax on interim dividend	-	-	-	-	-	-	-	(101.18)	-	-	(101.18)	-	**(101.18)**
Pre-acquisition adjustment for issue of further share capital by THDCIL	-	11.00	-	-	-	-	-	-	-	-	11.00	-	**11.00**
Balance as at 31 March 2020	**72.86**	**(5,159.26)**	**2,228.46**	**7,700.97**	**599.72**	**2.35**	**92,499.15**	**11,009.35**	**(50.58)**	**41.58**	**1,08,944.60**	**3,317.19**	**1,12,261.79**

For the year ended 31 March 2019

₹ Crore

Particulars	Attributable to owners of the Parent Company												
	Reserves & surplus								Items of other comprehensive income (OCI)		Other equity attributable to owners of the parent company	Non-controlling interests	Total
	Capital reserve	Other capital reserve - common control	Securities premium	Bonds/ Debentures redemption reserve	Fly ash utilisation reserve fund	Corporate Social Responsibility reserve	General reserve	Retained earnings	Equity instruments through OCI	Foreign currency translation reserve			
Balance as at 1 April 2018 (as previously reported)	50.08	-	2,228.46	7,274.56	631.21	0.24	81,131.83	4,003.92	7.80	(10.09)	95,318.01	947.77	96,265.78
Pooling of interest accounting for common control business combination (Also Refer Note 58)	-	(5,354.71)	-	600.67	-	-	1,976.92	3,317.91	-	-	540.79	2,079.06	2,619.85
Balance as at 1 April 2018 (restated)	50.08	(5,354.71)	2,228.46	7,875.23	631.21	0.24	83,108.75	7,321.83	7.80	(10.09)	95,858.80	3,026.83	98,885.63
Profit for the year	-	-	-	-	-	-	-	13,736.68	-	-	13,736.68	297.81	14,034.49
Other comprehensive income	-	-	-	-	-	-	-	(187.08)	(16.74)	11.67	(192.15)	(1.03)	(193.18)
Total comprehensive income	-	-	-	-	-	-	-	13,549.60	(16.74)	11.67	13,544.53	296.78	13,841.31
Additional non-controlling interest arising on acquisition/disposal of interest & other adjustments	-	-	-	-	-	-	-	-	-	-	-	(284.93)	(284.93)
Impact of change in ownership interest in subsidiary companies	-	-	-	-	-	-	-	(77.76)	-	-	(77.76)	-	(77.76)
Impact of changes in NCI interest and other adjustments	-	-	-	-	-	-	-	16.45	-	-	16.45	-	16.45
On account of business combination	22.78	-	-	-	-	-	-	-	-	-	22.78	-	22.78
Transfer to retained earnings	-	-	-	(1,104.50)	-	(0.10)	-	1,104.60	-	-	-	-	-
Transfer from retained earnings	-	-	-	1,827.24	-	2.25	4,539.50	(6,368.99)	-	-	-	-	-
Accretion / (utilisation) in fly ash utilisation fund (net) (Note 20)	-	-	-	-	6.90	-	-	-	-	-	6.90	-	6.90
Issue of bonus shares (Refer Note 20)	-	-	-	-	-	-	(1,649.10)	-	-	-	(1,649.10)	-	(1,649.10)
Final dividend paid for FY 2017-18 (Refer Note 20)	-	-	-	-	-	-	-	(2,332.56)	-	-	(2,332.56)	(108.23)	(2,440.79)
Tax on final dividend	-	-	-	-	-	-	-	(475.34)	-	-	(475.34)	(22.25)	(497.59)
Interim dividend paid for FY 2018-19 (Refer Note 20)	-	-	-	-	-	-	-	(3,019.88)	-	-	(3,019.88)	-	(3,019.88)
Tax on interim dividend	-	-	-	-	-	-	-	(617.62)	-	-	(617.62)	-	(617.62)
Pre-acquisition adjustment for issue of further share capital by THDCIL and NEEPCO	-	184.45	-	-	-	-	-	-	-	-	184.45	-	184.45
Balance as at 31 March 2019	72.86	(5,170.26)	2,228.46	8,597.97	638.11	2.39	85,999.15	9,100.33	(8.94)	1.58	1,01,461.65	2,908.20	1,04,369.85

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Consolidated Statement of Changes in Equity referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place:Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place:Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020
Digitally signed by signatory

CONSOLIDATED STATEMENT OF CASH FLOWS FOR THE YEAR ENDED 31 MARCH 2020

₹ Crore

Particulars	For the year ended 31 March 2020		For the year ended 31 March 2019
A. CASH FLOW FROM OPERATING ACTIVITIES			
Profit before tax		**16,377.51**	15,325.87
Add: Net movement in regulatory deferral account balances (net of tax)		**4,872.01**	(4,071.32)
Add: Tax on net movement in regulatory deferral account balances		**1,032.07**	(1,012.13)
Profit before tax including movements in regulatory deferral account balances		**22,281.59**	10,242.42
Adjustment for:			
Depreciation and amortisation expense	**10,356.16**		8,669.03
Provisions	**421.12**		1,071.88
Share of net profits of joint ventures accounted for using equity method	**(405.40)**		(672.17)
Deferred revenue on account of advance against depreciation	-		(74.35)
Deferred revenue on account of government grants	**(91.54)**		(136.59)
Deferred foreign currency fluctuation asset	**(1,072.34)**		(241.62)
Deferred income from foreign currency fluctuation	**1,340.04**		371.78
Regulatory deferral account debit balances	**(5,904.08)**		5,083.45
Fly ash utilisation reserve fund	**(38.39)**		6.90
Exchange differences on translation of foreign currency cash and cash equivalents	**0.03**		0.01
Finance costs	**8,060.61**		5,584.25
Unwinding of discount on vendor liabilities	**56.24**		20.40
Interest/income on term deposits/bonds/investments	**(56.89)**		(63.70)
Dividend income	**(4.80)**		(4.80)
Provisions written back	**(484.06)**		(389.84)
Profit on de-recognition of property, plant and equipment	**(12.59)**		(2.98)
Loss on de-recognition of property, plant and equipment	**64.19**		174.54
		12,228.30	19,396.19
Operating profit before working capital changes		**34,509.89**	29,638.61
Adjustment for:			
Trade receivables	**(8,092.46)**		(1,906.79)
Inventories	**(2,309.68)**		(1,665.41)
Trade payables, provisions, other financial liabilities and other liabilities	**1,524.12**		502.42
Loans, other financial assets and other assets	**2,558.22**		(4,418.36)
		(6,319.80)	(7,488.14)
Cash generated from operations		**28,190.09**	22,150.47
Income taxes (paid) / refunded		**(3,606.87)**	(3,464.82)
Net cash from operating activities - A		**24,583.22**	18,685.65

₹ Crore

Particulars	For the year ended 31 March 2020		For the year ended 31 March 2019
B. CASH FLOW FROM INVESTING ACTIVITIES			
Purchase of property, plant and equipment & intangible assets	(18,230.44)		(21,606.90)
Disposal of property, plant and equipment & intangible assets	167.93		78.75
Investment in joint venture companies	(764.98)		(123.30)
Consideration paid towards acquisition of NEEPCO and THDCIL	(11,500.00)		-
Payment for business acquisition	-		(2,145.33)
Acquisition of subsidiary, net of cash acquired	-		(1,689.42)
Interest/income on term deposits/bonds/investments received	65.90		51.55
Income tax paid on interest income	(40.79)		(40.44)
Dividend received	4.80		4.80
Bank balances other than cash and cash equivalents	(24.09)		1,407.02
Net cash used in investing activities - B		(30,321.67)	(24,063.27)
C. CASH FLOW FROM FINANCING ACTIVITIES			
Proceeds from non-current borrowings	33,653.14		27,707.79
Repayment of non-current borrowings	(9,583.31)		(14,468.79)
Proceeds from current borrowings	(812.62)		9,841.50
Payment of lease obligations	(78.71)		(8.51)
Interest paid	(13,399.15)		(11,491.60)
Dividend paid	(3,133.37)		(5,460.67)
Tax on dividend	(641.72)		(1,115.21)
Changes in ownership interest in subsidiary company	-		(77.76)
Net cash from financing activities - C		6,004.26	4,926.75
D. Exchange differences on translation of foreign currency cash and cash equivalents		(0.03)	**(0.01)**
Net increase/(decrease) in cash and cash equivalents (A+B+C+D)		265.78	(450.88)
Cash and cash equivalents at the beginning of the year (see Note 1 and 2 below)		323.74	774.62
Cash and cash equivalents at the end of the year (see Note 1 and 2 below)		589.52	323.74

Notes:

1 Cash and cash equivalents consist of cheques, drafts, stamps in hand, balances with banks and deposits with original maturity of upto three months.

2 Reconciliation of cash and cash equivalents:

Cash and cash equivalents as per Note 13	589.52	323.74

3 Refer Note 61 for details of undrawn borrowing facilities that may be available for future operating activities and to settle capital commitments.

CONSOLIDATED FINANCIAL STATEMENTS

4 Reconciliation between the opening and closing balances in the Balance Sheet for liabilities arising from financing activities:

For the year ended 31 March 2020 ₹ Crore

Particulars	**Non-current borrowings***	**Finance lease obligations**	**Current borrowings**
Opening balance as at 1 April 2019	**1,57,194.01**	**186.41**	**17,368.85**
Cash flows during the year	**10,670.68**	**(78.71)**	**(812.62)**
Non-cash changes due to:			
- Acquisitions under finance lease	-	**747.91**	-
- Interest on borrowings	**14,062.75**	-	-
- Variation in exchange rates	**3,665.59**	-	-
- Transaction costs on borrowings	**(20.56)**	-	-
Closing balance as at 31 March 2020	**1,85,572.47**	**855.61**	**16,556.23**

For the year ended 31 March 2019 ₹ Crore

Particulars	Non-current borrowings*	Finance lease obligations	Current borrowings
Opening balance as at 1 April 2018	1,34,629.43	184.34	7,527.35
Cash flows during the year	1,747.40	(8.51)	9,841.50
Non-cash changes due to:			
- Acquisitions under finance lease	-	10.58	-
- Acquisition of subsidiary	7,870.20	-	-
- Interest on borrowings	11,628.22	-	-
- Variation in exchange rates	1,372.75	-	-
- Transaction costs on borrowings	(53.99)	-	-
Closing balance as at 31 March 2019	1,57,194.01	186.41	17,368.85

* Includes current maturities of non-current borrowings and interest accrued thereon, refer Note 21 and Note 28

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

This is the Statement of cash flows referred to in our report of even date

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
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(P.R.Prasanna Varma)
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Place:Chennai

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(Thalendra Sharma)
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M No.079236
Place:Jaipur

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Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

Notes forming part of Consolidated Financial Statements

1. Group Information and Significant Accounting Policies

A. Reporting entity

NTPC Limited (the 'Company' or 'Parent Company') is a Company domiciled in India and limited by shares (CIN: L40101DL1975GOI007966). The shares of the Company are listed and traded on the National Stock Exchange of India Limited (NSE) and BSE Limited in India. The address of the Company's registered office is NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi - 110003.These consolidated financial statements comprise the financial statements of the Company and its subsidiaries (referred to collectively as the 'Group') and the Group's interest in its joint ventures. The Group is primarily involved in the generation and sale of bulk power to State Power Utilities. Other business of the Group includes providing consultancy, project management & supervision, energy trading, oil & gas exploration and coal mining.

B. Basis of preparation

1. Statement of Compliance

These consolidated financial statements are prepared on going concern basis following accrual system of accounting and comply with the Indian Accounting Standards (Ind AS) prescribed under Section 133 of the Companies Act, 2013 read with the Companies (Indian Accounting Standards) Rules, 2015 as amended, and other provisions of the Companies Act, 2013 (to the extent notified and applicable) and the provisions of the Electricity Act, 2003 to the extent applicable.

These financial statements were approved for issue by the Board of Directors on 27 June 2020.

2. Basis of measurement

The consolidated financial statements have been prepared on the historical cost basis except for:

- Certain financial assets and liabilities (including derivative instruments) that are measured at fair value (refer serial no. 28 of accounting policy regarding financial instruments);and
- Plan assets in the case of employees defined benefit plans that are measured at fair value.

The methods used to measure fair values are discussed in notes to the financial statements.

Historical cost is the amount of cash or cash equivalents paid or the fair value of the consideration given to acquire assets at the time of their acquisition or the amount of proceeds received in exchange for the obligation, or at the amounts of cash or cash equivalents expected to be paid to satisfy the liability in the normal course of business. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

3. Functional and presentation currency

These consolidated financial statements are presented in Indian Rupees (₹) which is the Company's functional currency. All financial information presented in (₹) has been rounded to the nearest crore (up to two decimals), except when indicated otherwise.

4. Current and non-current classification

The Group presents assets and liabilities in the balance sheet based on current/non-current classification.

An asset is classified as current when it is:

- Expected to be realized or intended to be sold or consumed in normal operating cycle;
- Held primarily for the purpose of trading;
- Expected to be realized within twelve months after the reporting period; or
- Cash or cash equivalent unless restricted from being exchanged or used to settle a liability for at least twelve months after the reporting period.

All other assets are classified as non-current.

A liability is classified as current when:

- It is expected to be settled in normal operating cycle;
- It is held primarily for the purpose of trading;

- It is due to be settled within twelve months after the reporting period; or
- There is no unconditional right to defer settlement of the liability for at least twelve months after the reporting period.

All other liabilities are classified as non-current.

Deferred tax assets/liabilities are classified as non-current.

Assets and liabilities are classified between current and non-current considering 12 month period as normal operating cycle.

C. Significant accounting policies

A summary of the significant accounting policies applied in the preparation of the consolidated financial statements are as given below. These accounting policies have been applied consistently to all periods presented in the consolidated financial statements.

The Group has elected to utilize the option under Ind AS 101 - 'First time adoption of Indian Accounting Standards' by not applying the provisions of Ind AS 16 - 'Property, plant and equipment'& Ind AS 38 - 'Intangible assets' retrospectively and continue to use the previous GAAP carrying amount as a deemed cost under Ind AS at the date of transition to Ind AS i.e. 1 April 2015. Therefore, the carrying amount of property, plant and equipment and intangible assets as per the previous GAAP as at 1 April 2015, i.e. the Group's date of transition to Ind AS, were maintained on transition to Ind AS.

1. Basis of consolidation

The financial statements of subsidiary companies and joint venture companies are drawn up to the same reporting date as of the Company for the purpose of consolidation.

1.1 Subsidiaries

Subsidiaries are all entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power to direct the relevant activities of the investee. Subsidiaries are fully consolidated from the date on which control is acquired by the Group and are continued to be consolidated until the date that such control ceases.

The Group combines the financial statements of the parent and its subsidiaries line by line adding together like items of assets, liabilities, equity, income and expenses. Intercompany transactions, balances and unrealized gains on transactions between Group companies are eliminated. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the transferred asset. When necessary, adjustments are made to the financial statements of subsidiaries to bring their accounting policies in line with Group's accounting policies.

Non-controlling interests (NCI) in the results and equity of subsidiaries are shown separately in the consolidated statement of profit and loss, consolidated statement of changes in equity and consolidated balance sheet respectively.

Changes in the Group's equity interest in a subsidiary that do not result in a loss of control are accounted for as equity transactions.

When the Group loses control over a subsidiary, it derecognizes the assets and liabilities of the subsidiary, and any related NCI and other components of equity. Any interest retained in the former subsidiary is measured at fair value at the date the control is lost. Any resulting gain or loss is recognized in statement of profit and loss. All amounts previously recognized in other comprehensive income in relation to that subsidiary are accounted for as if the Group had directly disposed of the related assets and liabilities of the subsidiary i.e. reclassified to consolidated statement of profit and loss or transferred to equity as specified by applicable Ind AS. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as an associate, joint venture or financial asset.

1.2 Joint ventures

A joint venture is a type of joint arrangement whereby the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint control is the contractually agreed sharing of control of an arrangement, which exists only when decisions about the relevant activities require unanimous consent of the parties sharing control.

Interests in joint ventures are accounted for using the equity method, after initially being recognized at cost in the consolidated balance sheet.

Under the equity method of accounting, the investments are initially recognized at cost and adjusted thereafter to recognize the Group's share of the post-acquisition profits or losses of the investee in profit and loss, and the Group's share of other comprehensive income (OCI) of the investee in OCI. Dividends received or receivable from joint ventures are recognized as a reduction in the carrying amount of the investment.

When the Group's share of losses in an equity-accounted investment equals or exceeds its interest in the entity, which includes any long term interest that, in substance, form part of Group investment in joint venture, the Group does not recognize further losses, unless it has incurred legal or constructive obligations or made payments on behalf of the joint venture. Losses recognized using the equity method in excess of the entity's investment in ordinary shares are applied to the other components of the entity's interest in an associate or a joint venture in the reverse order of their seniority i.e. priority in liquidation.

The statement of profit and loss reflects the Group' share of results of operations of the joint venture. Any change in the OCI of those investee is presented as presented as part of the Group OCI. Unrealized gains on transactions between the Group and its joint ventures are eliminated to the extent of the Group's interest in these entities. Unrealized losses are also eliminated unless the transaction provides evidence of an impairment of the asset transferred. When necessary, adjustments are made to the financial statements of joint ventures to bring their accounting policies into line with the Group's accounting policies.

The carrying amount of equity accounted as investments are tested for impairment in accordance with the policy described in D.11 below.

When the Group ceases to apply equity method of accounting for an investment because of a loss of joint control, any retained interest in the entity is re-measured to its fair value with the change in carrying amount recognized in statement of profit and loss. This fair value becomes the initial carrying amount for the purposes of subsequently accounting for the retained interest as a financial asset. In addition, any amounts previously recognized in OCI in respect of that entity are accounted for as if the Group had directly disposed of the related assets or liabilities. This may mean that amounts previously recognized in OCI are reclassified to profit or loss.

If the ownership interest in a joint venture is reduced but joint control is retained, only a proportionate share of the amounts previously recognized in OCI are reclassified to profit or loss where appropriate.

2. Property, plant and equipment

2.1. Initial recognition and measurement

An item of property, plant and equipment is recognized as an asset if and only if it is probable that future economic benefits associated with the item will flow to the Group and the cost of the item can be measured reliably.

Items of property, plant and equipment are initially recognized at cost. Cost includes purchase price including import duties and non-refundable taxes after deducting trade discounts and rebates, any cost directly attributable to bringing the asset to the location and condition necessary for it to be capable of operating in the manner intended by management and the present value of initial estimate of cost of dismantling, removal and restoration.

Subsequent measurement is done at cost less accumulated depreciation/amortization and accumulated impairment losses.

When parts of an item of property, plant and equipment that are significant in value and have different useful lives as compared to the main asset, they are recognized separately.

Deposits, payments/liabilities made provisionally towards compensation, rehabilitation and other expenses relatable to land in possession are treated as cost of land.

In the case of assets put to use, where final settlement of bills with contractors is yet to be effected, capitalization is done on provisional basis subject to necessary adjustment in the year of final settlement.

Assets and systems common to more than one generating unit are capitalized on the basis of engineering estimates/assessments.

Items of spare parts, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized. Other spare parts are carried as inventory and recognized in the statement of profit and loss on consumption.

The acquisition or construction of some items of property, plant and equipment although not directly increasing the future economic benefits of any particular existing item of property, plant and equipment, may be necessary for the

Group to obtain future economic benefits from its other assets. Such items are recognized as property, plant and equipment.

2.2. Subsequent costs

Subsequent expenditure is recognized in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

Expenditure on major inspection and overhauls of generating unit is capitalized, when it meets the asset recognition criteria. Any remaining carrying amount of the cost of the previous inspection and overhaul is derecognized.

The cost of replacing major part of an item of property, plant and equipment is recognized in the carrying amount of the item if it is probable that the future economic benefits embodied within the part will flow to the Group and its cost can be measured reliably. The carrying amount of the replaced part is derecognized regardless of whether the replaced part has been depreciated separately. The costs of the day-to-day servicing of property, plant and equipment are recognized in the statement of profit and loss as and when incurred.

2.3. Decommissioning costs

The present value of the expected cost for the decommissioning of the asset after its use is included in the cost of the respective asset if the recognition criteria for a provision are met.

2.4. De-recognition

Property, plant and equipment is derecognized when no future economic benefits are expected from their use or upon their disposal. Gains and losses on de-recognition of an item of property, plant and equipment are determined as the difference between sale proceeds from disposal, if any, and the carrying amount of property, plant and equipment and are recognized in the statement of profit and loss.

In circumstance, where an item of property, plant and equipment is abandoned, the net carrying cost relating to the property, plant and equipment is written off in the same period.

2.5. Depreciation/amortization

Depreciation is recognized in statement of profit and loss on a straight-line basis over the estimated useful life of each part of an item of property, plant and equipment.

Depreciation on the assets of the generation of electricity business and on the assets of Corporate & other offices of the Group, covered under Part B of Schedule II of the Companies Act, 2013, is charged on straight-line method following the rates and methodology notified by the Central Electricity Regulatory Commission (CERC) Tariff Regulations.

Depreciation on the assets of the coal mining, oil & gas exploration and consultancy business is charged on straight-line method following the useful life specified in Schedule II of the Companies Act, 2013 except for the assets referred below.

Depreciation on the following assets is provided on their estimated useful lives, which are different from the useful lives as prescribed under Schedule II to the Companies Act, 2013, ascertained on the basis of technical evaluation/ assessment:

a) Kutcha roads	2 years
b) Enabling works	
- residential buildings	15 years
- internal electrification of residential buildings	10 years
- non-residential buildings including their internal electrification, water supply, sewerage & drainage works, railway sidings, aerodromes, helipads and airstrips	5 years
c) Personal computers & laptops including peripherals	3 years
d) Photocopiers, fax machines, water coolers and refrigerators	5 years
e) Temporary erections including wooden structures	1 year
f) Telephone exchange	15 years
g) Wireless systems, VSAT equipment, display devices viz. projectors, screens, CCTV, audio video conferencing systems and other communication equipment	6 years
h) Energy saving electrical appliances and fittings	2-7 years
i) Solar/wind power plants which are not governed by CERC Tariff Regulations	25 years

Major overhaul and inspection costs which have been capitalized are depreciated over the period until the next scheduled outage or actual major inspection/overhaul, whichever is earlier.

Capital spares are depreciated considering the useful life ranging between 2 to 25 years based on technical assessment.

Right-of-use land and buildings relating to generation of electricity business governed by CERC Tariff Regulations are fully amortized over lease period or life of the related plant whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Right-of-use land and buildings relating to generation of electricity business not governed by CERC tariff Regulations are fully amortized over lease period or life of the related plant whichever is lower.

Right-of-use land and buildings relating to corporate, and other offices are fully amortized over lease period or twenty-five years whichever is lower following the rates and methodology notified by the CERC Tariff Regulations.

Land acquired for mining business under Coal Bearing Areas (Acquisition & Development) Act, 1957 is amortized on the basis of balance useful life of the project. Other right-of-use land acquired for mining business is amortized over the lease period or balance life of the project whichever is less.

Depreciation on additions to/deductions from property, plant and equipment during the year is charged on pro-rata basis from/up to the month in which the asset is available for use/sale, disposal or earmarked for disposal.

Where the cost of depreciable assets has undergone a change during the year due to increase/decrease in long-term liabilities(recognized up to 31 March 2016) on account of exchange fluctuation and price adjustment change in duties or similar factors, the unamortized balance of such asset is charged off prospectively over the remaining useful life determined following the applicable accounting policies relating to depreciation/amortization.

Where it is probable that future economic benefits deriving from the expenditure incurred will flow to the enterprise and the cost of the item can be measured reliably, subsequent expenditure on a property, plant and equipment along-with its unamortized depreciable amount is charged off prospectively over the revised useful life determined by technical assessment.

The residual values, useful lives and method of depreciation of assets other than the assets of generation of electricity business governed by CERC Tariff Regulations, are reviewed at each financial year end and adjusted prospectively, wherever required.

Refer policy nos.C.7.3 and C.20 in respect of depreciation/amortization of coal mining assets and right-of-use assets respectively.

3. Capital work-in-progress

Cost incurred for property, plant and equipment that are not ready for their intended use as on the reporting date, is classified under capital work-in-progress.

The cost of self-constructed assets includes the cost of materials & direct labour, any other costs directly attributable to bringing the assets to the location and condition necessary for it to be capable of operating in the manner intended by management and the borrowing costs attributable to the acquisition or construction of qualifying asset.

Expenses directly attributable to construction of property, plant and equipment incurred till they are ready for their intended use are identified and allocated on a systematic basis on the cost of related assets.

Deposit works/cost plus contracts are accounted for on the basis of statements of account received from the contractors.

Unsettled liabilities for price variation/exchange rate variation in case of contracts are accounted for on estimated basis as per terms of the contracts.

4. Intangible assets and intangible assets under development

4.1. Initial recognition and measurement

An intangible asset is recognized if and only if it is probable that the expected future economic benefits that are attributable to the asset will flow to the Group and the cost of the asset can be measured reliably.

Intangible assets that are acquired by the Group, which have finite useful lives, are recognized at cost. Subsequent measurement is done at cost less accumulated amortization and accumulated impairment losses. Cost includes any directly attributable expenses of preparing the asset for its intended use.

Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the Group intends to & has sufficient resources to complete development and to use or sell the asset.

Expenditure incurred which are eligible for capitalizations under intangible assets are carried as intangible assets under development till they are ready for their intended use.

4.2. Subsequent costs

Subsequent expenditure is recognized as an increase in the carrying amount of the asset when it is probable that future economic benefits deriving from the cost incurred will flow to the enterprise and the cost of the item can be measured reliably.

4.3. De-recognition

An intangible asset is derecognized when no future economic benefits are expected from their use or upon their disposal. Gain or loss on de-recognition of an intangible asset is determined as the difference between the net disposal proceeds, if any, and the carrying amount of intangible assets and are recognized in the statement of profit and loss.

4.4. Amortization

Cost of software recognized as intangible asset, is amortized on straight-line method over a period of legal right to use or 3 years, whichever is less. Other intangible assets are amortized on straight-line method over the period of legal right to use or life of the related plant, whichever is less.

The amortization period and the amortization method of intangible assets with a finite useful life is reviewed at each financial year end and adjusted prospectively, wherever required.

5. Regulatory deferral account balances

Expense/income recognized in the statement of profit and loss to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized as 'Regulatory deferral account balances'.

Regulatory deferral account balances are adjusted in the year in which the same become recoverable from or payable to the beneficiaries.

Regulatory deferral account balances are evaluated at each balance sheet date to ensure that the underlying activities meet the recognition criteria and it is probable that future economic benefits associated with such balances will flow to the Group. If these criteria are not met, the regulatory deferral account balances are derecognized.

6. Exploration for and evaluation of mineral resources

6.1. Oil and gas exploration activities

All exploration costs incurred in drilling and equipping exploratory and appraisal wells, cost of drilling exploratory type stratigraphic test wells are initially capitalized as 'Exploratory wells-in-progress' under 'Intangible assets under development' till the time these are either transferred to oil and gas assets when a well is ready for commercial production or expensed as exploration cost (including allocated depreciation) as and when determined to be dry or of no further use, as the case may be.

Costs of exploratory wells are not carried over unless it could be reasonably demonstrated that there are indications of sufficient quantity of reserves and sufficient progress is being made in assessing the reserves and the economic & operating viability of the project. All such carried over costs are subject to review for impairment as per the policy of the Group.

Cost of surveys and prospecting activities conducted in the search of oil and gas are expensed in the year in which these are incurred.

6.2. Coal mining exploration activities

Exploration and evaluation assets comprise capitalized costs which are attributable to the search for coal, pending the determination of technical feasibility and the assessment of commercial viability of an identified resource which comprises inter-alia the following:

- researching and analyzing historical exploration data;
- gathering exploration data through topographical, geo chemical and geo physical studies;
- exploratory drilling, trenching and sampling;
- determining & examining the volume and grade of the resource; and
- surveying transportation and infrastructure requirements.

Exploration and evaluation expenditure incurred after obtaining the mining right or the legal right to explore are capitalized as exploration and evaluation assets under 'Intangible assets under development'and stated at cost less impairment if any. Exploration and evaluation assets are assessed for impairment indicators at least annually.

Once the proved reserves are determined and development of mine/project is sanctioned.

Exploration and evaluation assets are transferred to 'Development of Coal Mines' under 'Capital Work in Progress'. However, if proved reserves are not determined, exploration and evaluation asset is derecognized.

Exploration and evaluation expenditure incurred prior to obtaining the mining right or the legal right to explore are expensed as incurred.

7. Development expenditure on coal mines

When proved reserves are determined and development of mines/project is sanctioned, exploration and evaluation assets are transferred to 'Development of coal mines' under 'Capital work-in-progress'.

Subsequent expenditure is capitalized only where it either enhances the economic benefits of the development/producing asset or replaces part of the existing development/producing asset. Any remaining costs associated with the part replaced are expensed.

The development expenditure capitalized is net of value of coal extracted during development phase.

Mines under development are brought to revenue on occurrence of earliest of the following milestones except otherwise when commercial readiness is specifically stated in the project report:

a) From the beginning of the financial year immediately after the year in which the project achieves physical output of 25% of rated capacity as per approved project report; or

b) From the beginning of the financial year in which the value of production is more than total expenses; or

c) 2 years of touching of coal.

The above is subject to commercial readiness to yield production on a sustainable basis (i.e. when the Group determines that the mining property will provide sufficient and sustainable return relative to its perceived risks and therefore it is considered probable that future economic benefits will flow to the Group).

On being brought to revenue, the assets under capital work-in-progress are classified as a component of property, plant and equipment under 'Mining property'.

Gains and losses on de-recognition of assets referred above, are determined as the difference between the net disposal proceeds, if any, and the carrying amount of respective assets and are recognized in the statement of profit and loss.

7.1. Stripping activity expense/adjustment

Expenditure incurred on removal of mine waste materials (overburden) necessary to extract the coal reserves is referred to as stripping cost. The Group has to incur such expenses over the life of the mine as technically estimated.

Cost of stripping is charged on technically evaluated average stripping ratio at each mine with due adjustment for stripping activity asset and ratio-variance account after the mines are brought to revenue.

Net of the balances of stripping activity asset and ratio variance at the Balance Sheet date is shown as 'Stripping activity adjustment' under the head 'Non-current assets/Non-current provisions' as the case may be.

7.2. Mines closure, site restoration and decommissioning obligations

The Group's obligations for land reclamation and decommissioning of structure consist of spending at mines in accordance with the guidelines from Ministry of Coal, Government of India. The Group estimates its obligations for mine closure, site restoration and decommissioning based on the detailed calculation and technical assessment of the amount and timing of future cash spending for the required work and provided for as per approved mine closure plan. The estimate of expenses is escalated for inflation and then discounted at a pre-tax discount rate that reflects current market assessment of the time value of money and risk, such that the amount of provision reflects the present value of expenditure required to settle the obligation. The Group recognizes a corresponding asset under property, plant and equipment as a separate item for the cost associated with such obligation.

The value of the obligation is progressively increased over time as the effect of discounting unwinds and the same is recognized as finance costs.

Further, a specific escrow account is maintained for this purpose as per approved mine closure plan. The progressive mine closure expenses incurred on year to year basis, forming part of the total mine closure obligation, are initially recognized as receivable from escrow account and thereafter adjusted with the obligation in the year in which the amount is withdrawn from escrow account after concurrence of the certifying agency.

7.3. Amortization

On being brought to revenue, the mines closure, site restoration and decommissioning obligations are amortized on straight line method over the balance life of the mine. Mining property is amortized on straight line method from the year in which the mine is brought under revenue, in 20 years or life of mine whichever is less.

8. Joint operations

The Group has entered into joint arrangements with others for operations in the nature of joint operations. The Group recognizes, on a line-by-line basis its share of the assets, liabilities and expenses of these joint operations as per the arrangement which are accounted based on the respective accounting policies of the Group.

9. Borrowing costs

Borrowing costs consist of (a) interest expense calculated using the effective interest method as described in Ind AS 109 – 'Financial Instruments' (b) interest expense on lease liabilities recognized in accordance with Ind AS 116– 'Leases' and (c) exchange differences arising from foreign currency borrowings to the extent that they are regarded as an adjustment to interest costs.

Borrowing costs that are directly attributable to the acquisition, construction/exploration/ development or erection of qualifying assets are capitalized as part of cost of such asset until such time the assets are substantially ready for their intended use. Qualifying assets are assets which necessarily take substantial period of time to get ready for their intended use or sale.

When the Group borrows funds specifically for the purpose of obtaining a qualifying asset, the borrowing costs incurred are capitalized. When Group borrows funds generally and uses them for the purpose of obtaining a qualifying asset, the capitalization of the borrowing costs is computed based on the weighted average cost of all borrowings that are outstanding during the period and used for the acquisition, construction/exploration or erection of the qualifying asset. However, borrowing costs applicable to borrowings made specifically for the purpose of obtaining a qualifying asset, are excluded from this calculation, until substantially all the activities necessary to prepare that asset for its intended use or sale are complete.

Income earned on temporary investment made out of the borrowings pending utilization for expenditure on the qualifying assets is deducted from the borrowing costs eligible for capitalization.

Capitalization of borrowing costs ceases when substantially all the activities necessary to prepare the qualifying assets for their intended uses are complete.

Other borrowing costs are recognized as an expense in the year in which they are incurred.

10. Inventories

Inventories are valued at the lower of cost and net realizable value. Cost includes cost of purchase, cost of conversion and other costs incurred in bringing the inventories to their present location and condition. Cost is determined on weighted average basis. Costs of purchased inventory are determined after deducting rebates and discounts. Net realizable value is the estimated selling price in the ordinary course of business, less estimated costs of completion and the estimated costs necessary to make the sale.

The diminution in the value of obsolete, unserviceable, surplus and non-moving items of stores and spares is ascertained on review and provided for.

Steel scrap is valued at estimated realizable value.

11. Cash and cash equivalents

Cash and cash equivalents in the balance sheet comprise cash at banks, cash on hand and short-term deposits with an original maturity of three months or less, which are subject to an insignificant risk of changes in value.

12. Government grants

Government grants are recognized initially as deferred income when there is reasonable assurance that they will be received and the Group will comply with the conditions associated with the grant. Grants that compensate the Group for the cost of depreciable asset are recognized as income in statement of profit and loss on a systematic basis over the period and in the proportion in which depreciation is charged. Grants that compensate the Group for expenses incurred are recognized over the period in which the related costs are incurred and the same is deducted from the related expenses.

13. Fly ash utilization reserve fund

Proceeds from sale of ash/ash products along-with income on investment of surplus fund are transferred to 'Fly ash utilization reserve fund' in terms of provisions of gazette notification dated 3 November 2009 issued by Ministry of Environment and Forests, Government of India. The fund is utilized towards expenditure on development of infrastructure/ facilities, promotion & facilitation activities for use of fly ash.

14. Provisions, contingent liabilities and contingent assets

A provision is recognized if, as a result of a past event, the Group has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects current market assessments of the time value of money and the risks specific to the liability. When discounting is used, the increase in the provision due to the passage of time is recognized as a finance cost.

The amount recognized as a provision is the best estimate of the consideration required to settle the present obligation at reporting date, taking into account the risks and uncertainties surrounding the obligation.

When some or all of the economic benefits required to settle a provision are expected to be recovered from a third party, the receivable is recognized as an asset if it is virtually certain that reimbursement will be received and the amount of the receivable can be measured reliably. The expense relating to a provision is presented in the statement of profit and loss net of reimbursement, if any.

Contingent liabilities are possible obligations that arise from past events and whose existence will only be confirmed by the occurrence or non-occurrence of one or more future events not wholly within the control of the Group. Where it is not probable that an outflow of economic benefits will be required, or the amount cannot be estimated reliably, the obligation is disclosed as a contingent liability, unless the probability of outflow of economic benefits is remote. Contingent liabilities are disclosed on the basis of judgment of the management/independent experts. These are reviewed at each balance sheet date and are adjusted to reflect the current management estimate.

Contingent assets are possible assets that arise from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events not wholly within the control of the Group. Contingent assets are disclosed in the financial statements when inflow of economic benefits is probable on the basis of judgment of management. These are assessed continually to ensure that developments are appropriately reflected in the financial statements.

15. Foreign currency transactions and translation

Transactions in foreign currencies are initially recorded at the functional currency spot rates at the date the transaction first qualifies for recognition.

Monetary assets and liabilities denominated in foreign currencies are translated at the functional currency spot rates of exchange at the reporting date. Exchange differences arising on settlement or translation of monetary items are recognized in the statement of profit and loss in the year in which it arises with the exception that exchange differences on long term monetary items related to acquisition of property, plant and equipment recognized up to 31 March 2016 are adjusted to the carrying cost of property, plant and equipment.

Non-monetary items denominated in foreign currency which are measured in terms of historical cost are recorded using the exchange rate at the date of the transaction. In case of advance consideration received or paid in a foreign currency, the date of transaction for the purpose of determining the exchange rate to use on initial recognition of the related asset, expense or income (or part of it), is when the Group initially recognizes the non-monetary asset or non-monetary liability arising from the payment or receipt of advance consideration.

The results and financial position of foreign operations (none of which has the currency of a hyperinflationary economy) that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- Assets and liabilities are translated at the closing rate at the date of that balance sheet
- Income and expenses are translated at average exchange rates (unless this is not a reasonable approximation of the cumulative effect of the rates prevailing on the transaction dates, in which case income and expenses are translated at the dates of the transactions), and
- All resulting exchange differences are recognized in OCI.

On consolidation, exchange differences arising from the translation of any net investment in foreign entities are recognized in OCI. The associated exchange differences are reclassified to profit or loss, as part of the gain or loss on disposal of the net investment.

16. Revenue

Group's revenues arise from sale and trading of energy, consultancy, project management & supervision services, income on assets under lease and other income. Revenue from other income comprises interest from banks, employees, contractors etc., dividend from mutual fund investments, surcharge received from beneficiaries for delayed payments, sale of scrap, other miscellaneous income, etc.

16.1. Revenue from sale of energy

The majority of the Group's operations in India are regulated under the Electricity Act, 2003. Accordingly, the CERC determines the tariff for the Group's power plants based on the norms prescribed in the tariff regulations as applicable from time to time. Tariff is based on the capital cost incurred for a specific power plant and primarily comprises two components: capacity charge i.e. a fixed charge that includes depreciation, return on equity, interest on working capital, operating & maintenance expenses, interest on loan and energy charge i.e. a variable charge primarily based on fuel costs.

Revenue is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the products or services and excludes amounts collected on behalf of third parties. The Group recognizes revenue when (or as) the performance obligation is satisfied, which typically occurs when (or as) control over the products or services is transferred to a customer.

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. As at each reporting date, revenue from sale of energy includes an accrual for sales delivered to beneficiaries but not yet billed i.e. contract assets/ unbilled revenue.

The incentives/disincentives are accounted for based on the norms notified/approved by the CERC as per principles enunciated in Ind AS 115 - 'Revenue from contracts with customers'. In cases of power stations where the same have not been notified/approved, incentives/disincentives are accounted for on provisional basis.

Part of revenue from energy sale where CERC tariff Regulations are not applicable is recognized based on the rates, terms& conditions mutually agreed with the beneficiaries and trading of power through power exchanges.

Advance against depreciation considered as deferred revenue in earlier years is included in sales, to the extent depreciation recovered in tariff during the year is lower than the corresponding depreciation charged. Exchange differences arising from settlement/translation of monetary items denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Regulatory deferred account balances' and such balances are adjusted in the year in which the same becomes recoverable/payable to the beneficiaries.

Exchange differences on account of translation of foreign currency borrowings recognized upto 31 March 2016, to the extent recoverable from or payable to the beneficiaries in subsequent periods as per the CERC Tariff Regulations are accounted as 'Deferred foreign currency fluctuation asset' with corresponding credit to 'Deferred income from foreign currency fluctuation'. Deferred income from foreign currency fluctuation account is amortized in the proportion in which depreciation is charged on such exchange differences and same is adjusted against depreciation expense. Fair value changes in respect of forward exchange contracts for derivatives recoverable from/payable to the beneficiaries as per the CERC Tariff Regulations, are recognized in sales.

Revenue from sale of energy through trading is recognized based on the rates, terms & conditions mutually agreed with the beneficiaries as per the guidelines issued by Ministry of New and Renewable Energy, Government of India.

Rebates allowed to beneficiaries as early payment incentives are deducted from the amount of revenue.

16.2.Revenue from services

Revenue from consultancy, project management and supervision services rendered is measured based on the consideration that is specified in a contract with a customer or is expected to be received in exchange for the services, which is determined on output method and excludes amounts collected on behalf of third parties. The Group recognizes revenue when the performance obligation is satisfied, which typically occurs when control over the services is transferred to a customer.

Reimbursement of expenses is recognized as other income, as per the terms of the service contracts.

Contract modifications are accounted for when additions, deletions or changes are approved either to the contract scope or contract price. The accounting for modifications of contracts involves assessing whether the services added to an existing contract are distinct and whether the pricing is at the standalone selling price. Services added that are not distinct are accounted for on a cumulative catch up basis, while those that are distinct are accounted for prospectively, either as a separate contract, if the additional services are priced at the standalone selling price, or as a termination of the existing contract and creation of a new contract if not priced at the standalone selling price.

16.3. Other income

Interest income is recognized, when no significant uncertainty as to measurability or collectability exist, on a time proportion basis taking into account the amount outstanding and the applicable interest rate, using the effective interest rate method (EIR).

Scrap other than steel scrap is accounted for as and when sold.

Insurance claims for loss of profit are accounted for in the year of acceptance. Other insurance claims are accounted for based on certainty of realization.

Revenue from rentals and operating leases is recognized on an accrual basis in accordance with the substance of the relevant agreement.

For debt instruments measured either at amortized cost or at fair value through other comprehensive income (OCI), interest income is recorded using the EIR. EIR is the rate that exactly discounts the estimated future cash payments or receipts over the expected life of the financial instrument or a shorter period, where appropriate, to the gross carrying amount of the financial asset or to the amortized cost of a financial liability. When calculating the EIR, the Group estimates the expected cash flows by considering all the contractual terms of the financial instrument (for example, prepayment, extension, call and similar options) but does not consider the expected credit losses. Interest income is included in other income in the statement of profit and loss.

The interest/surcharge on late payment/overdue trade receivables for sale of energy is recognized when no significant uncertainty as to measurability or collectability exists.

Interest/surcharge recoverable on advances to suppliers as well as warranty claims wherever there is uncertainty of realization/acceptance are not treated as accrued and are therefore, accounted for on receipt/acceptance.

Dividend income is recognized in profit or loss only when the right to receive is established, it is probable that the economic benefits associated with the dividend will flow to the Group, and the amount of the dividend can be measured reliably.

17. Employee benefits

17.1. Defined contribution plans

A defined contribution plan is a post-employment benefit plan under which an entity pays fixed contributions to separate entities and will have no legal or constructive obligation to pay further amounts. Obligations for contributions to defined contribution plans are recognized as an employee benefits expense in statement of profit and loss in the period during which services are rendered by employees. Prepaid contributions are recognized as an asset to the extent that a cash refund or a reduction in future payments is available. Contributions to a defined contribution plan that are due after more than 12 months after the end of the period in which the employees render the service are discounted to their present value.

The Group has a defined contribution pension scheme which is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post-retirement medical facility (PRMF) or any other retirement benefits. The contributions to the fund for the year are recognized as an expense and charged to the statement of profit and loss.

17.2. Defined benefit plans

A defined benefit plan is a post-employment benefit plan other than a defined contribution plan. The Group's liability towards gratuity, pension scheme at two of the stations in respect of taken over employees from the erstwhile state government power utility, post-retirement medical facility(PRMF), baggage allowance for settlement at home town after retirement, farewell gift on retirement and provident fund scheme to the extent of interest liability on provident fund contribution are in the nature of defined benefit plans.

The Group pays fixed contribution to the provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The contributions to the fund for the year are recognized as expense and are charged to the statement of profit and loss. The obligation of the Group is to make such fixed contributions and to ensure a minimum rate of return to the members as specified by the Government of India.

The gratuity is funded by the Group and is managed by separate trust. Pension scheme at one of the taken over projects is also funded by the Group and is managed by separate trust. The Group has PRMF, under which retired employee and the spouse are provided medical facilities in the Group hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group.

The Group's net obligation in respect of defined benefit plans is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value. The fair value of any plan assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. When the calculation results in a benefit to the Group, the recognized asset is limited to the present value of economic benefits available in the form of any future refunds from the plan or reductions in future contributions to the plan. An economic benefit is available to the Group if it is realizable during the life of the plan, or on settlement of the plan liabilities. Any actuarial gains or losses are recognized in the Other Comprehensive Income (OCI) in the period in which they arise.

Past service costs are recognized in statement of profit and loss on the earlier of the date of the plan amendment or curtailment, and the date that the Group recognizes related restructuring costs. If a plan amendment, curtailment or settlement occurs, the current service cost and the net interest for the period after the re-measurement are determined using the assumptions used for the re-measurement.

17.3. Other long-term employee benefits

Benefits under the Group's leave encashment, long-service award and economic rehabilitation scheme constitute other long term employee benefits.

The Group's net obligation in respect of these long-term employee benefits is calculated separately for each plan by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods; that benefit is discounted to determine its present value and the fair value of any related assets is deducted. The discount rate is based on the prevailing market yields of Indian government securities as at the reporting date that have maturity dates approximating the terms of the Group's obligations and that are denominated in the same currency in which the benefits are expected to be paid.

The actuarial calculation is performed annually by a qualified actuary using the projected unit credit method. Any actuarial gains or losses are recognized in statement of profit and loss account in the period in which they arise.

The obligations are presented as current liabilities in the balance sheet if the Group does not have an unconditional right to defer settlement for at least twelve months after the reporting period, regardless of when the actual settlement is expected to occur.

17.4. Short-term benefits

Short-term employee benefit obligations are measured on an undiscounted basis and are expensed as the related service is provided.

A liability is recognized for the amount expected to be paid under performance related pay if the Group has a present legal or constructive obligation to pay this amount as a result of past service provided by the employee and the obligation can be estimated reliably.

18. Other expenses

Expenses on ex-gratia payments under voluntary retirement scheme, training & recruitment and voluntary community development are charged to statement of profit and loss in the year incurred.

Expenditure on research is charged to revenue as and when incurred. Expenditure on development is charged to revenue as and when incurred unless it meets the recognition criteria for intangible asset as per Ind AS 38- 'Intangible assets'.

Preliminary expenses on account of new projects incurred prior to approval of feasibility report/techno economic clearance are charged to statement of profit and loss.

Net pre-commissioning income/expenditure is adjusted directly in the cost of related assets and systems.

Transit and handling losses of coal as per Group's norms are included in cost of coal.

19. Income tax

Income tax expense comprises current and deferred tax. Current tax expense is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

Current tax is the expected tax payable on the taxable income for the year, using tax rates enacted or substantively enacted by the end of the reporting period, and any adjustment to tax payable in respect of previous years.

Deferred tax is recognized using the balance sheet method, on temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the tax bases of assets and liabilities. Deferred tax is measured at the tax rates that are expected to be applied to temporary differences when they materialize, based on the laws that have been enacted or substantively enacted by the reporting date. Deferred tax assets and liabilities are offset if there is a legally enforceable right to offset current tax liabilities and assets, and they relate to income taxes levied by the same tax authority.

Deferred tax is recognized in statement of profit and loss except to the extent that it relates to items recognized directly in OCI or equity, in which case it is recognized in OCI or equity, respectively.

A deferred tax asset is recognized for all deductible temporary differences to the extent that it is probable that future taxable profits will be available against which the deductible temporary difference can be utilized. Deferred tax assets are reviewed at each reporting date and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Deferred tax liabilities are not recognized for taxable temporary differences between the carrying amount and tax bases of investments in subsidiaries and interests in joint venture where the Group is able to control the timing of the reversal of the temporary differences and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred tax assets are not recognized for temporary differences between the carrying amount and tax bases of investments in subsidiaries and interest in joint arrangements where it is not probable that the differences will reverse in the foreseeable future and taxable profit will not be available against which the temporary difference can be utilized.

Additional income taxes that arise from the distribution of dividends are recognized at the same time that the liability to pay the related dividend is recognized. The income tax consequences of dividends is recognized in profit or loss, other comprehensive income or equity according to where the entity originally recognized those past transactions or events.

Deferred tax assets include Minimum Alternative Tax (MAT) paid in accordance with the tax laws in India, which is likely to give future economic benefits in the form of availability of set off against future income tax liability. MAT credit is recognized as deferred tax asset in the balance sheet when the asset can be measured reliably and it is probable that the future taxable profit will be available against which MAT credit can be utilized.

When there is uncertainty regarding income tax treatments, the Group assesses whether a tax authority is likely to accept an uncertain tax treatment. If it concludes that the tax authority is unlikely to accept an uncertain tax treatment, the effect of the uncertainty on taxable income, tax bases and unused tax losses and unused tax credits is recognized. The effect of the uncertainty is recognized using the method that, in each case, best reflects the outcome of the uncertainty: the most likely outcome or the expected value. For each case, the Group evaluates whether to consider each uncertain tax treatment separately, or in conjunction with another or several other uncertain tax treatments, based on the approach that best prefixes the resolution of uncertainty.

20. Leases

Effective 1 April 2019, the Group adopted Ind AS 116 - 'Leases' and applied to all lease contracts existing on 1 April 2019 using the modified retrospective transition method. Consequently, the lease liability is measured at the present value of remaining lease payments discounted at incremental borrowing rate applicable at the date of initial application and the right-of-use asset has been recognized at an amount equal to lease liability. Comparatives as at and for the year ended 31 March 2019 have not been adjusted and therefore will continue to be reported as per Ind AS 17 – 'Leases'. The details of accounting policies as per Ind AS 17 are disclosed separately if they are different from those under Ind AS 116.

20.1. As lessee

The Group assesses whether a contract contains a lease, at inception of a contract. A contract is, or contains, a lease if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. To assess whether a contract conveys the right to control the use of an identified asset, the Group assesses whether: (1) the contact involves the use of an identified asset (2) the Group has substantially all of the economic benefits from use of the asset through the period of the lease and (3) the Group has the right to direct the use of the asset.

The Group recognizes a right-of-use asset and a corresponding lease liability for all lease arrangements in which it is a lessee, except for leases with a term of twelve months or less (short-term leases) and leases for low value underlying assets. For these short-term and leases for low value underlying assets, the Group recognizes the lease payments as an operating expense on a straight-line basis over the term of the lease.

Certain lease arrangements include the options to extend or terminate the lease before the end of the lease term. Right-of use assets and lease liabilities include these options when it is reasonably certain that the option to extend the lease will be exercised/option to terminate the lease will not be exercised.

The right-of-use assets are initially recognized at cost, which comprises the initial amount of the lease liability adjusted for any lease payments made at or prior to the commencement date of the lease plus any initial direct costs less any lease incentives. They are subsequently measured at cost less accumulated depreciation/amortization and impairment losses.

Right-of-use assets are depreciated/amortized from the commencement date to the end of the useful life of the underlying asset, if the lease transfers ownership of the underlying asset by the end of lease term or if the cost of right-of-use assets reflects that the purchase option will be exercised. Otherwise, Right-of-use assets are depreciated/amortized from the commencement date on a straight-line basis over the shorter of the lease term and useful life of the underlying asset.

Right-of-use assets are evaluated for recoverability whenever events or changes in circumstances indicate that their carrying amounts may not be recoverable. For the purpose of impairment testing, the recoverable amount (i.e. the higher of the fair value less cost to sell and the value-in-use) is determined on an individual asset basis unless the asset does not generate cash flows that are largely independent of those from other assets. In such cases, the recoverable amount is determined for the Cash Generating Unit (CGU) to which the asset belongs.

The lease liability is initially measured at amortized cost at the present value of the future lease payments. The lease payments are discounted using the interest rate implicit in the lease or, if not readily determinable, using the incremental borrowing rate. Lease liabilities are re-measured with a corresponding adjustment to the related right-of-use asset if the Group changes its assessment whether it will exercise an extension or a termination option.

In the comparative period, as lessee the leases were accounted as per Ind AS 17 and classified as finance lease and operating lease, and accounted as follows:

Accounting for finance leases

In the comparative period, leases of property, plant and equipment where the Group, as lessee has substantially all risks and rewards of ownership were classified as finance lease. On initial recognition, assets held under finance leases we rerecorded as property, plant and equipment and the related liability was recognized under borrowings. At inception of the lease, finance leases were recorded at amounts equal to the fair value of the leased asset or if lower the present value of the minimum lease payments. Minimum lease payments amounts under finance leases were apportioned between the finance cost and the reduction of the outstanding liability.

The finance cost was allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Accounting for operating leases

In the comparative period, leases in which a significant portion of the risks and rewards of ownership were not transferred to the Group as lessee are classified as operating lease. Payments made under operating leases were recognized as an expense on a straight-line basis over the lease term unless the payments we restructured to increase in line with expected general inflation to compensate for the lessor's expected inflationary cost increases. Lease incentives received were recognized as an integral part of the total lease expense, over the term of the lease.

20.2. As lessor

At the inception of an arrangement, the Group determines whether such an arrangement is or contains a lease. A specific asset is subject of a lease if fulfillment of the arrangement is dependent on the use of that specified asset. An arrangement conveys the right to use the asset if the arrangement conveys to the customer the right to control the use of the underlying asset. Arrangements that do not take the legal form of a lease but convey rights to customers/suppliers to use an asset in return for a payment or a series of payments are identified as either finance leases or operating leases.

Accounting for finance leases

Where the Group determines a long term Power Purchase Agreement (PPA) to be or to contain a lease and where the off taker has the principal risk and rewards of ownership of the power plant through its contractual arrangements with the Group, the arrangement is considered a finance lease. Capacity payments are apportioned between capital repayments relating to the provision of the plant, finance income and service income. The finance income element of the capacity payment is recognized as revenue, using a rate of return specific to the plant to give a constant periodic rate of return on the net investment in each period. The service income element of the capacity payment is the difference between the total capacity payment and the amount recognized as finance income and capital repayments and recognized as revenue as it is earned.

The amounts due from lessees under finance leases are recorded in the balance sheet as financial assets, classified as 'Finance lease receivables', at the amount of the net investment in the lease.

Accounting for operating leases

Where the Group determines a long term PPA to be or to contain a lease and where the Group retains the principal risks and rewards of ownership of the power plant, the arrangement is considered an operating lease.

For operating leases, the power plant is capitalized as property, plant and equipment and depreciated over its economic life. Rental income from operating leases is recognized on a straight line basis over the term of the arrangement.

21. Impairment of non-financial assets

The carrying amounts of the Group's non-financial assets are reviewed at each reporting date to determine whether there is any indication of impairment considering the provisions of Ind AS 36 - 'Impairment of Assets'. If any such indication exists, then the asset's recoverable amount is estimated.

The recoverable amount of an asset or cash-generating unit is the higher of its fair value less costs to disposal and its value in use. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. For the purpose of impairment testing, assets that cannot be tested individually are grouped together into the smallest group of assets that generates cash inflows from continuing use that are largely independent of the cash inflows of other assets or groups of assets (the 'cash-generating unit', or "CGU").

An impairment loss is recognized if the carrying amount of an asset or its CGU exceeds its estimated recoverable amount. Impairment losses are recognized in the statement of profit and loss. Impairment losses recognized in respect of CGUs are reduced from the carrying amounts of the assets of the CGU.

Impairment losses recognized in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of accumulated depreciation or amortization, if no impairment loss had been recognized.

22. Operating segments

In accordance with Ind AS 108 – 'Operating Segments', the operating segments used to present segment information are identified on the basis of internal reports used by the Group's management to allocate resources to the segments and assess their performance. The Board of Directors is collectively the Group's 'Chief Operating Decision Maker' or 'CODM' within the meaning of Ind AS 108. The indicators used for internal reporting purposes may evolve in connection with performance assessment measures put in place.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Unallocated items comprise mainly corporate expenses, finance costs, income tax expenses and corporate income.

Revenue directly attributable to the segments is considered as segment revenue. Expenses directly attributable to the segments and common expenses allocated on a reasonable basis are considered as segment expenses.

Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment, and intangible assets other than goodwill.

Segment assets comprise property, plant and equipment, intangible assets, trade and other receivables, inventories and other assets that can be directly or reasonably allocated to segments. For the purpose of segment reporting, property, plant and equipment have been allocated to segments based on the extent of usage of assets for operations attributable to the respective segments. Segment assets do not include investments, income tax assets, capital work in progress, capital advances, corporate assets and other current assets that cannot reasonably be allocated to segments.

Segment liabilities include all operating liabilities in respect of a segment and consist principally of trade and other payables, employee benefits and provisions. Segment liabilities do not include equity, income tax liabilities, loans and borrowings and other liabilities and provisions that cannot reasonably be allocated to segments.

23. Business Combinations

Acquisition of subsidiaries and businesses are accounted for using the acquisition method as at the date of the acquisition, which is the date at which control is transferred to the Group. The consideration transferred in each business combination is measured at the aggregate of the acquisition date fair values of assets transferred by the Group, liabilities incurred by the Group to the former owners of the acquiree, equity interests issued by the Group in exchange for control of the acquiree and fair value of any asset or liability resulting from a contingent consideration arrangement. The identifiable assets acquired and liabilities assumed are recognized at fair values on their acquisition date (except certain assets and liabilities which are required to be measured as per the applicable standard) and the non-controlling interest is initially recognized at the non-controlling interest's proportionate share of the acquiree's net identifiable assets.

Acquisition related costs are recognized in the consolidated statement of profit and loss.

Goodwill is initially measured at cost, being the excess of the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity over the Group's interest in the net fair value of the identifiable assets acquired, liabilities assumed and contingent liabilities recognized. Where the fair value of the identifiable assets acquired and liabilities assumed exceed the consideration transferred, amount of any non-controlling interest recognized in the acquired entity and acquisition date fair value of any previous equity interest in the acquired entity after reassessing the fair values of the net assets and contingent liabilities, the excess is recognized as capital reserve on consolidation.

Business combinations arising from transfers of interests in entities that are under the common control are accounted for using the pooling of interest method. The difference, if any, between the amounts recorded as share capital issued plus any additional consideration in the form of cash or other assets and the amount of share capital of the transferor is transferred to capital reserve and is presented separately from other capital reserves.

If the business combination is achieved in stages, the acquisition date carrying value of the acquirer's previously held equity interest in the acquiree is re-measured to fair value at the acquisition date. Any gains or losses arising from such re-measurement are recognized in statement of profit and loss or OCI, as appropriate.When the Group obtains control of a business that is a joint operation, then it considers such an acquisition as a business combination achieved in stages.

24. Dividends

Dividends and interim dividends payable to the Group's shareholders are recognized as changes in equity in the period in which they are approved by the shareholders and the Board of Directors respectively.

25. Material prior period errors

Material prior period errors are corrected retrospectively by restating the comparative amounts for the prior periods presented in which the error occurred. If the error occurred before the earliest period presented, the opening balances of assets, liabilities and equity for the earliest period presented, are restated.

26. Earnings per share

Basic earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares outstanding during the financial year.

Diluted earnings per equity share is computed by dividing the net profit or loss attributable to equity shareholders of the Group by the weighted average number of equity shares considered for deriving basic earnings per equity share and also the weighted average number of equity shares that could have been issued upon conversion of all dilutive potential equity shares.

The number of equity shares and potentially dilutive equity shares are adjusted retrospectively for all periods presented for any bonus shares issued during the financial year.

Basic and diluted earnings per equity share are also computed using the earnings amounts excluding the movements in regulatory deferral account balances.

27. Statement of cash flows

Statement of cash flows is prepared in accordance with the indirect method prescribed in Ind AS 7 - 'Statement of cash flows'.

28. Financial instruments

A financial instrument is any contract that gives rise to a financial asset of one entity and a financial liability or equity instrument of another entity. The Group recognizes a financial asset or a financial liability only when it becomes party to the contractual provisions of the instrument.

28.1. Financial assets

Initial recognition and measurement

All financial assets are recognized at fair value on initial recognition, except for trade receivables which are initially measured at transaction price. Transaction costs that are directly attributable to the acquisition of financial assets, which are not valued at fair value through profit or loss, are added to the fair value on initial recognition.

Subsequent measurement

Debt instruments at amortized cost

A 'debt instrument' is measured at the amortized cost if both the following conditions are met:

(a) The asset is held within a business model whose objective is to hold assets for collecting contractual cash flows, and

(b) Contractual terms of the asset give rise on specified dates to cash flows that are solely payments of principal and interest (SPPI) on the principal amount outstanding.

After initial measurement, such financial assets are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance income in the statement of profit and loss. The losses arising from impairment are recognized in the statement of profit and loss. This category generally applies to trade and other receivables.

Debt instrument at FVTOCI (Fair value through OCI)

A 'debt instrument' is classified as at the FVTOCI if both of the following criteria are met:

(a) The objective of the business model is achieved both by collecting contractual cash flows and selling the financial assets, and

(b) The asset's contractual cash flows represent SPPI

Debt instruments included within the FVTOCI category are measured initially as well as at each reporting date at fair value. Fair value movements are recognized in the OCI. However, the Group recognizes interest income, impairment losses & reversals and foreign exchange gain or loss in the statement of profit and loss. On de-recognition of the asset, cumulative gain or loss previously recognized in OCI is reclassified from the equity to the statement of profit and loss. Interest earned whilst holding FVTOCI debt instrument is reported as interest income using the EIR method.

Debt instrument at FVTPL (Fair value through profit or loss)

FVTPL is a residual category for debt instruments. Any debt instrument, which does not meet the criteria for categorization as at amortized cost or as FVTOCI, is classified as at FVTPL.

In addition, the Group may elect to classify a debt instrument, which otherwise meets amortized cost or FVTOCI criteria, as at FVTPL. However, such election is allowed only if doing so reduces or eliminates a measurement or recognition inconsistency (referred to as 'accounting mismatch'). Debt instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Interest income on such investments is presented under 'Other income'.

Investment in Equity instruments

All equity investments in entities other than subsidiaries and joint venture companies are measured at fair value. Equity instruments which are held for trading are classified as at FVTPL. For all other equity instruments, the Group decides to classify the same either as at FVTOCI or FVTPL. The Group makes such election on an instrument by instrument basis. The classification is made on initial recognition and is irrevocable.

If the Group decides to classify an equity instrument as at FVTOCI, then all fair value changes on the instrument, excluding dividends, are recognized in the OCI. There is no recycling of the amounts from OCI to statement of profit and loss, even on sale of investments. However, the Group may transfer the cumulative gain or loss within equity.

Equity instruments included within the FVTPL category are measured at fair value with all changes recognized in the statement of profit and loss. Dividend on such investments is presented under 'Other income'.

De-recognition

A financial asset (or, where applicable, a part of a financial asset or part of a Group of similar financial assets) is primarily de-recognized (i.e. removed from the Group's balance sheet) when:

- The rights to receive cash flows from the asset have expired, or
- The Group has transferred its rights to receive cash flows from the asset or has assumed an obligation to pay the received cash flows in full without material delay to a third party under a 'pass-through' arrangement and either (a) the Group has transferred substantially all the risks and rewards of the asset, or (b) the Group has neither transferred nor retained substantially all the risks and rewards of the asset, but has transferred control of the asset.

The difference between the carrying amount and the amount of consideration received/receivable is recognized in the statement of profit and loss.

Impairment of financial assets

In accordance with Ind AS 109 – 'Financial Instruments', the Group applies expected credit loss (ECL) model for measurement and recognition of impairment loss on the following financial assets and credit risk exposure:

(a) Financial assets that are debt instruments, and are measured at amortized cost e.g., loans, debt securities, deposits and bank balance.

(b) Financial assets that are debt instruments and are measured as at FVTOCI.

(c) Lease receivables under Ind AS 116.

(d) Trade receivables, unbilled revenue and contract assets under Ind AS 115.

(e) Loan commitments which are not measured as at FVTPL.

(f) Financial guarantee contracts which are not measured as at FVTPL.

For trade receivables and contract assets/unbilled revenue, the Group applies the simplified approach required by Ind AS 109-'Financial Instruments', which requires lifetime expected losses to be recognized from initial recognition.

For recognition of impairment loss on other financial assets and risk exposure, the Group determines that whether there has been a significant increase in the credit risk since initial recognition. If credit risk has not increased significantly, 12-month ECL is used to provide for impairment loss. However, if credit risk has increased significantly, lifetime ECL is used. If, in a subsequent period, credit quality of the instrument improves such that there is no longer a significant increase in credit risk since initial recognition, then the Group reverts to recognizing impairment loss allowance based on 12-month ECL.

28.2. Financial liabilities

Initial recognition and measurement

Financial liabilities are classified, at initial recognition, as financial liabilities at fair value through profit or loss and financial liabilities at amortized cost, as appropriate. All financial liabilities are recognized initially at fair value and, in the case of liabilities measured at amortized cost net of directly attributable transaction cost. The Group's financial liabilities include trade and other payables, borrowings including bank overdrafts, financial guarantee contracts and derivative financial instruments.

Subsequent measurement

The measurement of financial liabilities depends on their classification, as described below:

Financial liabilities at amortized cost

After initial measurement, such financial liabilities are subsequently measured at amortized cost using the EIR method. Gains and losses are recognized in statement of profit and loss when the liabilities are derecognized as well as through the EIR amortization process Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is included in finance costs in the statement of profit and loss. This category generally applies to borrowings, trade payables and other contractual liabilities.

Financial liabilities at fair value through profit or loss

Financial liabilities at fair value through profit or loss include financial liabilities held for trading and financial liabilities designated upon initial recognition as at fair value through profit or loss. Financial liabilities are classified as held for trading if they are incurred for the purpose of repurchasing in the near term. This category also includes derivative financial instruments entered into by the Group that are not designated as hedging instruments in hedge relationships as defined by Ind AS 109. Separated embedded derivatives are also classified as held for trading unless they are designated as effective hedging instruments.

Gains or losses on liabilities held for trading are recognized in the statement of profit and loss.

Financial liabilities designated upon initial recognition at fair value through profit or loss are designated at the initial date of recognition, and only if the criteria in Ind AS 109 are satisfied. For liabilities designated as FVTPL, fair value gains/losses attributable to changes in own credit risk is recognized in OCI. These gains/losses are not subsequently transferred to profit and loss. However, the Group may transfer the cumulative gain or loss within equity. All other changes in fair value of such liability are recognized in the statement of profit and loss. The Group has not designated any financial liability as at fair value through profit and loss.

De-recognition

A financial liability is derecognized when the obligation under the liability is discharged or cancelled or expires. When an existing financial liability is replaced by another from the same lender on substantially different terms, or the terms of an existing liability are substantially modified, such an exchange or modification is treated as the de-recognition of the original liability and the recognition of a new liability. The difference in the respective carrying amounts is recognized in the statement of profit and loss.

28.3. Derivative financial instruments

Initial recognition and subsequent measurement

The Group uses derivative financial instruments, such as forward currency contracts and interest rate swaps to hedge its foreign currency risks and interest rate risks of foreign currency loans. Such derivative financial instruments are initially recognized at fair value on the date on which a derivative contract is entered into and are subsequently re-measured at fair value. Derivatives are carried as financial assets when the fair value is positive and as financial liabilities when the fair value is negative. Any gains or losses arising from changes in the fair value of derivatives are taken to statement of profit and loss.

28.4. Offsetting of financial assets and financial liabilities

Financial assets and financial liabilities are offset and the net amount is presented in the balance sheet if there is a currently enforceable legal right to offset the recognized amounts and there is an intention to settle on a net basis, to realize the assets and settle the liabilities simultaneously.

D. Use of estimates and management judgments

The preparation of financial statements requires management to make judgments, estimates and assumptions that may impact the application of accounting policies and the reported value of assets, liabilities, income, expenses and related disclosures concerning the items involved as well as contingent assets and liabilities at the balance sheet date. The estimates and management's judgments are based on previous experience & other factors considered reasonable and prudent in the circumstances. Actual results may differ from these estimates.

Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognized in the period in which the estimates are revised and in any future periods affected.

In order to enhance understanding of the financial statements, information about significant areas of estimation, uncertainty and critical judgments in applying accounting policies that have the most significant effect on the amounts recognized in the financial statements is as under:

1. Formulation of accounting policies

The accounting policies are formulated in a manner that results in financial statements containing relevant and reliable information about the transactions, other events and conditions to which they apply. Those policies need not be applied when the effect of applying them is immaterial.

2. Useful life of property, plant and equipment and intangible assets

The estimated useful life of property, plant and equipment and intangible assets is based on a number of factors including the effects of obsolescence, demand, competition and other economic factors (such as the stability of the industry and known technological advances) and the level of maintenance expenditures required to obtain the expected future cash flows from the asset.

Useful life of the assets of the generation of electricity business (where tariff is regulated) is determined by the CERC Tariff Regulations in accordance with Schedule II of the Companies Act, 2013.

3. Recoverable amount of property, plant and equipment and intangible assets

The recoverable amount of property, plant and equipment and intangible assets is based on estimates and assumptions regarding in particular the expected market outlook and future cash flows associated with the power plants. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

4. **Post-employment benefit plans**

 Employee benefit obligations are measured on the basis of actuarial assumptions which include mortality and withdrawal rates as well as assumptions concerning future developments in discount rates, the rate of salary increases and the inflation rate. The Group considers that the assumptions used to measure its obligations are appropriate and documented. However, any changes in these assumptions may have a material impact on the resulting calculations.

5. **Revenues**

 The Group records revenue from sale of energy based on tariff rates approved by the CERC as modified by the orders of Appellate Tribunal for Electricity, as per principles enunciated under Ind AS 115. However, in cases where tariff rates are yet to be approved, provisional rates are adopted considering the applicable CERC Tariff Regulations.

6. **Leases not in legal form of lease**

 Significant judgment is required to apply lease accounting rules as per Ind AS 116 in determining whether an arrangement contains a lease. In assessing arrangements entered into by the Group, management has exercised judgment to evaluate the right to use the underlying asset, substance of the transactions including legally enforceable agreements and other significant terms and conditions of the arrangements to conclude whether the arrangement meets the criteria as per Ind AS 116.

7. **Assets held for sale**

 Significant judgment is required to apply the accounting of non-current assets held for sale under Ind AS 105 - 'Non-current assets held for sale and discontinued operations'. In assessing the applicability, management has exercised judgment to evaluate the availability of the asset for immediate sale, management's commitment for the sale and probability of sale within one year to conclude if their carrying amount will be recovered principally through a sale transaction rather than through continuing use.

8. **Regulatory deferral account balances**

 Recognition of regulatory deferral account balances involves significant judgments including about future tariff regulations since these are based on estimation of the amounts expected to be recoverable/payable through tariff in future.

9. **Provisions and contingencies**

 The assessments undertaken in recognizing provisions and contingencies have been made in accordance with Ind AS 37 - 'Provisions, contingent liabilities and contingent assets'. The evaluation of the likelihood of the contingent events require best judgment by management regarding the probability of exposure to potential loss. Should circumstances change following unforeseeable developments, this likelihood could alter.

10. **Classification of joint arrangements**

 Group's joint arrangements in the nature of joint operations and joint ventures require unanimous consent from all parties sharing control for decisions about the relevant activities. Parties are jointly and severally liable for the liabilities incurred by the joint arrangements. These arrangements are classified and accounted for as either joint operation or joint venture in accordance with the provisions of Ind AS 111 - 'Joint Arrangements'.

11. **Impairment test of investments in Subsidiaries and Joint Venture Companies**

 The recoverable amount of investment in subsidiaries and joint venture companies is based on estimates and assumptions regarding in particular the future cash flows associated with the operations of the investee Company. Any changes in these assumptions may have a material impact on the measurement of the recoverable amount and could result in impairment.

12. **Income taxes**

 Significant estimates are involved in determining the provision for current and deferred tax, including amount expected to be paid/recovered for uncertain tax positions.

2. Non-current assets - Property, plant and equipment

As at 31 March 2020 ₹ Crore

Particulars	Gross block				Depreciation and amortisation				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	As at 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Land									
(including development expenses)									
Freehold	8,718.90	20.11	20.74	**8,759.75**	-	-	-	-	**8,759.75**
Right of use	5,495.61	933.49	(3,050.92)	**3,378.18**	421.07	210.11	(179.87)	**451.31**	**2,926.87**
Under submergence (refer foot note (f) below)	2,428.09	36.47	(39.61)	**2,424.95**	725.19	82.06	(3.59)	**803.66**	**1,621.29**
Right of use - Coal Bearing Area Land	-	50.24	3,164.09	**3,214.33**	-	57.42	94.06	**151.48**	**3,062.85**
Roads, bridges, culverts and helipads	1,390.84	261.40	217.08	**1,869.32**	220.01	64.76	(6.36)	**278.41**	**1,590.91**
Building									
Freehold									
Main plant	7,942.14	1,549.50	49.22	**9,540.86**	1,150.71	320.00	(1.58)	**1,469.13**	**8,071.73**
Others	4,305.55	1,052.30	1.94	**5,359.79**	608.01	213.04	(86.63)	**734.42**	**4,625.37**
Right of use	18.91	14.92	(0.05)	**33.78**	7.42	5.92	(0.04)	**13.30**	**20.48**
Temporary erection	63.22	4.09	0.29	**67.60**	54.68	6.96	(1.04)	**60.60**	**7.00**
Water supply, drainage and sewerage system	708.41	90.29	18.29	**816.99**	120.74	38.19	(0.01)	**158.92**	**658.07**
Hydraulic works, barrages, dams, tunnels and power channel	10,843.83	212.88	97.26	**11,153.97**	4,423.25	582.16	3.59	**5,009.00**	**6,144.97**
MGR track and signalling system	1,146.86	1,078.32	0.58	**2,225.76**	270.10	90.02	-	**360.12**	**1,865.64**
Railway siding	1,652.77	1,476.77	125.65	**3,255.19**	237.47	109.97	-	**347.44**	**2,907.75**
Earth dam reservoir	318.89	149.20	(0.72)	**467.37**	58.19	24.22	-	**82.41**	**384.96**
Plant and equipment									
Owned	1,40,950.30	35,677.97	1,713.66	**1,78,341.93**	29,132.10	9,169.44	(500.75)	**37,800.79**	**1,40,541.14**
Right of use	85.77	-	-	**85.77**	18.87	4.75	-	**23.62**	**62.15**
Mining Properties	-	707.03	-	**707.03**	-	35.35	-	**35.35**	**671.68**
Site restoration cost	-	182.43	-	**182.43**	-	3.72	-	**3.72**	**178.71**
Furniture and fixtures	594.79	172.86	7.71	**775.36**	139.76	60.33	(4.05)	**196.04**	**579.32**
Vehicles including speedboats / helicopter									
Owned	40.30	17.51	(0.94)	**56.87**	16.98	8.73	(0.27)	**25.44**	**31.43**
Right of use	3.25	31.87	(2.03)	**33.09**	1.98	5.10	(1.86)	**5.22**	**27.87**
Office equipment	381.21	81.62	(2.13)	**460.70**	164.31	57.85	(1.10)	**221.06**	**239.64**
EDP, WP machines and satcom equipment	423.66	55.15	(48.98)	**429.83**	229.62	97.99	(45.13)	**282.48**	**147.35**
Construction equipment	240.64	38.83	(9.17)	**270.30**	68.81	22.14	(7.88)	**83.07**	**187.23**
Electrical installations	834.66	994.13	13.20	**1,841.99**	158.09	82.98	(1.51)	**239.56**	**1,602.43**
Communication equipment	89.68	13.25	0.35	**103.28**	39.63	9.18	(0.23)	**48.58**	**54.70**
Hospital equipment	32.19	3.36	(0.12)	**35.43**	6.46	1.96	(0.02)	**8.40**	**27.03**
Laboratory and workshop equipment	141.17	71.13	0.11	**212.41**	22.77	11.47	0.03	**34.27**	**178.14**
Assets for ash utilisation	40.71	4.81	-	**45.52**	-	-	-	-	**45.52**
Less: Adjusted from fly ash utilisation reserve fund	40.71	4.81	-	**45.52**	-	-	-	-	**45.52**
Total	**1,88,851.64**	**44,977.12**	**2,275.50**	**2,36,104.26**	**38,296.22**	**11,375.82**	**(744.24)**	**48,927.80**	**1,87,176.46**

As at 31 March 2019 ₹ Crore

Particulars	Gross block				Depreciation and amortisation				Net block
	As at 1 April 2018	Additions	Deductions/ adjustments	As at 31 March 2019	As at 1 April 2018	For the year	Deductions/ adjustments	Upto 31 March 2019	As at 31 March 2019
Land									
(including development expenses)									
Freehold	7,429.25	1,181.54	108.11	8,718.90	-	-	-	-	8,718.90
Leasehold	4,934.16	413.39	148.06	5,495.61	280.83	115.86	24.38	421.07	5,074.54
Under submergence (refer footnote (f) below)	2,406.16	0.67	21.26	2,428.09	635.17	90.02	-	725.19	1,702.90
Roads, bridges, culverts and helipads	1,286.48	84.12	20.24	1,390.84	168.35	53.83	(2.17)	220.01	1,170.83
Building									
Freehold									
Main plant	7,024.25	834.20	83.69	7,942.14	863.91	287.66	(0.86)	1,150.71	6,791.43
Others	3,702.48	606.87	(3.80)	4,305.55	425.54	193.24	(10.77)	608.01	3,697.54
Leasehold	18.91	-	-	18.91	5.56	1.86	-	7.42	11.49
Temporary erection	51.80	11.46	(0.04)	63.22	45.50	9.20	(0.02)	54.68	8.54
Water supply, drainage and sewerage system	629.70	53.49	25.22	708.41	87.59	33.65	(0.50)	120.74	587.67
Hydraulic works, barrages, dams, tunnels and power channel	10,817.82	2.25	23.76	10,843.83	3,847.44	575.81	-	4,423.25	6,420.58
MGR track and signalling system	1,129.55	-	17.31	1,146.86	195.48	74.62	-	270.10	876.76
Railway siding	1,462.05	174.83	15.89	1,652.77	151.23	86.32	(0.08)	237.47	1,415.30
Earth dam reservoir	318.54	-	0.35	318.89	39.54	18.65	-	58.19	260.70
Plant and equipment									
Owned	1,24,165.59	15,651.55	1,133.16	1,40,950.30	21,741.49	7,723.78	(333.17)	29,132.10	1,11,818.20
Leased	85.77	-	-	85.77	14.12	4.75	-	18.87	66.90
Furniture and fixtures	464.86	124.79	5.14	594.79	98.58	41.60	(0.42)	139.76	455.03
Vehicles including speedboats									
Owned	34.73	6.14	(0.57)	40.30	14.42	2.91	(0.35)	16.98	23.32
Leased	2.67	0.94	(0.36)	3.25	1.40	0.81	(0.23)	1.98	1.27
Office equipment	322.67	62.88	(4.34)	381.21	134.75	31.48	(1.92)	164.31	216.90
EDP, WP machines and satcom equipment	337.74	114.39	(28.47)	423.66	181.34	74.77	(26.49)	229.62	194.04
Construction equipment	214.43	33.16	(6.95)	240.64	52.52	18.84	(2.55)	68.81	171.83
Electrical installations	721.24	108.63	4.79	834.66	109.35	50.40	(1.66)	158.09	676.57
Communication equipment	80.51	10.10	(0.93)	89.68	32.23	8.16	(0.76)	39.63	50.05
Hospital Equipment	29.83	3.25	(0.89)	32.19	4.81	1.85	(0.20)	6.46	25.73
Laboratory and workshop equipment	120.41	21.55	(0.79)	141.17	15.30	7.65	(0.18)	22.77	118.40
Assets for ash utilisation	39.29	1.42	-	40.71	-	-	-	-	40.71
Less: Adjusted from fly ash utilisation reserve fund	39.29	1.42	-	40.71	-	-	-	-	40.71
Total	1,67,791.60	19,500.20	1,559.84	1,88,851.64	29,146.45	9,507.72	(357.95)	38,296.22	1,50,555.42

a) The conveyancing of the title to **10,478.87 acres** of freehold land of value ₹ **1,611.74 crore** (31 March 2019: 10,510.78 acres of value ₹ 1,607.41 crore), buildings and structures of value ₹ **4.97 crore** (31 March 2019: ₹ 4.55 crore) and also execution of lease agreements for **10,012.14 acres** of right of use land of value ₹ **1,399.87 crore** (31 March 2019: 10,593.24 acres of value ₹ 1,551.39 crore) in favour of the Group are awaiting completion of legal formalities.

b) Land includes **284.35 acres** of freehold land of value ₹ **0.52 crore** (31 March 2019: 284.35 acres of value ₹ 0.52 crore), and **1939.55 acres** of right of use land of value ₹ **3.81 crore** (31 March 2019: 1939.55 acres of value ₹ 3.81 crore), the value thereof including periodical lease rent accruing thereon is subject to revision on final settlement with the State Government Authorities with demand of late payment charges, if any.

c) Land right of use does not include value of **33 acre** (31 March 2019: 33 acres) of land in possession of the Company. This will be accounted for on settlement of the price thereof by the State Government Authorities.

d) Land includes **1,284 acres** of freehold land of value ₹ **128.15 crore** (31 March 2019: 1,236 acres of value ₹ 130.67 crore) and **395 acres** of right of use land of value ₹ **3.10 crore** (31 March 2019: 101 acres of value ₹ 3.10 crore) not in possession of the Company. The Company is taking appropriate steps for repossession of the same.

e) Land-freehold includes an amount of ₹ **282.92 crore** (31 March 2019: ₹ 282.92 crore) deposited with various authorities in respect of land in possession which is subject to adjustment on final determination of price.

f) Gross block of land under submergence represents ₹ **2,246.12 crore** (31 March 2019: ₹ 2,249.26 crore) of freehold land and ₹ **178.83 crore** (31 March 2019: ₹ 178.83 crore) of right of use land. The land has been amortized considering the rate of depreciation provided by the CERC in the tariff regulations and the fact that it will not have any economic value due to deposit of silt and other foreign materials.

g) Possession of land measuring **98 acres** (31 March 2019: 98 acres) consisting of **79 acres** of freehold land (31 March 2019: 79 acres) and **19 acres** of right of use land (31 March 2019: 19 acres) of value ₹ **0.21 crore** (31 March 2019: ₹ 0.21 crore) was transferred to Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (erstwhile UPSEB) for a consideration of ₹ 0.21 crore. Pending approval for transfer of the said land, the area and value of this land has been included in the total land of the Company. The consideration received from erstwhile UPSEB is disclosed under Note 28 - Current liabilities - Other financial liabilities.

h) Refer Note 67 regarding property, plant and equipment under finance lease.

i) Spare parts of ₹ 5 lakh and above, stand-by equipment and servicing equipment which meet the definition of property, plant and equipment are capitalized.

j) Property, plant and equipment costing ₹5,000/- or less, are depreciated fully in the year of acquisition.

k) Refer Note 21 and Note 26 for information on property, plant and equipment pledged as security by the Group.

l) Refer Note 69 (C) (a) for disclosure of contractual commitments for the acquisition of property, plant and equipment.

m) Deduction/adjustments from gross block and depreciation and amortisation for the year includes:

₹ Crore

	Gross block		Depreciation and amortisation	
	For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Disposal of assets	(59.64)	(52.61)	(46.15)	(27.44)
Retirement of assets	(673.04)	(552.71)	(467.00)	(327.57)
Cost adjustments including exchange differences	3,293.04	2,180.86	-	-
Assets capitalised with retrospective effect/Write back of excess capitalisation	(54.37)	70.85	-	-
Others	(230.49)	(86.55)	(231.09)	(2.94)
	2,275.50	1,559.84	(744.24)	(357.95)

n) Exchange differences capitalized are disclosed in the ‘Addition’ column of Capital work-in-progress (CWIP) and allocated to various heads of CWIP in the year of capitalisation through ‘Deductions/Adjustments’ column of CWIP. Exchange differences in respect of assets already capitalised are disclosed in the ‘Deductions/Adjustments’ column of Property, plant and equipment. Asset-wise details of exchange differences and borrowing costs included in the cost of major heads of CWIP and property, plant and equipment through ‘Addition’ or ‘Deductions/Adjustments’ column are given below:

₹ **Crore**

	For the year ended 31 March 2020		For the year ended 31 March 2019	
	Exchange Difference included in PPE/CWIP	**Borrowing costs included in PPE/CWIP**	Exchange Difference included in PPE /CWIP	Borrowing costs included in PPE/CWIP
Building - Freehold				
Main plant	**51.75**	**97.70**	5.72	127.17
Others	**6.54**	**123.27**	0.35	131.19
Hydraulic works, barrages, dams, tunnels and power channel	**27.91**	**200.56**	18.52	96.67
MGR track and signalling system	**31.82**	**56.24**	-	21.73
Railway siding	**0.60**	**128.65**	-	103.09
Plant and equipment	**1,915.89**	**4,690.00**	759.98	5,204.13
Others including pending allocation	**49.06**	**753.13**	545.99	565.26
Total	**2,083.57**	**6,049.55**	1,330.56	6,249.24

o) **Property, plant and equipment subject to operating lease**

(i) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which are extened, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Ind AS 116. The net carrying value of such leased assets included above are as under:

₹ Crore

	As at 31 March 2020	As at 31 March 2019
Land- Free hold	**74.85**	74.83
Land- Right of use	**0.61**	0.74
Roads, bridges, culverts and helipads	**13.99**	15.98
Main plant building-Freehold	**16.38**	18.83
Other building-Freehold	**42.01**	46.68
Water supply, drainage and sewerage system	**11.41**	11.93
Plant and equipment - Owned	**475.40**	535.29
Railway siding	**2.65**	2.90
Electrical installation	**6.05**	7.20
Others	**14.75**	15.90
	658.10	730.28

(ii) Freehold land includes land measuring **92.23 acres** (31 March 2019: 24.50 acre) of value ₹ **62.53 crore** (31 March 2019: ₹ 16.61 crore) given under operating lease by one of the subsidiaries. Also refer Note 67.

3. Non-current assets - Capital work-in-progress

As at 31 March 2020 ₹ Crore

Particulars	As at 1 April 2019	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2020
Development of land	1,017.57	154.75	(515.20)	7.35	**649.77**
Roads, bridges, culverts and helipads	518.50	419.85	73.75	261.11	**750.99**
Piling and foundation	676.81	35.79	-	-	**712.60**
Buildings					
Freehold					
Main plant	2,980.54	688.14	(179.54)	1,540.47	**1,948.67**
Others	2,660.95	987.97	(588.00)	1,021.01	**2,039.91**
Temporary erections	38.97	14.95	(23.57)	2.96	**27.39**
Water supply, drainage and sewerage system	113.93	53.24	27.11	90.26	**104.02**
Hydraulic works, barrages, dams, tunnels and power channel	3,232.84	1,258.48	6.08	212.88	**4,284.52**
MGR track and signalling system	936.21	285.96	731.72	1,078.32	**875.57**
Railway siding	2,688.35	924.63	(580.48)	1,476.77	**1,555.73**
Earth dam reservoir	271.47	137.82	42.32	141.85	**309.76**
Plant and equipment - owned	87,278.75	17,349.37	1,459.75	33,904.87	**72,183.00**
Furniture and fixtures	48.78	25.35	40.12	74.05	**40.20**
Vehicles	-	-	-	-	**-**
Office equipment	8.81	2.25	0.62	7.03	**4.65**
EDP/WP machines and satcom equipment	4.68	9.81	(0.98)	4.78	**8.73**
Construction equipment	0.13	0.97	(0.97)	-	**0.13**
Electrical installations	556.94	298.09	634.53	909.13	**580.43**
Communication equipment	3.12	2.77	(0.16)	2.84	**2.89**
Hospital equipment	0.04	0.11	-	0.04	**0.11**
Laboratory and workshop equipment	0.53	5.18	(0.23)	0.30	**5.18**
Development of coal mines	2,310.71	682.78	(421.29)	871.58	**1,700.62**
	1,05,348.63	23,338.26	705.58	41,607.60	**87,784.87**
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	532.03	(53.08)	(13.08)	0.32	**465.55**
Difference in exchange on foreign currency loans	1,569.72	447.21	(615.39)	-	**1,401.54**
Pre-commissioning expenses (net)	551.64	1,087.43	(1,370.93)	-	**268.14**
Expenditure during construction period (net)*	4,301.02	8,025.08	(30.96)	-	**12,295.14**
Other expenditure directly attributable to project construction	2,406.81	74.40	(1,033.13)	290.76	**1,157.32**
Less: Allocated to related works	-	7,310.96	-	-	**7,310.96**
	9,361.22	2,270.08	(3,063.49)	291.08	**8,276.73**
Sub-total	1,14,709.85	25,608.34	(2,357.91)	41,898.68	**96,061.60**
Less: Provision for unserviceable works	593.56	45.90	(10.42)	-	**629.04**
Construction stores (net of provision)	3,881.94	2,063.26	(3,166.82)	-	**2,778.38**
Total	**1,17,998.23**	**27,625.70**	**(5,514.31)**	**41,898.68**	**98,210.94**

As at 31 March 2019 ₹ Crore

Particulars	As at 1 April 2018	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2019
Development of land	793.83	469.21	(226.83)	18.64	1,017.57
Roads, bridges, culverts and helipads	435.61	144.28	19.30	80.69	518.50
Piling and foundation	645.05	34.30	(2.54)	-	676.81
Buildings					
Freehold					
Main plant	2,876.62	633.70	296.41	826.19	2,980.54
Others	2,012.32	1,170.29	50.26	571.92	2,660.95
Temporary erections	22.92	15.24	5.45	4.64	38.97
Water supply, drainage and sewerage system	73.31	61.93	32.00	53.31	113.93
Hydraulic works, barrages, dams, tunnels and power channel	2,547.97	685.94	(1.07)	-	3,232.84
MGR track and signalling system	728.37	468.90	(260.95)	0.11	936.21
Railway siding	1,114.22	1,772.90	(23.94)	174.83	2,688.35
Earth dam reservoir	76.37	174.22	20.88	-	271.47
Plant and equipment-owned	70,649.41	32,092.74	(1,665.33)	13,798.07	87,278.75
Furniture and fixtures	29.04	43.86	8.70	32.82	48.78
Vehicles	0.10	-	-	0.10	_
Office equipment	3.59	7.15	(0.18)	1.75	8.81
EDP/WP machines and satcom equipment	7.21	5.62	(1.46)	6.69	4.68
Construction equipment	0.35	0.34	(0.14)	0.42	0.13
Electrical installations	375.00	518.39	(260.85)	75.60	556.94
Communication equipment	0.43	4.08	(0.02)	1.37	3.12
Hospital equipment	0.01	0.04	-	0.01	0.04
Laboratory and workshop equipment	1.53	0.56	(0.49)	1.07	0.53
Development of coal mines	2,027.71	1,497.99	(1,214.99)	-	2,310.71
	84,420.97	39,801.68	(3,225.79)	15,648.23	1,05,348.63
Expenditure pending allocation					
Survey, investigation, consultancy and supervision charges	353.45	203.05	(24.47)	-	532.03
Difference in exchange on foreign currency loans	1,233.35	904.87	(568.50)	-	1,569.72
Pre-commissioning expenses (net)	144.30	668.99	(261.65)	-	551.64
Expenditure during construction period (net)*	4,498.11	8,761.31	(1,027.10)	-	12,232.32
Other expenditure directly attributable to project construction	2,203.99	79.11	127.96	4.25	2,406.81
Less: Allocated to related works	-	7,931.30	-	-	7,931.30
	8,433.20	2,686.03	(1,753.76)	4.25	9,361.22
Sub-total	92,854.17	42,487.71	(4,979.55)	15,652.48	1,14,709.85
Less: Provision for unserviceable works	452.01	88.43	53.12	-	593.56
Construction stores (net of provision)	3,857.71	24.23	-	-	3,881.94
Total	96,259.87	42,423.51	(5,032.67)	15,652.48	1,17,998.23

* Brought from expenditure during construction period (net) - Note 39

a) Construction stores includes material lying with contractors for construction works and are net of provision for shortages pending investigation amounting to ₹ **25.64 crore** (31 March 2019: ₹ 25.94 crore).

b) Pre-commissioning expenses for the year amount to ₹ **1,519.26 crore** (31 March 2019: ₹ 745.56 crore) and after adjustment of pre-commissioning sales of ₹ **431.83 crore** (31 March 2019: ₹ 76.57 crore) resulted in net pre-commissioning expenditure of ₹ **1,087.43 crore** (31 March 2019: ₹ 668.99 crore).

c) Additions to the development of coal mines include expenditure during construction period (net) of ₹ **635.12 crore** (31 March 2019: ₹1,269.79 crore) - [Ref. Note 40] and are after netting off the receipts from coal extracted during the development phase amounting to ₹**154.14 crore** (31 March 2019: ₹1,214.99 crore).

d) Details of exchange differences and borrowing costs capitalised are disclosed in Note 2 (n).

e) Amount capitalised under development of coal mines is included in assets capitalised under 'Mining properties' and 'Site restoration cost' under Property, plant and equipment.

4. Non-current assets - Intangible assets

As at 31 March 2020 — ₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2019	Additions	Deductions/ adjustments	As at 31 March 2020	As at 1 April 2019	For the year	Deductions/ adjustments	Upto 31 March 2020	As at 31 March 2020
Software	61.15	39.90	3.20	104.25	37.59	29.33	(0.11)	66.81	37.44
Right of use - Land	264.54	7.76	13.49	285.79	21.68	9.46	(4.96)	26.18	259.61
- Others	203.97	180.90	-	384.87	41.28	14.31	-	55.59	329.28
Total	**529.66**	**228.56**	**16.69**	**774.91**	**100.55**	**53.10**	**(5.07)**	**148.58**	**626.33**

As at 31 March 2019 — ₹ Crore

Particulars	Gross block				Amortisation				Net block
	As at 1 April 2018	Additions	Deductions/ adjustments	As at 31 March 2019	As at 1 April 2018	For the year	Deductions/ adjustments	Upto 31 March 2019	As at 31 March 2019
Software	41.04	16.16	3.95	61.15	27.89	9.72	(0.02)	37.59	23.56
Right of use - Land	224.76	39.26	0.52	264.54	13.85	7.83	-	21.68	242.86
- Others	203.71	-	0.26	203.97	30.95	10.33	-	41.28	162.69
Total	469.51	55.42	4.73	529.66	72.69	27.88	(0.02)	100.55	429.11

a) The right to use of land and others are amortized over the period of legal right to use or life of the related plant, whichever is less.

b) Cost of acquisition of the right for drawl of water amounting to ₹ **384.87 crore** (31 March 2019: ₹ 203.97 crore) is included under intangible assets – Right to use - Others.

c) Deductions/adjustments from gross block and amortisation for the year includes:

₹ Crore

	Gross block		Amortisation	
	For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019
Cost adjustments	**39.30**	4.73	**(4.97)**	-
Others	**(22.61)**	-	**(0.10)**	(0.02)
Total	**16.69**	4.73	**(5.07)**	(0.02)

5. Non-current assets - Intangible assets under development

As at 31 March 2020 ₹ Crore

Particulars	**As at 1 April 2019**	**Additions**	**Deductions/ adjustments**	**Capitalised**	**As at 31 March 2020**
Right to use - others	147.52	-	-	147.52	**-**
Exploration and evaluation assets - coal mines	238.96	20.27	33.23	-	**292.46**
Exploratory wells-in-progress	7.65	-	(0.01)	-	**7.64**
Upfront premium including processing fee	100.83	-	-	-	**100.83**
Software	11.31	4.22	-	11.29	**4.24**
	506.27	24.49	33.22	158.81	**405.17**
Less: Provision for unserviceable works	107.64	-	-	-	**107.64**
Total	**398.63**	**24.49**	**33.22**	**158.81**	**297.53**

As at 31 March 2019 ₹ Crore

Particulars	As at 1 April 2018	Additions	Deductions/ adjustments	Capitalised	As at 31 March 2019
Right to use - others	237.82	25.23	(115.53)	-	147.52
Exploration and evaluation assets - coal mines	222.94	16.08	(0.06)	-	238.96
Exploratory wells-in-progress	7.72	-	(0.07)	-	7.65
Upfront premium including processing fee	100.83	-	-	-	100.83
Software	41.52	66.45	(86.67)	9.99	11.31
	610.83	107.76	(202.33)	9.99	506.27
Less: Provision for unserviceable works	107.64	-	-	-	107.64
Total	503.19	107.76	(202.33)	9.99	398.63

6. Non-current assets - Investments accounted for using the equity method

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2020	As at 31 March 2019
Equity instruments - Unquoted (fully paid up - unless otherwise stated, at cost)				
Joint venture companies				
Utility Powertech Ltd. (includes 10,00,000 bonus shares)	20,00,000 (20,00,000)	10 (10)	**72.25**	59.07
NTPC-GE Power Services Private Ltd.	30,00,000 (30,00,000)	10 (10)	**6.34**	6.43
NTPC-SAIL Power Company Ltd.	49,02,50,050 (49,02,50,050)	10 (10)	**1,369.93**	1,249.12
NTPC Tamil Nadu Energy Company Ltd.	1,42,81,06,112 (1,41,56,06,112)	10 (10)	**1,575.37**	1,376.96
Ratnagiri Gas and Power Private Ltd.	83,45,56,046 (83,45,56,046)	10 (10)	**-**	-
Konkan LNG Ltd.	13,97,52,264 (13,97,52,264)	10 (10)	**34.38**	-
Aravali Power Company Private Ltd.	1,43,30,08,200 (1,43,30,08,200)	10 (10)	**2,993.91**	2,936.53
NTPC BHEL Power Projects Private Ltd.	5,00,00,000 (5,00,00,000)	10 (10)	**-**	-
Meja Urja Nigam Private Ltd.	1,58,16,39,800 (1,25,93,29,800)	10 (10)	**1,303.22**	1,284.75
Transformers and Electricals Kerala Ltd.	1,91,63,438 (1,91,63,438)	10 (10)	**46.87**	41.67
National High Power Test Laboratory Private Ltd.	3,04,00,000 (3,04,00,000)	10 (10)	**21.97**	26.08
Energy Efficiency Services Ltd.	46,36,10,000 (24,55,00,000)	10 (10)	**556.88**	301.45
CIL NTPC Urja Private Ltd.	76,900 (76,900)	10 (10)	**0.02**	0.02
Anushakti Vidhyut Nigam Ltd.	49,000 (49,000)	10 (10)	**0.01**	0.01
Hindustan Urvarak and Rasayan Ltd.	75,10,85,000 (44,03,25,000)	10 (10)	**753.77**	443.54
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.)	2,79,30,000 (2,79,30,000)	10 (10)	**32.37**	32.33
Trincomalee Power Company Ltd. (* Srilankan rupees)	32,86,061 (32,86,061)	100* (100)*	**1.31**	1.58
Bangladesh-India Friendship Power Company Private Ltd. (** Bangladeshi Taka)	5,42,50,000 (3,42,50,000)	100** (100)**	**487.71**	280.85
Total			**9,256.31**	8,040.39
Aggregate amount of unquoted investments			**9,256.31**	8,040.39

a) Details of interest in joint venture companies, their summarised financial information, restrictions for the disposal of investments held by the Group and commitments towards certain Joint venture companies are disclosed in Note 64.

7. Non-current financial assets - Investments

₹ Crore

Particulars	Number of shares Current year/ (previous year)	Face value per share in ₹ Current year/ (previous year)	As at 31 March 2020	As at 31 March 2019
Equity instruments (fully paid up - unless otherwise stated)				
Quoted (designated at fair value through other comprehensive income)				
PTC India Ltd.	1,20,00,000 (1,20,00,000)	10 (10)	**46.50**	88.14
			46.50	88.14
Unquoted (measured at fair value through profit or loss)				
International Coal Ventures Private Ltd.	14,00,000 (14,00,000)	10 (10)	**1.40**	1.40
BF-NTPC Energy Systems Ltd.	68,48,681 (68,48,681)	10 (10)	**2.38**	2.38
			3.78	3.78
Co-operative societies			**#**	#
Total			**50.28**	91.92
Aggregate amount of quoted investments - at cost			**12.00**	12.00
Aggregate market value of the quoted investments			**46.50**	88.14
Aggregate amount of unquoted investments			**3.78**	3.78

Equity shares of ₹ **30,200**/- (31 March 2019: ₹ 30,200/-) held in various employee co-operative societies.

a) Investments have been valued as per accounting policy no. C.28.1 (Note 1).

b) The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from PTC India Ltd. (PTC). As the Company was formed by a directive from the GOI, approval of the GOI is awaited for exit by NTPC Limited.

c) The Board of Directors of NTPC Limited in its meeting held on 27 January 2012 accorded in principle approval for withdrawal from International Coal Ventures Private Ltd. (ICVPL). As the Company was formed by a directive from the GOI, approval of the Ministry of Steel, GOI is awaited for exit by NTPC Limited. Pending withdrawal, the Company had lost the joint control over the entity and accordingly, has classified the investment in ICVPL as 'Investment in unquoted equity instruments'.

d) The Board of Directors of NTPC Limited in its meeting held on 19 June 2014 accorded in principle approval for withdrawal from BF-NTPC Energy Systems Ltd. (BF-NTPC), a joint venture of the Company. As BF-NTPC was formed by a directive from the GOI, approval of the GOI was sought for exit by the Company. Ministry of Power, GoI conveyed its approval for winding up of BF-NTPC on 8 January 2018. Consequently, liquidator was appointed in the extra-ordinary general meeting of BF-NTPC held on 9 October 2018. The winding up is under process. Pursuant to winding up proceedings, the Company had lost the joint control over the entity and accordingly, has classified the investment in BF NTPC as 'Investment in unquoted equity instruments'. The difference between the cost of investment and the fair value has been provided for in the earlier years.

e) The Group is of the view that provisions of Ind AS 24 'Related Party Disclosures' and Ind AS 111 'Joint Arrangements' are not applicable to the investments made in PTC India Ltd., International Coal Ventures Private Ltd. and BF-NTPC Energy systems Ltd., and the same has been accounted for as per the provisions of Ind AS 109 'Financial Instruments'.

f) No strategic investments in equity instruments measured at FVTOCI were disposed during the financial year 2019-20, and there were no transfers of any cumulative gain or loss within equity relating to these investments.

8. Non-current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Loans (Considered good, unless otherwise stated)		
Related parties		
Unsecured	**19.01**	6.61
Employees (including accrued interest)		
Secured	**292.07**	262.77
Unsecured	**176.65**	182.57
Others		
Secured	**23.35**	24.18
Total	**511.08**	476.13

a) Due from directors and officers of the Group

Directors	**0.01**	0.01
Officers	-	-

b) Loans to related parties include:

Key management personnel	**0.01**	0.01
National High Power Test Laboratory Private Ltd. (Joint venture company)	**18.40**	6.00
NTPC Education and Research Society	**0.60**	0.60

c) Other loans include loan of ₹ **23.28 crore** (31 March 2019: ₹ 24.18 crore) given to Andhra Pradesh Industrial Infrastructure Corporation Ltd. (APIIC) which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

9. Non-current assets - Other financial assets

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Share application money pending allotment in		
Joint venture companies		
Meja Urja Nigam Private Limited	-	60.00
	-	60.00
Claims recoverable	**771.36**	739.54
Finance lease receivables (Refer Note 67)	**409.14**	470.96
Mine closure deposit	**47.38**	32.20
Total	**1,227.88**	1,302.70

a) The shares against the share application money pending allottment are expected to be alloted in due course.

b) Claims recoverable includes ₹ **749.01 crore** (31 March 2019: ₹ 719.71 crore) towards the cost incurred upto 31 March 2020 in respect of one of the hydro power projects, the construction of which has been discontinued on the advice of the Ministry of Power (MOP), GOI which includes ₹ **439.57 crore** (31 March 2019: ₹ 413.40 crore) in respect of arbitration awards challenged by the Company before Hon'ble High Court of Delhi. In the event the Hon'ble High Court grants relief to the Company, the amount would be adjusted against Current liabilities - Provisions - Provision for others (Note 30). Management expects that the total cost incurred, anticipated expenditure on the safety and stabilisation measures, other recurring site expenses and interest costs as well as claims of contractors/vendors for various packages for this project will be compensated in full by the GOI. Hence, no provision is considered necessary.

c) The Company had ascertained that the Power Purchse Agreement (PPA) entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on transition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Ind AS 116. Accordingly, recovery of capacity charges towards depreciation, interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease' under 'Revenue from operations' (Note 32).

d) As per the guidelines from Ministry of Coal, Government of India for preparation of Mine Closure Plan, Escrow Accounts have been opened for each captive mine and the balances held in these escrow accounts are presented as 'Mine closure deposit'. Up to 80% of the total deposited amount including interest accrued in the escrow account shall be released after every five years in line with the periodic examination of the closure plan as per the Guidelines. Interest earned on the escrow account is added to mine closure deposit account.

10. Other non-current assets

₹ Crore

Particulars		As at 31 March 2020	As at 31 March 2019
Capital advances			
(Considered good unless otherwise stated)			
Secured		**17.83**	21.65
Unsecured			
Covered by bank guarantee		**3,258.56**	2,794.83
Others		**3,924.59**	4,155.88
Considered doubtful		**169.13**	169.47
Less: Allowance for bad and doubtful advances		**169.13**	169.47
		7,200.98	6,972.36
Advances other than capital advances			
Security deposits		**97.51**	92.48
Advances to contractors and suppliers			
Unsecured	**2,082.05**		2,149.72
Considered doubtful	**112.57**		112.57
Less: Allowances for bad and doubtful advances	**112.57**		112.57
		2,082.05	2,149.72
Advance tax and tax deducted at source	**14,805.62**		16,432.23
Less: Provision for tax	**13,028.18**		11,651.22
		1,777.44	4,781.01
Deferred foreign currency fluctuation asset		**2,424.93**	1,352.59
Deferred payroll expenditure		**143.80**	145.66
Others		**0.01**	0.40
Total		**13,726.72**	15,494.22

a) In line with accounting policy no. 15 (Note 1), deferred foreign currency fluctuation asset has been accounted and (-) ₹ **255.22 crore** (31 March 2019: (-) ₹ 120.25 crore) being the exchange fluctuations on account of foreign currency loans have been adjusted in 'Energy sales' under 'Revenue from operations' (Note 32).

b) Capital advances include amounts given as advance against works to the following private companies (related parties) in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**15.81**	21.82
NTPC BHEL Power Projects Private Ltd.	**128.11**	139.52
Aravali Power Company Private Ltd.	-	0.09

c) Capital advances include ₹ **224.29 crore** (31 March 2019: ₹ 224.29 crore), paid to a contractor pending settlement of certain claims which are under arbitration. The amount will be adjusted with the cost of related work or recovered from the party, depending upon the outcome of the arbitration proceedings.

d) Advances to contractors and suppliers include payments to Railways amounting to ₹ **2,063.56 crore** (31 March 2019: ₹ 2,097.65 crore) under customer funding model as per policy on 'Participative model for rail-connectivity and capacity augmentation projects' issued by the Ministry of Railways, GOI. As per this policy, an agreement has been signed between the Company and the Ministry of Railways, GOI on 6 June 2016. As per the agreement, railway projects agreed between the Company and Railways will be constructed, maintained and operated by Railways and ownership of the line and its operations and maintenance will always remain with them. Railways will pay upto 7% of the amount invested through freight rebate on freight volumes every year till the funds provided by the Company are fully recovered along-with interest (equal to the prevailing rate of dividend payable by Railways at the time of signing of respective agreements), subject to the rebate not exceeding the freight amount in the accounting year, after commercial operation date (COD) of the railway projects. During the year, one of the projects has achieved COD. Freight rebate amount in consonance with the agreement clauses, is under verification by the Railways and the said advance will be adjusted upon receipt of the claim amount from Railways.

e) Capital advances are secured against the hypothecation of the construction equipment/material supplied by the contractors/ suppliers.

f) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

11. Current assets - Inventories

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Coal	**5,626.55**	3,628.46
Fuel oil	**532.22**	404.43
Naphtha	**128.38**	127.66
Stores and spares	**4,011.24**	3,479.30
Chemicals and consumables	**160.66**	145.15
Loose tools	**11.40**	9.44
Steel scrap	**27.80**	31.63
Others	**924.14**	687.38
	11,422.39	8,513.45
Less: Provision for shortages	**24.07**	113.28
Provision for obsolete/unserviceable items/ diminution in value of surplus inventory	**259.78**	148.55
Total	**11,138.54**	8,251.62
Inventories include material-in-transit		
Coal	**330.41**	286.23
Stores and spares	**51.78**	34.91
Chemicals and consumables	**1.58**	2.21
Loose tools	**0.03**	0.04
Others	**3.37**	1.97

a) Inventory items have been valued as per accounting policy no. C.10 (Note 1).

b) Inventories - Others includes steel, cement, ash bricks etc.

c) Refer Note 21 and 48 (b) for information on inventories pledged as security by the Group.

d) Refer Note 48 (a) for information on inventories consumed and recognised as expense during the year.

e) Paragraph 32 of Ind AS 2 - Inventories provides that materials and other supplies held for use in the production of inventories are not written down below cost if the finished products in which they will be incorporated are expected to be sold at or above cost. The Group is operating in the regulatory environment and as per CERC Tariff Regulations, cost of fuel and other inventory items are recovered as per extant tariff regulations. Accordingly, the realizable value of the inventories is not lower than the cost.

12. Current financial assets - Trade receivables

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Trade receivables		
Unsecured, considered good	**20,370.80**	12,363.52
Credit Impaired	**188.57**	148.53
	20,559.37	12,512.05
Less: Allowance for credit impaired trade receivables	**188.57**	148.53
Total	**20,370.80**	12,363.52

a) Based on arrangements between Company, banks and benificiaries, the bills of the beneficiaries have been discounted. Accordingly, trade receivables have been disclosed net off bills discounted amounting to ₹**10,842.34 crore** (31 March 2019 ₹9,998.75 crore). Also refer Note 69 A(c).
b) Amounts receivable from related parties are disclosed in Note 53.
c) The margin and other tariff have been billed to Discoms including Rajasthan as per the guidelines of MNRE for JNNSM-I uniformely by M/s NVVN Ltd., a subsidiary of the Company. However, three Rajasthan Discoms have not paid the bills issued amounting to ₹**163.36 crore** (31 March 2019: ₹163.36 crore). The above cases were filed with Central Electricity Regulatory Commission (CERC) wherein CERC has decided in favour of the subsidiary in all the matters stated above. However, in all the above cases Rajasthan Discoms have filed appeal with Appellate Tribunal for Electricity (ATE) against order of CERC. The case is pending with ATE. Hence, the subsidiary has not considered making provision for these outstanding dues in the Books.

   Further, in matters related to outstanding dues towards payment of trading margin @1.5 paise/unit instead of 7.0 paise/unit in respect of M/s NVVN Ltd, CERC has advised to decide the matter with mutual consent. However, the subsidiary has filed appeal with Appellate Tribunal for Electricity (ATE) against CERC order and requested ATE to direct Rajasthan Discoms to make payment of differential trading margin and surcharge thereon. The case is pending with ATE. Based on order of CERC a provision for the disputed amount of ₹85.18 crore has been recognised during the year.

13. Current financial assets - Cash and cash equivalents

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Balances with banks		
Current accounts	**424.42**	228.53
Deposits with original maturity upto three months (including interest accrued)	**164.29**	93.62
Cheques and drafts on hand	**0.73**	1.51
Others (stamps on hand)	**0.08**	0.08
Total	**589.52**	323.74

14. Current financial assets -Bank balances other than cash and cash equivalents

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Deposits with original maturity of more than three months and maturing within one year (including interest accrued)	**1,015.47**	942.61
Earmarked balances with banks #	**1,609.30**	1,667.08
Total	**2,624.77**	2,609.69
# Earmarked balances with banks towards:		
Redemption of bonds due for repayment within one year	**111.00**	332.00
Fly ash utilisation reserve fund*	**599.72**	638.11
DDUGJY Scheme of the GOI**	**804.63**	491.86
Unpaid dividend account balance	**19.35**	17.68
Amount deposited as per court orders	**23.13**	21.96
Unpaid interest/refund account balance - Bonds	**5.22**	4.69
Payment Security Fund - MNRE(b)	**27.34**	26.11
Payment Security Scheme of MNRE(c)	**0.09**	103.71
Unpaid interest on public deposit	**0.03**	0.03
Margin money	**15.14**	21.52
Security with government authorities	**0.01**	0.02
Others	**3.64**	9.39
Total	**1,609.30**	1,667.08

* Refer Note 20 (d) regarding fly ash utilization reserve fund.

** Out of advance for DDUGJY Scheme of the GOI. Refer Note 28 (c) and 29 (a).

a) In line with the guidelines issued by Ministry of New and Renewable Energy (MNRE), GOI under National Solar Mission-II, a Payment Security Fund/Working Capital Fund will be set up/created by the MNRE. Upon creation of the said fund, amounts accrued from encashment of bank guarantee, penalties/liquidated damages on developers deducted by the Group from the Solar Power Developers (SPDs) as per the guidelines of MNRE shall be transferred to this fund. The said fund is yet to be created by MNRE. Pending creation of the fund, amount deducted by the Group on account of liquidated damages/penalties from the SPDs is earmarked for the said fund and is not available for use by the Group.

b) Funds received from MNRE under payment security scheme. For corresponding liability refer Note 28 h).

15. Current financial assets - Loans

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Loans (including interest accrued)		
(Considered good unless otherwise stated)		
Related parties		
Unsecured	**0.71**	0.11
Employees		
Secured	**79.22**	75.11
Unsecured	**171.83**	172.05
Others		
Secured	**0.91**	0.89
Total	**252.67**	248.16
a) Due from Directors and Officers of the Group		
Directors	**0.02**	0.11
Officers	**-**	-
b) Loans to related parties include:		
Key management personnel	**0.02**	0.11
National High Power Test Laboratory Private Ltd. (Joint venture company)	**0.69**	-

c) Other loans include loan of ₹ **0.89 crore** (31 March 2019: ₹ 0.89 crore) given to APIIC which is covered by a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

d) Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Group.

16. Current assets - Other financial assets

Particulars		As at 31 March 2020	As at 31 March 2019
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**101.21**	129.36
Employees			
Unsecured	**16.29**		20.43
Considered doubtful	**0.14**		0.14
Less: Allowance for bad and doubtful advances	**0.14**		0.14
		16.29	20.43
Others			
Unsecured		**17.40**	0.47
		134.90	150.26
Claims recoverable			
Unsecured, considered good	**50.19**		45.73
Considered doubtful	**0.12**		15.07
Less: Allowance for doubtful claims	**0.12**		15.07
		50.19	45.73
Unbilled revenue		**12,231.18**	8,750.66
Hedging cost recoverable from beneficiaries		**-**	5.93
Derivative MTM asset		**-**	1.28
Finance lease receivables		**55.23**	49.04
Security deposits		**495.86**	40.27
Others		**60.44**	38.07
Total		**13,027.80**	9,081.24

a) Unbilled revenue is net of credits to be passed to beneficiaries at the time of billing and includes ₹ **9,036.87 crore** (31 March 2019: ₹ 7,841.48 crore) billed to the beneficiaries after 31 March for energy sales.

b) Advances to related parties include:

	31 March 2020	31 March 2019
Joint venture companies	**81.73**	56.17

c) Advances include amounts due from the following private companies in which one or more directors of the Company are directors:

	31 March 2020	31 March 2019
NTPC-GE Power Services Private Ltd.	**1.10**	0.83
Aravali Power Company Private Ltd.	**4.83**	2.25
NTPC BHEL Power Projects Private Ltd.	**7.02**	6.44
Meja Urja Nigam Private Ltd.	**7.97**	13.97
Bangladesh India Friendship Power Company Pvt.Ltd.	**-**	0.60

d) Other financial assets - Others include amount recoverable from contractors and other parties towards hire charges, rent/electricity etc.

16A. Current assets - Current tax assets (net)

₹ **Crore**

Particulars	As at 31 March 2020	As at 31 March 2019
Current tax assets (net)	**83.26**	23.21

17. Current assets - Other current assets

₹ Crore

Particulars		As at 31 March 2020	As at 31 March 2019
Security deposits (unsecured)		**1,880.56**	1,510.40
Advances			
(Considered good unless otherwise stated)			
Related parties			
Unsecured		**729.65**	2,047.54
Employees			
Unsecured		**3.19**	6.66
Contractors and suppliers			
Secured	-		1.39
Unsecured	**888.44**		7,140.38
Considered doubtful	**18.21**		18.27
Less: Allowance for bad and doubtful advances	**18.21**		18.27
		888.44	7,141.77
Others			
Unsecured		**121.11**	161.33
		1,742.39	9,357.30
Interest accrued on			
Advance to contractors		**36.18**	46.34
Claims recoverable			
Unsecured, considered good	**4,773.76**		4,137.08
Considered doubtful	**125.00**		134.55
Less: Allowance for doubtful claims	**125.00**		134.55
		4,773.76	4,137.08
Assets held for disposal		**249.22**	259.95
Deferred payroll expenses		**26.05**	27.84
Others		**110.35**	6.29
Total		**8,818.51**	15,345.20

a) Security deposits (unsecured) include ₹ **28.45 crore** (31 March 2019: ₹ 30.56 crore) towards sales tax deposited with sales/commercial tax authorities, ₹ **494.47 crore** (31 March 2019: ₹ 299.79 crore) deposited with Courts, ₹ **199.74 crore** (31 March 2019: ₹ 188.44 crore) deposited with LIC for making annuity payments to the land oustees, ₹ **361.74 crore** (31 March 2019: ₹ 275.05 crore) deposited with the Water Resource Department, Govt. of Chhattisgarh for drawl of water and ₹ **500.00 crore** (31 March 2019: ₹ 356.31 crore) deposited against bank guarantee with one of the party as per the direction of the Hon'ble Supreme Court of India, refer Note 56.

b) Advances - Contractors and suppliers - unsecured includes an amount of ₹ **0.60 crore** (31 March 2019: ₹ 5,769.00 crore) paid to Indian Railways to be adjusted against freight payable on coal transportation, pursuant to the agreement entered into with Indian Railways, Ministry of Railways, GOI.

c) Advances - others include prepaid expenses amounting to ₹ **109.15 crore** (31 March 2019: ₹ 159.49 crore).

d) Advances - Related parties include amounts due from the following private companies in which one or more directors of the Company are directors:

NTPC-GE Power Services Private Ltd.	**0.01**	0.01
NTPC BHEL Power Projects Private Ltd.	**1.33**	1.33
Aravali Power Company Private Ltd.	**19.05**	19.05

e) Loans given to employees are measured at amortized cost. The deferred payroll expenditure represents the benefits on account of interest rate on loans being lower than the market rate of interest. The same is amortized on a straight-line basis over the remaining period of the loan.

f) Assets held for disposal includes an amount of ₹ **156.17 crore** (31 March 2019: ₹ 158.20 crore) of M/s Patratu Vidyut Utpadan Nigam Ltd., a subsidiary, accounted at fair realisable value net of decommissioning cost based on assessment made by the subsidiary. These assets were initially transferred to the subsidiary by the Scheme notified by the Government of Jharkhand (GoJ) vide notification No. 888 dated 1 April 2016 of Patratu Thermal Power Station, for generation of the electricity under power supply arrangement to Jharkhand Bijli Vitran Nigam Limited (JBVNL), an enterprise of Government of Jharkand (GoJ). However due to heavy cost of generation, JBVNL / GoJ proposed to shut down the plant and scrap all the existing units and accordingly plant has been shut down on 24 Jan 2017. It has been further agreed that consideration of these assets shall be the amount realised from sale of scrap, net of cost.

The proceeds realised during the year from dismantling of the existing units, current assets & Scrap less administrative expenses towards the sale, land lease and any other incidental expenses has been credited to GoJ in lieu of the Specified Assets Transfer consideration as per the agreement. The corresponding liability on account of these assets has been created and disclosed under 29 b) after setting off amount recoverable toward dismantling cost.

g) Asset held for disposal includes an amount of ₹ **89.31 crore** (31 March 2019: ₹ 98.90 crore) in respect of one of the power stations which has since been shut down in compliance to order of Delhi Polution Control Committee (DPCC) dated 25 July 2018. The operations of the station was permanently discontinued w.e.f.15 October 2018 and the assets of the power station are in the process of disposal and/or being utilised at other locations of the Company.

18. Regulatory deferral account debit balances

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
On account of		
Exchange differences	**1,359.52**	80.09
Employee benefits expense	**932.42**	895.15
Deferred tax	**6,178.08**	2,460.47
Ash transportation cost	**826.85**	179.29
Others	**100.86**	13.03
	9,397.73	3,628.03

a) Regulatory deferral account balances have been accounted in line with Accounting policy no. C.5 (Note 1). Refer Note 65 for detailed disclosures.

b) CERC Tariff Regulations, 2019 provide for recovery of deferred tax liability (DTL) as at 31 March 2009 from the beneficiaries. Accordingly, DTL as at 31 March 2009 is recoverable on materialisation from the beneficiaries. Regulations, 2014 and Regulations,2019 provide for grossing-up the rate of return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. Accordingly, deferred tax liability for the period from 1 April 2014 will be reversed in future years when the related DTL forms part of current tax. Keeping in view the above, the Company has recognized such deferred tax as regulatory deferral account debit balances, since the amounts are recoverable in future years.

19. Equity share capital

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Equity share capital		
Authorised		
10,00,00,00,000 shares of par value ₹10/- each (10,00,00,00,000 shares of par value ₹10/- each as at 31 March 2019)	**10,000.00**	10,000.00
Issued, subscribed and fully paid up		
9,89,45,57,280 shares of par value ₹ 10/- each (9,89,45,57,280 shares of par value ₹10/- each as at 31 March 2019)	**9,894.56**	9,894.56

a) **Reconciliation of the shares outstanding at the beginning and at the end of the year:**

Particulars	Number of Shares	
	As at 31 March 2020	As at 31 March 2019
At the beginning of the year	**9,89,45,57,280**	8,24,54,64,400
Issued during the year - Bonus shares	**-**	1,64,90,92,880
Outstanding at the end of the year	**9,89,45,57,280**	9,89,45,57,280

b) **Terms and rights attached to equity shares:**

The Company has only one class of equity shares having a par value ₹10/- per share. The holders of the equity shares are entitled to receive dividends as declared from time to time and are entitled to voting rights proportionate to their share holding at the meetings of shareholders.

c) **Dividends:**

₹ Crore

Particulars	Paid during the year ended	
	31 March 2020	31 March 2019
(i) Dividends paid and recognised during the year		
Final dividend for the year ended 31 March 2019 of ₹ **2.50** (31 March 2018: ₹ 2.39) per fully paid share	**2,473.64**	1,970.67
Interim dividend for the year ended 31 March 2020 of ₹ **0.50** (31 March 2019: ₹ 3.58) per fully paid share	**494.73**	2,951.88

₹ Crore

(ii) Dividends not recognised at the end of the reporting period	31 March 2020	31 March 2019
In addition to the above dividends, since year end the directors have recommended the payment of a final dividend of ₹ **2.65** (31 March 2019: ₹ 2.50) per fully paid equity share. This proposed dividend is subject to the approval of shareholders in the ensuing Annual General Meeting.	**2,622.06**	2,473.64

d) **Details of shareholders holding more than 5% shares in the Company:**

Particulars	As at 31 March 2020		As at 31 March 2019	
	No. of shares	%age holding	No. of shares	%age holding
- President of India*	**5,04,80,97,508**	**51.02**	5,58,11,67,271	56.41
- Life Insurance Corporation of India (including shares held in various Funds/ Schemes)	**1,03,26,64,560**	**10.44**	1,13,84,46,831	11.51
- ICICI Prudential Mutual Fund	**73,55,85,649**	**7.43**	54,53,42,820	5.51

* Includes 3,10,46,970 (0.32%) shares held by GoI in CPSE ETF Account as at the previous year ended 31 March 2019.

e) **Shares allotted as fully paid up by way of bonus shares:**

The Company had issued 1,64,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares in the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

20. Other equity

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Capital reserve	**72.86**	72.86
Other capital reserve - common control	**(5,159.26)**	(5,170.26)
Securities premium	**2,228.46**	2,228.46
Bonds/debentures redemption reserve	**7,700.97**	8,597.97
Fly ash utilisation reserve fund	**599.72**	638.11
Corporate social responsibility (CSR) reserve	**2.35**	2.39
General reserve	**92,499.15**	85,999.15
Retained earnings	**11,009.35**	9,100.33
Items of other comprehensive income	**(9.00)**	(7.36)
Total	**1,08,944.60**	1,01,461.65

(a) Capital reserve

₹ Crore

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Opening balance	**72.86**	50.08
Add: On account of business combination	**-**	22.78
Closing balance	**72.86**	72.86

Opening capital reserve represents amount received by the parent company during 2001-02 as consideration under settlement for withdrawal from a erstwhile JV project. Additions during the previous year is on account of acquisition of M/s NPGCL (Subsidiary). This amount will be utilised as per the provisions of the Companies Act,2013.

(b) Other capital reserve - common control

₹ Crore

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Opening balance	**(5,170.26)**	(5,354.71)
Add: Adjustments during the year	**11.00**	184.45
Closing balance	**(5,159.26)**	(5,170.26)

Consequent to the acquisition of THDC India Ltd. and NEEPCO, the difference between the Company's share in their share capitals of ₹ 6,145.29 crore and the consideration paid of ₹ 11,500.00 crore has been recognized as other capital reserve - common control as at 1 April 2018. Also refer Note 58.

(c) Securities premium

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance and closing balance	**2,228.46**	2,228.46

Securities premium is used to record the premium on issue of shares/securities. This amount is utilised in accordance with the provisions of the Companies Act, 2013. There is no movement in the balance of securities premium during the year.

(d) Bonds/Debentures redemption reserve

₹ Crore

Particulars	For the year ended 31 March 2019	For the year ended 31 March 2018
Opening balance	**8,597.97**	7,875.23
Add: Transferred during the year:	**-**	1,827.24
Less: Utilised during the year	**897.00**	1,104.50
Closing balance	**7,700.97**	8,597.97

Ministry of Corporate Affairs has notified Companies (Share Capital and Debentures) Amendment Rules, 2019 on 16 August 2019. As per the amendment, Debenture Redemption Reserve (DRR) is not required to be created in case of companies whose debt securities are listed. Accordingly, the Group has not created any Bonds/Debenture Redemption Reserve during the year. Further, the outstanding balance of Bonds / Debenture Redemption Reserve created up to 31 March 2019 shall be written back as and when the respective bonds / debentures are redeemed.

(e) Fly ash utilisation reserve fund

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	**638.11**	631.21
Add: Transferred during the year:		
Revenue from operations	**176.17**	173.57
Other income	**35.66**	40.65
Less: Utilised during the year:		
Capital expenditure	**4.81**	1.42
Employee benefits expense	**-**	18.49
Other expenses	**211.96**	178.65
Tax Expense	**33.45**	8.76
Closing balance	**599.72**	638.11

Pursuant to Gazette Notification dated 3 November 2009, issued by the Ministry of Environment and Forest (MOEF), Government of India (GOI), the amount collected from sale of fly ash and fly ash based products should be kept in a separate account head and shall be utilized only for the development of infrastructure or facility, promotion & facilitation activities for use of fly ash until 100 percent fly ash utilization level is achieved.

During the year, proceeds of ₹ **176.17 crore** (31 March 2019: ₹ 173.57 crore) from sale of ash/ash products, ₹ **35.66 crore** (31 March 2019: ₹ 40.65 crore) towards income on investment have been transferred to fly ash utilisation reserve fund. An amount of ₹ **250.22 crore** (31 March 2019: ₹ 207.32 crore) has been utilized from the fly ash utilisation reserve fund on expenses incurred for activities as specified in the aforesaid notification of MOEF.

The fund balance of ₹ **599.72 crore** (31 March 2019: ₹ 638.11 crore) has been kept in 'Bank balances other than cash & cash equivalents' (Note 14). Refer Note 18 & 65 for ash transportation cost

(f) Corporate social responsibility (CSR) reserve

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	2.39	0.24
Add : Transfer from retained earnings	2.45	2.25
Less: Transfer to retained earnings	2.49	0.10
Closing balance	2.35	2.39

In terms of Section 135 of the Companies Act, 2013 read with guidelines on corporate social responsibility issued by Department of Public Enterprises (DPE), GOI, the companies in the Group wherever applicable are required to spend, in every financial year, at least two per cent of the average net profits of the respective companies made during the three immediately preceding financial years in accordance with their CSR Policy. The amount equivalent to unspent CSR expenditure transferred in the previous year to CSR reserve from retained earnings, has been transferred back to retained earnings on actual expenditure. Further, amount equivalent to unspent CSR expenditure has been transferred from retained earnings to CSR reserve.

(g) General reserve

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	85,999.15	83,108.75
Add : Transfer from retained earnings	6,500.00	4,539.50
Less : Utilised for issuance of bonus shares	-	1,649.10
Closing balance	92,499.15	85,999.15

General reserve is used from time to time to transfer profits from retained earnings for appropriation purposes. The same will be utilised as per the provisions of the Companies Act,2013. The Company had issued 1,64,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares during the previous year ended 31 March 2019 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

(h) Retained earnings

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	9,100.33	7,321.83
Add: Profit for the year as per statement of profit and loss	11,600.23	13,736.68
Impact of change in ownership interest in subsidiary company	-	(77.76)
Impact of adjustments in share of net profits of joint ventures accounted for using equity method pertaining to previous years	(53.94)	-
Impact of changes in NCI interest and other adjustments	3.82	16.45
Transfer from bonds/debentures redemption reserve	897.00	1,104.50
Transfer from CSR reserve	2.49	0.10
Less: Transfer to bonds/debentures redemption reserve	-	1,827.24
Transfer to CSR reserve	2.45	2.25
Transfer to general reserve	6,500.00	4,539.50
Final dividend paid	2,606.50	2,332.56
Tax on final dividend paid	533.93	475.34
Interim dividend paid	494.73	3,019.88
Tax on interim dividend paid	101.18	617.62
	11,311.14	9,287.41
Items of other comprehensive income recognised directly in retained earnings:		
- Net actuarial gains/(losses) on defined benefit plans (net of tax)	(301.29)	(186.01)
- Share of other comprehensive income/(expense) of joint ventures accounted for using the equity method (net of tax)	(0.50)	(1.07)
Closing balance	11,009.35	9,100.33

Retained Earnings are the profits of the Company earned till date net of appropriations. The same will be utilised for the purposes as per the provisions of the Companies Act,2013.

(I) Items of other comprehensive income

i) Reserve for equity instruments through OCI

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	(8.94)	7.80
Add: Fair value gain/(losses) on equity instruments for the year	(41.64)	(16.74)
Closing balance (i)	**(50.58)**	(8.94)

The Group has elected to recognise changes in the fair value of certain investments in equity instruments in other comprehensive income. These changes are accumulated in reserve for equity instruments through OCI within equity. The group transfers amounts from this reserve to retained earnings when the relevant equity instruments are derecognised.

ii) Foreign currency translation reserve

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	1.58	(10.09)
Add: Currency translation of foreign operations for the year	40.00	11.67
Closing balance (ii)	**41.58**	1.58
Total (i+ii)	**(9.00)**	(7.36)

Exchange differences arising on translation of the joint ventures are recognised in other comprehensive income as described in accounting policy and accumulated in a separate reserve within equity. The cumulative amount will be reclassified to profit or loss when the net investment is disposed-off.

20A. Non-controlling interest

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance	2,908.20	3,026.83
Add: Share of profit for the year	301.75	297.81
Share of OCI	(4.29)	(1.03)
Additional non-controlling interest arising on acquisition / disposal of interest & other adjustments	150.28	(284.93)
Less: Dividend paid to NCI	32.14	108.23
Dividend distribution tax on the above	6.61	22.25
	3,317.19	2,908.20

21. Non current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Bonds/debentures		
Secured		
7.37% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3A)[X]	**188.98**	188.96
7.62% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2035 (Fifty Sixth Issue - Public Issue - Series 3B)[X]	**171.74**	171.72
8.61% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2034 (Fifty First Issue C - Private Placement) [III]	**322.11**	322.11
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3A)[VII]	**319.93**	319.80
8.91% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2033 (Fiftieth Issue - Public Issue - Series 3B)[VII]	**410.39**	410.22
7.37% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 14 December 2031 (Sixty Sixth Issue - Private Placement)[II]	**4,009.35**	4,010.36
7.49% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 7 November 2031 (Sixty Fourth Issue - Private Placement)[XI]	**720.70**	720.46
7.28% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2A)[X]	**133.48**	133.46
7.53% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2030 (Fifty Sixth Issue - Public Issue - Series 2B)[X]	**49.91**	49.90
7.32% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 17 July 2029 (Sixty Ninth Issue - Private Placement)[XI]	**4,522.50**	-
8.63% Tax free secured non-cumulative non-convertible redeemable bonds of ₹ 10,00,000/- each redeemable at par in full on 4 March 2029 (Fifty First Issue B - Private Placement) [III]	**105.70**	105.70
8.30% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 January 2029 (Sixty Seventh Issue - Private Placement) VI	**4,069.62**	4,068.88
8.48% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2A)[VII]	**256.14**	256.04
8.73% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2028 (Fiftieth Issue - Public Issue - Series 2B)[VII]	**93.73**	93.69
7.47% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 16 September 2026 (Sixty Third Issue - Private Placement)[XI]	**696.89**	696.67
7.58% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 23 August 2026 (Sixty Second Issue - Private Placement)[XI]	**836.60**	836.51
8.05% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 5 May 2026 (Sixtieth Issue - Private Placement)[XI]	**1,072.62**	1,072.80

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
8.19% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 15 December 2025 (Fifty Seventh Issue - Private Placement)[XI]	**511.80**	511.81
7.11% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1A)[X]	**112.02**	111.99
7.36% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 1,000/- each redeemable at par in full on 5 October 2025 (Fifty Sixth Issue - Public Issue - Series 1B)[X]	**68.21**	68.19
7.15% Tax free secured non-cumulative non-convertible redeemable bonds - 2015 of ₹ 10,00,000/- each redeemable at par in full on 21 August 2025 (Fifty Fifth Issue - Private Placement)[VIII]	**313.13**	313.11
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 22 September 2024 (Fifty Third Issue - Private Placement)[VIII]	**1,047.85**	1,047.48
9.34% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 March 2024 (Fifty Second Issue - Private Placement)[III]	**751.54**	751.34
8.19% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 10,00,000/- each redeemable at par in full on 4 March 2024 (Fifty First Issue A - Private Placement)[III]	**75.47**	75.47
8.41% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1A)[VII]	**500.03**	499.83
8.66% Tax free secured non-cumulative non-convertible redeemable bonds - 2013 of ₹ 1,000/- each redeemable at par in full on 16 December 2023 (Fiftieth Issue - Public Issue - Series 1B)[VII]	**213.92**	213.84
9.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 04 May 2023 and ending on 04 May 2027 (Forty Fourth Issue - Private Placement)[VII]	**542.08**	542.07
8.48% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 1 May 2023 (Seventeenth Issue - Private Placement)[I]	**50.01**	50.02
8.80% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4 April 2023 (Forty Ninth Issue - Private Placement)[VII]	**217.46**	217.46
8.49% Secured non-cumulative non-convertible redeemable taxable fully paid-up bonus debentures of ₹ 12.50 each redeemable at par in three annual installments of ₹ 2.50, ₹5.00 and ₹5.00 at the end of 8th year, 9th year and 10th year on 25 March 2023, 25 March 2024 and 25 March 2025 respectively (Fifty Fourth Issue -Bonus Debentures)[IX]	**10,323.61**	10,323.61
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 7 March 2023 (Forty Eighth Issue - Private Placement)[VII]	**301.79**	301.79
9.00% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each with five equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 11th year and in annual installments thereafter upto the end of 15th year respectively commencing from 25 January 2023 and ending on 25 January 2027 (Forty Second Issue - Private Placement)[III]	**508.36**	508.14
8.84% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 4 October 2022 (Forty Seventh Issue - Private Placement)[VII]	**406.96**	406.91
7.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 10,00,000/- each redeemable at par in full on 3 May 2022 (Sixty Eighth Issue - Private Placement)[XI]	**3,277.51**	-

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
6.72% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 November 2021 (Sixty Fifth Issue - Private Placement)[XI]	**716.36**	716.09
8.10% Secured non-cumulative non-convertible redeemable taxable bonds of ₹30,00,000/- each redeemable at par in three equal separately transferable redeemable principal parts (STRPP) at the end of 5th year, 10th year & 15th year on 27 May 2021, 27 May 2026 and 27 May 2031 respectively (Sixty first issue - Private Placement)[X]	**1,146.01**	1,145.73
8.33% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 24 February 2021 (Fifty Ninth Issue - Private Placement)[XI]	**660.46**	660.12
8.93% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 19 January 2021 (Thirty Seventh Issue - Private placement)[III]	**317.20**	317.17
8.18% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 December 2020 (Fifty Eight Issue - Private Placement)[XI]	**306.12**	306.02
8.73% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 31 March 2020 (Thirty Third Issue-Private Placement)[III]	**-**	209.97
8.78% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 9 March 2020 (Thirty First Issue-Private Placement)[III]	**-**	531.27
11.25% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in five equal annual installments commencing from 6 November 2019 and ending on 6 November 2023 (Twenty Seventh Issue - Private Placement)[III]	**294.50**	368.12
7.89% Secured non-cumulative non-convertible redeemable taxable bonds of ₹10,00,000/- each redeemable at par in full on 6 May 2019 (Thirtieth Issue - Private Placement)[III]	**-**	701.82
9.3473% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 20 July 2018 and ending on 20 July 2032 (Forty Sixth Issue - Private Placement)[VII]	**69.42**	74.75
9.4376% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 16 May 2018 and ending on 16 May 2032 (Forty Fifth Issue - Private Placement)[VII]	**69.46**	74.80
9.2573% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 2 March 2018 and ending on 2 March 2032 (Forty Third Issue - Private Placement)I[II]	**64.04**	69.37
9.6713% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 23 December 2017 and ending on 23 December 2031 (Forty First Issue - Private Placement)[III]	**64.22**	69.56
9.558% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 29 July 2017 and ending on 29 July 2031 (Fortieth Issue - Private Placement)[III]	**64.17**	69.51
9.3896% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 9 June 2017 and ending on 9 June 2031 (Thirty Ninth Issue - Private Placement)[III]	**89.73**	97.20

CONSOLIDATED FINANCIAL STATEMENTS

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
9.17% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 22 March 2017 and ending on 22 March 2031 (Thirty Eighth Issue - Private Placement)[III]	58.66	63.99
8.8086% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 December 2016 and ending on 15 December 2030 (Thirty Sixth Issue - Private Placement)[III]	58.52	63.84
8.785% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 15 September 2016 and ending on 15 September 2030 (Thirty Fifth Issue - Private Placement)[III]	93.61	102.12
8.71% Secured non-cumulative non-convertible redeemable taxable bonds of ₹15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 10 June 2016 and ending on 10 June 2030 (Thirty Fourth Issue - Private Placement)[III]	116.96	127.59
8.8493% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 15,00,000/- each with fifteen equal separately transferable redeemable principal parts (STRPP) redeemable at par at the end of 6th year and in annual installments thereafter upto the end of 20th year respectively commencing from 25 March 2016 and ending on 25 March 2030 (Thirty Second Issue - Private Placement)[III]	74.50	81.95
8.6077% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 9 September 2011 and ending on 9 March 2021 (Twenty Fourth Issue - Private Placement)[IV]	51.06	102.12
8.3796% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 5 August 2011 and ending on 5 February 2021 (Twenty Third Issue - Private Placement)[IV]	51.03	102.07
8.1771% Secured non-cumulative non-convertible redeemable taxable bonds of ₹20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 July 2011 and ending on 2 January 2021 (Twenty Second Issue - Private Placement)[IV]	51.01	102.02
7.7125% Secured non-cumulative non-convertible redeemable taxable bonds of ₹ 20,00,000/- each with twenty equal separately transferable redeemable principal parts (STRPP) redeemable at par semi-annually commencing from 2 August 2010 and ending on 2 February 2020 (Twenty First Issue - Private Placement)[V]	-	101.90
Bonds issued by NEEPCO, a subsidiary of the Company		
8.69% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in two installments on 26 September 2026 and 26 September 2027 with call option on 26 September 2024, 26 March 2025, 26 September 2025, 26 March 2026, 26 September 2026 and 26 March 2027 (Twenty First Issue - Private Placement)[XII(i)]	149.94	-
9.50% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in four installments on 29 May 2024, 29 November 2024, 29 May 2025 & 29 November 2025 with call option on 29 November 2023, 29 May 2024, 29 November 2024, 29 May 2025 (Twentieth Issue - Private Placement)[XII(i)]	309.41	309.32
8.75% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in four installments on 6 September 2026, 6 March 2027, 6 September 2027 and 6 March 2028 with call option on 6 March 2023, 10 August 2023, 10 February 2024, 10 August 2024, 10 February 2025, 10 August 2025, 10 February 2026, 10 August 2026, 10 February 2027, 10 August 2027, 10 February 2028 (Nineteenth Issue - Private Placement)[XII(ii)]	303.39	303.30

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
7.68% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in two installments on 15 May 2025 and 15 November 2025 with call option on 15 November 2022, 15 May 2023, 15 November 2023, 15 May 2024, 15 November 2024, 15 May 2025 (Eighteenth Issue - Private Placement)[XII(ii)]	**514.19**	514.09
7.80% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par on 27 May 2020 (Seventeenth Issue - Private Placement)[XII(i)]	**308.01**	307.86
8.68% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in five installments on 30 september 2026, 30 September 2027, 30 September 2028, 30 September 2029 and 30 September 2030 (Sixteenth Issue - Private Placement)[XII(iii)]	**922.28**	922.32
9.15% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in five installments on 25 March 2021, 25 March 2022, 25 March 2023, 25 March 2024 and 25 March 2025 (Fifteenth Issue - Private Placement)[XII(iv)]	**601.05**	601.05
9.60% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in five installments on 1 October 2020, 1 October 2021, 1 October 2022, 1 October 2023 and 1 October 2024 (Fourteenth Issue - Private Placement)[XII(i)]	**2,500.00**	2,619.68
9.00% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in five installments on 15 March 2019, 15 March 2020, 15 March 2021, 15 March 2022 and 15 March 2023 (Thirteenth Issue - Private Placement)[XII(v)]	**43.68**	58.24
9.25% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par in five installments on 27 June 2018, 27 June 2019, 27 June 2020, 27 June 2021 and 27 June 2022 (Twelth Issue - Private Placement)[XII(vi)]	**74.51**	99.33
10.20% Secured redeemable non-convertible taxable bonds of ₹10,00,000 each redeemable at par on 15 December 2021 with a put & call option on 15 December 2018 (Eleventh Issue - Private Placement)[XII(vii)]	**40.86**	40.85
Bonds issued by THDC India Ltd., a subsidiary of the Company		
8.75% Secured redeemable non-convertible bonds of ₹10,00,000 each redeemable on 5 September 2029 (Series II)[XIII(i)]	**1,574.59**	-
7.59% Secured redeemable non-convertible bonds of ₹10,00,000 each redeemable on 3 October 2025 (Series I)[XIII(ii)]	**622.46**	622.46
	49,583.55	42,057.94
Foreign currency notes		
Unsecured		
4.500 % Fixed rate notes due for repayment on 19 March 2028	**3,026.26**	2,771.92
2.750 % Fixed rate notes due for repayment on 1 February 2027	**4,220.99**	3,937.18
4.250 % Fixed rate notes due for repayment on 26 February 2026	**3,800.85**	3,482.35
4.375 % Fixed rate notes due for repayment on 26 November 2024	**3,860.77**	3,541.49
3.750 % Fixed rate notes due for repayment on 3 April 2024	**3,415.75**	-
4.750 % Fixed rate notes due for repayment on 3 October 2022	**3,803.00**	3,570.43
7.250 % Fixed global INR denominated bonds due for repayment on 3 May 2022	**2,128.81**	2,127.39
7.375 % Fixed green global INR denominated bonds due for repayment on 10 August 2021	**2,090.59**	2,087.83
5.625 % Fixed rate notes due for repayment on 14 July 2021	**3,848.76**	3,530.47
	30,195.78	25,049.06

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Term loans		
From Banks		
Secured		
Rupee term loans[XIV]	**6,408.78**	4,356.07
Foreign currency loans[XV]	**290.21**	337.50
Unsecured		
Foreign currency loans	**9,923.06**	10,245.60
Rupee term loans	**62,632.60**	47,237.27
From Others		
Secured		
Rupee term loans[XIV]	**14,432.87**	15,140.09
Unsecured		
Foreign currency loans (guaranteed by GOI)	**3,436.14**	3,110.09
Other foreign currency loans	**2,890.91**	2,966.25
Rupee term loans	**5,487.34**	6,402.94
Rupee term loans from Government of India	**291.23**	291.20
Lease obligations		
Secured	**21.97**	1.40
Unsecured	**833.64**	185.01
	1,86,428.08	1,57,380.42
Less: Current maturities of		
Bonds - secured	**2,500.50**	1,820.50
Foreign currency loans from banks - secured	**77.32**	70.94
Rupee term loans from banks - secured	**344.60**	309.60
Foreign currency loans from banks - unsecured	**1,252.86**	2,568.74
Rupee term loans from banks - unsecured	**1,966.91**	1,726.61
Rupee term loans from others - secured	**406.07**	400.94
Foreign currency loans from other - unsecured (guaranteed by GOI)	**307.46**	259.24
Other foreign currency loans from others - unsecured	**389.31**	534.48
Rupee term loans from others - unsecured	**690.19**	898.52
Lease obligations - secured	**8.75**	0.75
Lease obligations - unsecured	**109.45**	35.35
Interest accrued but not due on borrowings	**2,354.64**	1,691.04
Total	**1,76,020.02**	1,47,063.71

a) **Details of terms of repayment and rate of interest**

i) Secured rupee term loan from banks and financial institutions carry floating rate of interest linked to SBI base rate or Base rate of respective lender or three year AAA bond yield rate plus agreed margin or three year AAA bond yield rate plus agreed margin with reset after three years or one year MCLR plus annual reset or prevalent rate notified by the lender for category 'A' public sector undertakings or fixed interest rate of 9.36% p.a. These loans are repayable in installments as per the terms of the respective loan agreements. The repayment period extends from a period of five to twenty years after 6 months from the date of COD or from the date specified in the loan agreements.

ii) Secured foreign currency loans from banks carry interest rate of 3 months LIBOR plus 2.75% p.a. as margin and is repayable in 39 equal quarterly installments w.e.f. 20.06.2014.

iii) Unsecured foreign currency loans (guaranteed by GOI) - Others include loans carrying fixed rate of interest ranging from 0.85% p.a. to 3.46% p.a. and are repayable in 13 to 22 semi annual installments as of 31 March 2020.

Unsecured foreign currency loans (guaranteed by GOI) - Others also include loans carrying interest rate linked to LIBOR plus variable spread and are repayable in 23 years on half yearly instalment from 15 November 2017 to 15 May 2040.

iv) Unsecured foreign currency loans – Banks include loans of ₹ **132.59 crore** (31 March 2019: ₹ 243.97 crore) which carry fixed rate of interest of 1.88% p.a. and loans of ₹ **9,790.47 crore** (31 March 2019: ₹ 10,001.63 crore) which carry floating rate of interest linked to 6M USD LIBOR/6M JPY LIBOR. These loans are repayable in 3 to 17 semi-annual/annual installments as of 31 March 2020, commencing after moratorium period if any, as per the terms of the respective loan agreements.

v) Unsecured foreign currency loans – Others include loans of ₹ **2,641.92 crore** (31 March 2019: ₹ 2,906.14 crore) which carry fixed rate of interest ranging from 1.88% p.a. to 4.13% p.a and loans of ₹ **248.99 crore** (31 March 2019: ₹ 60.11 crore) which carry floating rate of interest linked to 6M EURIBOR/6M JPY LIBOR. These loans are repayable in 03 to 18 semi annual installments as of 31 March 2020, commencing after moratorium period if any, as per the terms of the respective loan agreements.

vi) Unsecured rupee term loans carry interest rate ranging from 6.571% p.a. to 8.30% p.a. with monthly/half-yearly rests. These loans are repayable in quarterly/half-yearly/yearly installments as per the terms of the respective loan agreements. The repayment period extends from a period of 7 to 15 years after a moratorium period of 3 to 6 years.

Unsecured rupee term loans include ₹ **818.65 crore** (31 March 2019: ₹832.36 crore) from Government of Jharkhand to M/s Patratu Vidyut Utpadan Nigam Ltd., a Subsidiary of the parent company, which carry interest at the rate of 10% p.a. until the date of investment approval and afterwards equivalent to weighted average cost of borrowing subject to ceiling of 10% per annum. The said loan is proposed to be utilised as consideration for subsequent issue and allotment of shares in its % ownership as prescribed in the related JV agreement. This also includes deemed loan on account of cost of land transferred to the subsidiary company.

b) The lease obligations are repayable in installments as per the terms of the respective lease agreements generally over a period of more than 1 year and upto 99 years.

c) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

Details of securities

I Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of title deeds of the immovable properties pertaining to National Capital Power Station.

II Secured by Equitable mortgage of the immovable properties pertaining to Vindhyachal Super Thermal Power Station on first charge basis.

III Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Sipat Super Thermal Power Project by extension of charge already created.

IV Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage, by way of first charge, by deposit of the title deeds of the immovable properties pertaining to Sipat Super Thermal Power Project.

V Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai, (II) Hypothecation of all the present and future movable assets (excluding receivables) of Barh Super Thermal Power Project on first pari-passu charge basis, ranking pari passu with charge already created in favour of Trustee for other Series of Bonds and (III) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to Ramagundam Super Thermal Power Station by extension of charge already created.

VI Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Vindhyachal Super Thermal Power Station.

VII Secured by (I) English mortgage, on first pari-passu charge basis, of the office premises of the Company at Mumbai and (II) Equitable mortgage of the immovable properties, on first pari-passu charge basis, pertaining to National Capital Power Station by extension of charge already created.

VIII Secured by English mortgage of the immovable properties pertaining to Solapur Super Thermal Power Project on first charge basis.

IX Secured by Equitable mortgage of the immovable properties pertaining to Barh Super Thermal Power Project on first charge basis.

X Secured by English mortgage, on pari-passu charge basis, of the immovable properties pertaining to Solapur Super Thermal Power Project.

XI Secured by Equitable mortgage, on pari-passu charge basis, of the immovable properties pertaining to Barh Super Thermal Power Project.

XII (i) Secured by way of mortgage of assets attached to the earth as well as other movable assets of the Kameng Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(ii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Pare Hydro Electric Project, Arunchal Pradesh and the landed property in the District of Mehsana, Gujarat.

(iii) Secured by way of mortgage of the assets attached to the earth as well as other movable assets of the Tuirial Hydro Electric Project in Mizoram, Kopili Hydro Electric Project in Assam and the landed property in the District of Mehsana, Gujarat.

(iv) Secured by way of mortgage of the assets of the Agartala Gas Turbine Project (original open-cycle plant) in Tripura, assets except the gas turbines & steam turbines in the Assam Gas Based Project, Assam, assets except plant & machinery in the generating station in the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(v) Secured by way of mortgage of the steam turbines of the Assam Gas Based Power Plant, Assam and the landed property in the District of Mehsana, Gujarat.

(vi) Secured by way of mortgage of all the plant and machinery in the generating station of the Ranganadi Hydro Electric Project, Arunachal Pradesh and the landed property in the District of Mehsana, Gujarat.

(vii) Secured by way of mortgage of the gas turbines of the Assam Gas Based Power Project, Assam and the landed property in the District of Mehsana, Gujarat.

XIII (i) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I including book debts.

(ii) Secured by first charge on paripassu basis on movable assets of Tehri HPP Stage-I.

XIV (i) Secured by a first priority charge on all assets, present & future, movable & immovable and land of 975.05 acres and second charge on all inventories and receivables, in respect of loan from consortium led by SBI for Kanti Bijlee Utpadan Nigam Ltd. expansion project. The security will rank pari-pasu with all term lenders of the project. The charge has been created in favor of Security trustee i.e. SBI Cap Trustee Co. Ltd. Legal mortgage of land in favour of security trustee has been executed for 877.18 acres out of 975.05 acres of land.

(ii) Secured by equitable mortgage/ hypothecation of all present and future fixed and movable assets of Nabinagar TPP (4*250) MW of Bhartiya Rail Bijlee Company Ltd., a subsidiary company, as first charge, ranking pari passu. The term loan is secured on pari passu basis on the project assets (Units - I to IV).

(iii) Secured by all existing and future moveable assets of Patratu Vidyut Utpadan Nigam Ltd, a subsidiary company, including equipment, machinery and other current assets, book debts, receivables and all other moveables.

(iv) Secured by a first pari passu charge on land and building, plant and machinery and current assets of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

Secured by a first pari passu charge on all assets, present and future, movable and immovable through a deed of hypothecation and simple mortgage of 2500 acres of land of Nabinagar Power Generating Company Limited, a subsidiary of the Company.

(v) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary company.

(vi) Secured by first charge on pari passu basis on assets of Tehri stage-I i.e. dam, power house civil construction, power house electrical & mechanical equipments not covered under other borrowings and project township of Tehri dam and HPP together with all rights and interest appertaining there to, of THDC India Ltd., a subsidiary company.

(vii) Secured by first charge on pari passu basis on assets of Koteshwar HEP, of THDC India Ltd., a subsidiary company.

(viii) Secured against first charge on pari passu basis on assets of Tehri PSP of THDC India Ltd., a subsidiary company.

XV Secured by hypothecation of all movable & immovable assets (including plant, machinery) created / to be created in respect of Tripura Gas Based Power Plant, Agartala and Agartala Gas Turbine Projects –Extension, Agartala of NEEPCO, a sucbsidiary of the Company.

XVI The secured lease obligations are secured against assets taken on lease.

XVII Security cover mentioned at Sl. No. I to XV is above 100% of the debt securities outstanding.

22. Non-current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	10.35	6.41
- creditors other than micro and small enterprises	57.75	41.80
Total	**68.10**	48.21

a) Disclosures as required under Companies Act, 2013 / Micro, Small and Medium Enterprises Development Act, 2006 (MSMED) are provided in Note 70.

b) Amounts payable to related parties are disclosed in Note 53.

23. Non-current liabilities- Other financial liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Payable for capital expenditure		
- micro and small enterprises	14.03	11.06
- other than micro and small enterprises	1,362.04	1,890.43
Deposits from contractors and others	27.02	19.58
Others	1.36	56.73
Total	**1,404.45**	1,977.80

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.

b) Others include ₹ **Nil** (31 March 2019: ₹55.21 crore) being the amount payable to the Department of Water Resource, Government of Odisha pursuant to the Resolution No. 11011 dated 18 May 2015.

c) Amounts payable to related parties are disclosed in Note 53.

24. Non-current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Provision for employee benefits	1,162.51	1,133.61
Others	6.66	8.12
Total	**1,169.17**	1,141.73

Disclosures as per Ind AS 19 'Employee benefits' are provided in Note 50.

25. Non-current liabilities - Deferred tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Deferred tax liability		
Difference in book depreciation and tax depreciation	**20,927.25**	15,579.68
Less: Deferred tax assets		
Provisions	**1,307.40**	1,642.93
Statutory dues	**325.21**	277.25
Leave encashment	**450.19**	418.94
Unabsorbed depreciation	**1,454.99**	941.12
MAT credit entitlement	**9,677.15**	8,266.75
Others	**95.20**	104.58
Total	**7,617.11**	3,928.11

a) Deferred tax assets and deferred tax liabilities have been offset as they relate to the same governing laws.

b) The Company has been recognising MAT credit available to the Company in future as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability.

c) Disclosures as per Ind AS 12 'Income Taxes' are provided in Note 49.

d) Others include deferred tax assets on account of payments related to voluntary retirement schemes and other deferred tax adjustments.

Movement in deferred tax balances
As at 31 March 2020

₹ Crore

Particulars	Net balance as at 1 April 2019	Recognised in statement of profit and loss	Recognised in OCI	Other	Net balance as at 31 March 2020
Deferred tax liability					
Difference in book depreciation and tax depreciation	15,579.68	5,484.63	(1.70)	(135.36)	20,927.25
Less: Deferred tax assets					
Provisions	1,642.93	(334.82)	-	(0.71)	1,307.40
Statutory dues	277.25	47.96	-	-	325.21
Leave encashment	418.94	31.25	-	-	450.19
Unabsorbed depreciation	941.12	513.87	-	-	1,454.99
MAT credit entitlement	8,266.75	1,410.40	-	-	9,677.15
Others	104.58	(5.02)	(4.36)	-	95.20
Net tax (assets)/liabilities	**3,928.11**	**3,820.99**	**2.66**	**(134.65)**	**7,617.11**

As at 31 March 2019 ₹ Crore

Particulars	Net balance as at 1 April 2018	Recognised in statement of profit and loss	Recognised in OCI	Other	Net balance as at 31 March 2019
Deferred tax liability					
Difference in book depreciation and tax depreciation	12,427.36	3,257.49	1.14	(106.31)	15,579.68
Less: Deferred tax assets	1,323.15	320.92	-	(1.14)	1,642.93
Provisions	542.84	(265.59)	-	-	277.25
Statutory dues	369.20	49.74	-	-	418.94
Leave encashment	-	941.12	-	-	941.12
MAT credit entitlement	9.37	8,257.38	-	-	8,266.75
Others	110.30	21.30	(1.04)	(25.98)	104.58
Net tax (assets)/liabilities	10,072.50	(6,067.38)	2.18	(79.19)	3,928.11

26. Current financial liabilities -Borrowings

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Loans repayable on demand		
From banks		
Secured		
Cash credit	**1,573.38**	1,221.85
Unsecured		
Cash credit	**1,367.35**	73.90
Other Loans		
Secured		
Term loans	**796.35**	699.91
Unsecured		
Commercial paper	**12,819.15**	15,373.19
Total	**16,556.23**	17,368.85

a) Secured cash credit includes:

(i) Cash credit secured by first (hypothecation) charge on stock / stores / spares and other current assets (excluding receivables) paripassu with other consortium banks and trustees for bond holders and first (hypothecation) charge on receivables ranking pari passu with consortium banks.

(ii) Cash credit secured by hypothecation of trade receivables and inventory of Kanti Bijlee Utpadan Nigam Ltd., a subsidiary of the Company, with floating rate of interest linked to the bank's base rate. The loan is secured by second charges on all immovable properties, movable properties, both present & future, pertaining to project, including land measuring 975.05 acres.

(iii) Cash credit secured by a first pari passu charge on entire current assets and fixed assets of the of Nabinagar Power Generating Company Limited, a subsidiary of the Company. Also, there is a continuing first charge on current assets of the subsidiary company.

(iv) Cash credit secured against hypothecation of the stocks of stores and spares and book debt of the M/s NEEPCO, a subsidiary of the Company.

(v) Cash credit secured against secured by way of second charge on block of assets of Tehri Stage-1 and Koteshwar HEP including machinery spares, tools & accsesories, fuel stock, spares & material at project site of THDC India Ltd., a subsidiary of the Company.

b) Secured term loans include:

(i) Secured by pari passu charge over assets of the Kameng Hydro Electric Power Project (600 MW) situated at Arunachal Pradesh of NEEPCO, a subsidiary of the Company.

(ii) Secured against trade receivables of Koteshwar HEP and second charge on block of assets of Teheri Stage-I and Koteshwar HEP of THDC India Ltd., a subsidiary of the Company.

c) Borrowings under Commercial paper are net of unamortised discount as at 31 March 2020 amounting to ₹ **130.85 crore** (31 March 2019 : ₹ 126.81 crore).

d) There has been no default in repayment of any of the loans or interest thereon as at the end of the year.

27. Current financial liabilities - Trade payables

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Trade payable for goods and services		
Total outstanding dues of		
- micro and small enterprises	**512.24**	365.02
- creditors other than micro and small enterprises	**9,596.34**	8,249.30
Total	**10,108.58**	8,614.32

a) Disclosures as required under Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.
b) Amounts payable to related parties are disclosed in Note 53.

28. Current liabilities - Other financial liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Current maturities of non-current borrowings		
Bonds - Secured	**2,500.50**	1,820.50
From Banks		
Secured		
Foreign currency loans	**77.32**	70.94
Rupee term loans	**344.60**	309.60
Unsecured		
Foreign currency loans	**1,252.86**	2,568.74
Rupee term loans	**1,966.91**	1,726.61
From Others		
Secured		
Rupee term loans	**406.07**	400.94
Unsecured		
Foreign currency loans (guaranteed by GOI)	**307.46**	259.24
Other foreign currency loans	**389.31**	534.48
Rupee term loans	**690.19**	898.52
	7,935.22	8,589.57

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Current maturities of lease obligations - Secured	**8.75**	0.75
Current maturities of lease obligations - Unsecured	**109.45**	35.35
Interest accrued but not due on borrowings	**2,354.64**	1,691.04
Unpaid dividends	**19.35**	17.69
Unpaid matured deposits and interest accrued thereon	**0.19**	0.19
Unpaid matured bonds and interest accrued thereon	**5.55**	5.01
Unpaid bond refund money-Tax free bonds	**0.24**	0.26
Book overdraft	**3.61**	12.09
Payable to customers	**62.01**	162.27
Payable for capital expenditure		
- micro and small enterprises	**237.06**	237.20
- other than micro and small enterprises	**15,109.49**	14,965.76
Hedging gain payable to beneficiaries	**-**	7.21
Other payables		
Deposits from contractors and others	**241.90**	257.47
Payable to employees	**994.31**	1,022.93
Retention on account of encashment of bank guarantee (solar)	**286.83**	286.74
Payable to Solar Payment Security account	**301.12**	302.56
Liability for acquisition of THDCIL and NEEPCO	**-**	11,500.00
Others	**977.24**	1,079.13
Total	**28,646.96**	40,173.22

a) Details in respect of rate of interest and terms of repayment of current maturities of secured and unsecured non-current borrowings indicated above are disclosed in Note 21.

b) Unpaid dividends, matured deposits, bonds and interest include the amounts which have either not been claimed by the investors/holders of the equity shares/bonds/fixed deposits or are on hold pending legal formalities etc. Out of the above, the amount required to be transferred to Investor Education and Protection Fund has been transferred.

c) 'Other payables - Others' mainly includes ₹ **410.27 crore** (31 March 2019: ₹ 472.27 crore) towards the implementation of Deen Dayal Upadhyay Gram Jyoti Yojana (DDUGJY) Scheme of the GOI being carried out by the Company. The funds for the implementation of these schemes are provided by the agencies nominated by the GOI in this regard. Further, 'Other payables - Others' also include ₹ **380.48 crore** (31 March 2019: ₹ 319.74 crore) payable to the Department of Water Resource, Government of Odisha and amount payable to hospitals etc.

d) The Company had obtained exemption from the Ministry of Corporate Affairs (MCA), GOI in respect of applicability of Section 58A from the erstwhile Companies Act, 1956 in respect of deposits held from the dependants of employees who die or suffer permanent total disability under the 'Employees Rehabilitation Scheme' (said amount is included in "Other payables - Others"). Consequent upon enactment of the Companies Act, 2013, the Company has written to the MCA for clarification on continuation of above exemption granted earlier, which is still awaited. Based on an expert opinion, the amount accepted under the Scheme is not considered as a deposit under the Companies Act, 2013.

e) Retention on account of encashment of bank guarantee (solar) represents amounts retained by M/s NVVN Ltd., a wholly owned subsidiary, pursuant to directions received from the Ministry of New and Renewable Energy vide letter ref. no. 29/5/2010-11/JNNSM(ST) dated 29 June 2012 and clarifications thereafter.

f) Disclosures as required under the Companies Act, 2013 / MSMED Act, 2006 are provided in Note 70.

g) Amounts payable to related parties are disclosed in Note 53.

h) Solar Payment Security Account was created by MNRE, Government of India vide OM No. 29/5/2010-11/JNNSM(ST) dated 30 June 2011 as Gross Budgetary Support (GBS) by Ministry of New and Renewable Energy (MNRE), Government of India for ensuring timely payment to Solar Power Developers (SPDs) in the event of default by State Utilities/Discoms.

This fund is to be recouped after receipt of payment from State Utilities/Discoms against these bills. This fund was incorporated in the books of accounts of NVVN with effect from 01 Jan 2019 for better monitoring and control of the fund. The funds not withdrawn are invested in Term deposits and balance amount is kept in Current account (refer Note 14).

i) In compliance with Appendix C of Ind AS 103 'Business Combination', the Consolidated Balance Sheet as at 31 March 2019 has been restated. Accordingly, total cash consideration for acquisition of THDCIL and NEEPCO of ₹ 11,500.00 crore which was paid on 27 March 2020, has been considered as current liability as at 31 March 2019. Refer Note 58.

29. Current liabilities - Other current liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Advances from customers and others	**781.00**	296.75
Other payables		
Statutory dues	**697.65**	560.59
Others	**258.06**	222.22
Total	**1,736.71**	1,079.56

a) Advance received for the DDUGJY (including interest thereon) of ₹ **460.98 crore** (31 March 2019: ₹ 58.28 crore) is included in 'Advance from customers and others'. Refer Note 28 (c). Tax deducted at source on the interest is included in 'Advance tax and tax deducted at source' - Note 10.

b) Others include an amount ₹ **187.49 crore** (31 March 2019: ₹ 181.64 crore) payable to Government of Jharkand on disposal of the assets held for sale. Refer Note 17 (f).

30. Current liabilities - Provisions

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Provision for		
Employee benefits	**1,653.26**	1,384.17
Obligations incidental to land acquisition	**3,754.29**	3,763.80
Tariff adjustment	**190.68**	98.77
Others	**1,689.68**	2,061.67
Total	**7,287.91**	7,308.41

a) Disclosures required by Ind AS 19 'Employee Benefits' are provided in Note 50.

b) Disclosures required by Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' are provided in Note 56.

c) Provision for others mainly comprise ₹**101.05 crore** (31 March 2019: ₹ 85.14 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to Block AA-ONN-2003/2 (Refer Note 59), ₹ **1,551.18 crore** (31 March 2019: ₹ 1,952.13 crore) towards provision for cases under litigation and ₹ **2.41 crore** (31 March 2019: ₹ 5.13 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

30A. Current liabilities - Current tax liabilities (net)

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Current tax liabilities (net)	**1.71**	108.19

31. Deferred revenue

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
On account of		
Advance against depreciation	**212.71**	212.71
Income from foreign currency fluctuation	**2,728.32**	1,607.30
Government grants	**1,670.61**	1,762.15
Deferred fair valuation gain	**2.19**	2.48
Total	**4,613.83**	3,584.64

a) Advance against depreciation (AAD) was an element of tariff provided under the Tariff Regulations for 2001-04 and 2004-09 to facilitate debt servicing by the generators since it was considered that depreciation recovered in the tariff considering a useful life of 25 years is not adequate for debt servicing. Though this amount is not repayable to the beneficiaries, keeping in view the matching principle, and in line with the opinion of the Expert Advisory Committee (EAC) of the Institute of Chartered Accountants of India (ICAI), this was treated as deferred revenue to the extent depreciation chargeable in the accounts is considered to be higher than the depreciation recoverable in tariff in future years. Since AAD is in the nature of deferred revenue and does not constitute a liability, it has been disclosed in this note separately from equity and liabilities.

b) Foreign exchange rate variation (FERV) on foreign currency loans and interest thereon is recoverable from/payable to the customers in line with the Tariff Regulations. Keeping in view the opinion of the EAC of ICAI, the Company is recognizing deferred foreign currency fluctuation asset by corresponding credit to deferred income from foreign currency fluctuation in respect of the FERV on foreign currency loans adjusted in the cost of property, plant and equipment, which is recoverable from the customers in future years as provided in accounting policy no. C.16 (Note 1). This amount will be recognized as revenue corresponding to the depreciation charge in future years. The amount does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities.

c) Government grants does not constitute a liability to be discharged in future periods and hence, it has been disclosed separately from equity and liabilities. These includes:

(i) Government grants represent unamortised portion of grant received. This includes ₹ **543.61 crore** (31 March 2019: ₹ 535.38 crore) received from Solar Energy Corporation of India under MNRE Scheme for setting up Solar PV power projects. This amount will be recognized as revenue corresponding to the depreciation charge in future years. Also Refer Note 47 with regard to adjustment of grant due to prior period error in respect of depreciation on solar/wind power projects.

(ii) Grant received from GOI through Government of Bihar for renovation & modernisation of Kanti Bijlee Utpadan Nigam Ltd. (a subsidiary of the Company) amounting to ₹ **190.75 crore** (31 March 2019: ₹ 235.69 crore).

(iii) Grant received from Govt. of Uttar Pradesh towards irrigation sector by THDC India Ltd. (a subsidiary of the Company) amounting to ₹ **633.47 crore** (31 March 2019: ₹ 697.21 crore).

(iv) Grant received from Ministry of Development of North Eastern Region by NEEPCO (a subsidiary of the Company) amounting to ₹ **265.76 crore** (31 March 2019: ₹281.60 crore). As per the Investment Approval sanctioned vide the Ministry of Power's letter no.7/7/2009-H-I dated 14 January 2011, an amount of ₹300.00 crores has been sanctioned by the Ministry of Development of North Eastern Region (MDONER) as a part of the approved funding pattern for the Tuirial Hydro Electric Project, Mizoram. The grant is being amortised during normative useful life of the project since its commissioning.

32. Revenue from operations

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Energy sales (including electricity duty)		**1,01,422.65**	91,817.02
Sale of energy through trading		**7,303.06**	7,371.31
Consultancy, project management and supervision fee		**196.24**	188.37
Lease rentals on assets on operating lease		**156.18**	233.63
Commission - energy trading business		**0.50**	4.67
		1,09,078.63	99,615.00
Sale of fly ash/ash products	**176.17**		173.57
Less: Transferred to fly ash utilisation reserve fund	**176.17**		173.57
		-	-
Other operating revenues			
Interest from beneficiaries		**129.91**	90.02
Energy internally consumed		**76.93**	65.20
Interest income on assets under finance lease		**59.90**	70.84
Recognised from deferred revenue - government grant		**118.67**	168.79
Provisions for tariff adjustments written back		**-**	276.69
		385.41	671.54
Total		**1,09,464.04**	1,00,286.54

a) (i) The CERC notified the Central Electricity Regulatory Commission (Terms and Conditions of Tariff) Regulations, 2019 vide Order dated 7 March 2019 (Regulations, 2019) for determination of tariff for the tariff period 2019-2024. Pending issue of provisional/final tariff orders with effect from 1 April 2019, capacity charges are billed to beneficiaries in accordance with the tariff approved and applicable as on 31 March 2019, as provided in Regulations, 2019. In case of projects declared commercial w.e.f. 1 April 2019 and projects where tariff applicable as on 31 March 2019 is pending from CERC, billing is done based on capacity charges as filed with CERC in the tariff petitions. Energy charges are billed as per the operational norms specified in the Regulations 2019. The amount provisionally billed is ₹ **98,806.47 crore** (31 March 2019: ₹ 93,074.69 crore).

(ii) Sales have been provisionally recognized at ₹**1,03,362.52 crore** (31 March 2019: ₹98,380.43 crore) on the said basis.

b) Sales include ₹ **1,768.88 crore** (31 March 2019: (-) ₹ 0.02 crore) on account of income tax recoverable from / (refundable to) the beneficiaries as per Regulations, 2004. The current year amount is on account of income tax liability determined under Vivad se Vishwas Scheme notified under Direct Tax Vivad se Vishwas Act 2020. Sales also include ₹ **92.79 crore** (31 March 2019: ₹ 101.03 crore) on account of deferred tax materialized which is recoverable from beneficiaries as per Regulations, 2019.

c) Sales include ₹ **60.93 crore** (31 March 2019: (-) ₹ 2,235.15 crore) pertaining to previous years recognized based on the orders issued by the CERC/Appellate Tribunal for Electricity (APTEL).

d) Energy sales include electricity duty amounting to ₹ **999.75 crore** (31 March 2019: ₹ 904.35 crore).

e) Energy sales are net of rebate to beneficiaries amounting to ₹ **472.79 crore** (31 March 2019: ₹ 874.91 crore).

f) Other operating revenue includes ₹ **76.93 crore** (31 March 2019: ₹ 65.20 crore) towards energy internally consumed, valued at variable cost of generation and the corresponding amount is included in power charges in Note 38.

g) CERC Regulations provides that where after the truing-up, the tariff recovered is less/more than the tariff approved by the Commission, the generating Company shall recover/pay from/to the beneficiaries the under/over recovered amount along-with simple interest. Accordingly, the interest recoverable from the beneficiaries amounting to ₹ **129.91 crore** (31 March 2019: ₹90.02 crore) has been accounted as 'Interest from beneficiaries'. Further, the amount payable to the beneficiaries has been accounted as 'Interest to beneficiaries' in Note 38.

h) The Power Purchase Agreements (PPA) signed in respect of two power stations (one thermal and one gas) were operative initially for a period of five years with the respective beneficiaries which may be extened, renewed or replaced as the parties mutually agree. The Company has continued to classify these arrangement with its customers as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiaries are considered as lease rentals on the assets which are on operating lease.

i) The Company had ascertained that the PPA entered into for Stage-I of a power station with the beneficiary falls under the definition of finance lease. Accordingly, the written down value of the specified assets was derecognized from PPE and accounted as Finance Lease Receivable (FLR) on tranisition to Ind AS. The Company has continued to classify this arrangement with its customer as lease based on the practical expedient provided in Appendix C of Ind AS 116. Accordingly, recovery of capacity charges towards depreciation (including AAD), interest on loan capital & return on equity (pre-tax) components from the beneficiary are continued to be adjusted against FLR. The interest component of the FLR and amount received on account of revision of tariff of previous periods in respect of the above three elements are continued to be recognised as 'Interest income on Assets under finance lease'.

j) 'Recognized from deferred revenue-government grant' includes impact of reduction in recognition of grant for the period upto 31 March 2019 amounting to ₹ 33.32 crore corresponding to reduction in depreciation. Refer Note 47.

k) Sale of energy through trading includes export sales amounting to ₹ **1,788.41 crore** (31 March 2019: ₹1,511.48 crore) to neighbouring countries of Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

33. Other income

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Interest from			
Financial assets at amortised cost			
Loan to employees		**68.47**	70.43
Deposits with banks		**54.09**	54.86
Deposits with banks out of fly ash utilisation reserve fund	**35.66**		40.65
Less : Transferred to fly ash utilisation reserve fund	**35.66**		40.65
		-	-
Deposits with banks - DDUGJY funds	**24.24**		27.04
Less : Transferred to DDUGJY advance from customers	**24.24**		27.04
		-	-
Deposits with banks - Solar payment security account	**2.23**		18.50
Less: Transferred to Solar payment security account	**2.23**		18.50
		-	-
Deposits with banks - Retention on account of BG encashment (Solar)	**0.09**		1.01
Less: Transferred to Retention on account of BG encashment (Solar)	**0.09**		1.01
		-	-
Advance to contractors		**51.60**	45.50
Income Tax refund		**65.61**	-
Others		**28.30**	27.52
Dividend from			
Non-current investment in equity instruments designated at fair value through OCI		**4.80**	4.80
Other non-operating income			
Late payment surcharge from beneficiaries		**1928.56**	1703.89
Hire charges for equipment		**1.91**	1.58
Sale of scrap		**66.50**	126.96
Gain on sale of current investments measured at fair value through profit or loss		**2.80**	8.84
Miscellaneous income		**211.06**	159.72
Profit on de-recognition of property, plant and equipment		**12.59**	2.98
Provisions written back			
Doubtful loans, advances and claims		**24.91**	81.40
Shortage in inventories		**21.44**	8.40
Obsolescence in stores		**6.73**	4.17
Arbitration cases		**374.18**	1.93
Others		**56.80**	17.25
		2,980.35	2,320.23
Less: Transferred to expenditure during construction period (net) - Note 39		**60.63**	66.78
Transferred to expenditure during development of coal mines (net) - Note 40		**1.24**	6.29
Transferred to payable to Govt. of Jharkhand-Note 29		**9.94**	0.65
Total		**2,908.54**	2,246.51

a) 'Interest from others' includes interest on advance to APIIC for drawal of water and deposits with LIC towards annuity to the land losers.

b) Miscellaneous income includes income from township recoveries and receipts towards insurance claims.

c) 'Provisions written back - Arbitration cases' include an amount of ₹ **356.31 crore** (31 March 2019: Nil) pertaining to dispute pertaining to movement of coal by the operator. Refer Note 56 (iii)(b).

d) 'Provisions written back - Others' include provision for shortage in construction stores and shortage in property, plant and equipment.

34. Fuel cost

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Coal	53,845.86	50,302.48
Gas	2,678.37	3,588.39
Naptha	0.57	28.28
Oil	660.82	476.63
Total	57,185.62	54,395.78

35. Employee benefits expense

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Salaries and wages	5,943.33	6,022.18
Contribution to provident and other funds	703.62	878.24
Staff welfare expenses	710.35	724.78
	7,357.30	7,625.20
Less: Allocated to fuel inventory	293.10	278.58
Transferred to expenditure during construction period (net) - Note 39	1,101.67	1,338.92
Transferred to expenditure during development of coal mines (net) - Note 40	66.17	97.10
Transferred to fly ash utilisation reserve fund	-	18.49
Reimbursements for employees on deputation	64.67	73.49
Adjusted with payable to Govt. of Jharkhand-Note 29	1.21	1.97
Total	5,830.48	5,816.65

a) Disclosures as per Ind AS 19 - 'Employee Benefits' in respect of provision made towards various employee benefits are provided in Note 50.

36. Finance costs

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Finance costs on financial liabilities measured at amortised cost		
Bonds	3,848.82	3,299.91
Foreign currency term loans	424.66	468.81
Rupee term loans	6,302.77	5,702.14
Foreign currency bonds/notes	1,426.43	1,314.71
Cash credit	178.93	109.78
Unwinding of discount on vendor liabilities	124.21	104.15
Commercial papers	865.54	553.91
	13,171.36	11,553.41

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Interest on non financial items	104.52	65.46
Exchange differences regarded as an adjustment to borrowing costs	846.24	189.42
Other borrowing costs		
Guarantee fee	29.81	34.21
Others	14.47	11.39
	44.28	45.60
Sub-Total	14,166.40	11,853.89
Less: Transferred to expenditure during construction period (net) - Note 39	5,821.81	5,979.48
Transferred to expenditure during development of coal mines (net) - Note 40	227.74	269.76
Total	8,116.85	5,604.65

a) 'Other borrowing costs - Others' include bond issue and service expenses, commitment charges, exposure premium and insurance premium & other expenses on foreign currency loans.

b) Refer Note 67 w.r.t. Interest expense relating to lease obligations.

37. Depreciation and amortisation expense

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
On property, plant and equipment - Note 2	11,375.82	9,507.72
On intangible assets - Note 4	53.10	27.88
	11,428.92	9,535.60
Less: Allocated to fuel inventory	582.51	467.01
Transferred to expenditure during construction period (net) - Note 39	236.48	143.06
Transferred to expenditure during development of coal mines (net) - Note 40	34.75	51.57
Adjustment with deferred revenue from deferred foreign currency fluctuation	219.02	204.93
Total	10,356.16	8,669.03

a) Refer Note 67 w.r.t. Depreciation expense of right of use assets.

38. Other expenses

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Power charges	537.04		932.29
Less: Recovered from contractors and employees	37.60		30.73
		499.44	901.56
Water charges		729.66	576.25
Cost of captive coal		1,349.68	786.40
Stores consumed		82.88	89.85
Rent	12.08		25.37
Less: Recoveries	0.01		0.47
		12.07	24.90

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
Load dispatch centre charges		54.84	39.51
Repairs and maintenance			
Buildings	330.08		300.26
Plant and equipment	2,889.10		2,608.45
Others	462.85		431.62
		3,682.03	3,340.33
Insurance		218.36	181.19
Interest to beneficiaries		72.16	-
Rates and taxes		132.97	105.72
Water cess and environment protection cess		17.37	3.96
Training and recruitment expenses	50.32		47.73
Less: Receipts	0.36		1.92
		49.96	45.81
Communication expenses		87.95	86.09
Travelling expenses		278.63	281.59
Tender expenses	8.42		7.60
Less: Receipt from sale of tenders	1.09		2.35
		7.33	5.25
Payment to auditors		6.22	5.23
Advertisement and publicity		23.25	27.74
Electricity duty		952.40	904.44
Security expenses		1,103.13	1,000.35
Entertainment expenses		72.50	60.11
Expenses for guest house	55.38		47.36
Less: Recoveries	1.01		0.69
		54.37	46.67
Education expenses		61.40	54.79
Donation		8.00	8.00
Ash utilisation and marketing expenses		859.72	342.62
Directors sitting fee		0.73	0.73
Professional charges and consultancy fee		116.04	102.46
Legal expenses		55.43	51.44
EDP hire and other charges		40.48	31.77
Printing and stationery		7.33	12.13
Oil and gas exploration expenses		0.14	0.47
Hiring of vehicles		120.53	125.29
Reimbursement of LC charges on sales realisation		-	0.01
Net loss/(gain) in foreign currency transactions and translations		962.17	(59.01)
Cost of hedging		(0.99)	(0.63)

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Derivatives MTM loss/(gain) (net)	**1.28**	2.46
Horticulture expenses	**61.39**	55.06
Hire charges of helicopter/aircraft	**1.05**	12.62
Hire charges of construction equipment	**14.47**	13.03
Transport vehicle running expenses	**18.81**	26.72
Demurrage charges	**0.06**	1.30
Loss on de-recognition of property, plant and equipment	**64.19**	174.54
Miscellaneous expenses	**292.73**	297.32
	12,172.16	9,766.07
Less: Allocated to fuel inventory	**1,942.58**	569.04
Transferred to expenditure during construction period (net) - Note 39	**911.98**	1,367.07
Transferred to expenditure during development of coal mines (net) - Note 40	**82.37**	857.75
Transferred to derivative MTM loss/(gain) recoverable/(payable) from/to beneficiaries	**1.28**	2.46
Transferred to Corporate Social Responsibility (CSR) expense	**47.97**	44.23
Adjusted with payable to Govt. of Jharkhand-Note 29	**10.85**	13.49
Transferred to fly ash utilisation reserve fund	**211.96**	187.41
	8,963.17	6,724.62
Corporate Social Responsibility (CSR) expense	**341.12**	308.62
Provisions for		
Tariff adjustments	**91.91**	45.36
Obsolescence in stores	**12.99**	36.59
Shortages in stores	**20.45**	100.81
Unserviceable capital works	**147.70**	115.30
Unfinished minimum work programme for oil and gas exploration	**15.91**	11.98
Arbitration cases	**39.83**	454.41
Shortages in construction stores	**1.64**	2.04
Doubtful loans, advances and claims	**2.44**	299.68
Doubtful trade receivables	**85.18**	1.29
Shortage in Property,plant and equipment	**1.11**	1.82
Others	**1.96**	2.60
	421.12	1,071.88
Total	**9,725.41**	8,105.12

a) During the development stage of mine, transfer price of coal extracted from Group's captive mine has been determined considering the notified price of Coal India Ltd. for equivalent grade of coal. The same has been netted from the cost of captive coal and carried to 'Development of coal mines' (Note 3) through 'Transferred to expenditure during development of coal mines' (Note 40).

b) Details in respect of payment to auditors:

As Auditor		
Audit fee	**2.93**	2.39
Tax audit fee	**0.68**	0.64
Limited review	**1.15**	1.06

In other capacity		
Other services (certification fee)	**0.65**	0.68
Reimbursement of expenses	**0.81**	0.46
Total	**6.22**	5.23

Payment to the auditors includes ₹ **0.51 crore** (31 March 2019: ₹ 0.24 crore) relating to earlier year.

c) CERC Regulations provides that where after the truing-up, the tariff recovered is more than the tariff approved by the Commission, the generating Company shall pay to the beneficiaries the over recovered amount along-with simple interest. Accordingly, the interest payable to the beneficiaries amounting to ₹ **72.16 crore** (31 March 2019: ₹ Nil) has been accounted and disclosed as 'Interest to beneficiaries'.

d) Miscellaneous expenses include expenditure on books & periodicals, workshops, operating expenses of DG sets, brokerage and commission, bank charges, furnishing expenses, etc.

e) Provisions for arbitration cases includes an amount of ₹ **0.16 crore** (31 March 2019: 394.07 crore) pertaining to the dispute with the operator referred in Note 56(iii)(b) estimated and provided / updated against the award pronounced by the arbitral tribunal for which the Company has filed an appeal before Hon'ble High Court of Delhi.

f) Provisions for shortages in stores include provision for shortage of coal observed on physical verification, beyond the Company's norms, amounting to ₹ **0.24 crore** (31 March 2019: ₹ 75.32 crore).

39. Expenditure during construction period (net)*

₹ **Crore**

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
A. Employee benefits expense		
Salaries and wages	**893.36**	1,083.87
Contribution to provident and other funds	**116.14**	164.88
Staff welfare expenses	**92.17**	90.17
Total (A)	**1,101.67**	1,338.92
B. Finance costs		
Finance costs on financial liabilities measured at amortised cost		
Bonds	**1,622.12**	1,665.68
Foreign currency term loans	**153.80**	217.55
Rupee term loans	**2,833.48**	3,105.82
Foreign currency bonds/notes	**531.84**	648.45
Others	**79.78**	77.77
Unwinding of discount on vendor liabilities	**59.05**	83.66
Exchange differences regarded as an adjustment to borrowing costs	**518.35**	164.02
Other borrowing costs		
Others	**23.39**	16.53
Total (B)	**5,821.81**	5,979.48

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
C. Depreciation and amortisation expense		**236.48**	143.06
D. Other expenses			
Power charges	**351.12**		776.36
Less: Recovered from contractors and employees	**8.73**		6.07
		342.39	770.29
Water charges		**41.05**	17.08
Rent		**2.66**	5.03
Repairs and maintenance			
Buildings	**10.75**		9.50
Plant and equipment	**0.37**		1.32
Others	**130.63**		140.19
		141.75	151.01
Insurance		**21.25**	14.32
Rates and taxes		**35.27**	11.20
Communication expenses		**11.50**	14.72
Travelling expenses		**45.33**	56.01
Tender expenses		**7.54**	0.91
Advertisement and publicity		**1.19**	2.81
Security expenses		**130.41**	151.89
Entertainment expenses		**4.39**	7.85
Expenses for guest house		**7.15**	5.83
Professional charges and consultancy fee		**11.56**	22.57
Legal expenses		**7.76**	7.52
EDP hire and other charges		**2.25**	2.52
Printing and stationery		**0.69**	2.14
Miscellaneous expenses		**97.84**	123.37
Total (D)		**911.98**	1,367.07
E. Less: Other income			
Interest from advances to contractors		**29.51**	28.93
Interest others		**19.30**	18.34
Hire charges for equipment		**0.30**	1.81

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Sale of scrap	**0.23**	6.78
Miscellaneous income	**11.29**	10.92
Total (E)	**60.63**	66.78
F. Net actuarial losses on defined benefit plans	**13.77**	(0.44)
Grand total (A+B+C+D-E+F)**	**8,025.08**	8,761.31

* Other than for expenditure during development of coal mines- (Note 40)
** Carried to Capital work-in-progress - (Note 3)

40. Expenditure during development of coal mines (net)

₹ Crore

Particulars		For the year ended 31 March 2020	For the year ended 31 March 2019
A. Employee benefits expense			
Salaries and wages		**52.90**	77.11
Contribution to provident and other funds		**4.89**	9.44
Staff welfare expenses		**8.38**	10.55
Total (A)		**66.17**	97.10
B. Finance costs			
Finance costs on financial liabilities measured at amortised cost			
Bonds		**64.07**	67.56
Rupee term loans		**154.67**	201.97
Unwinding of discount on vendor liabilities		**8.92**	0.09
Other borrowing costs - others		**0.08**	0.14
Total (B)		**227.74**	269.76
C. Depreciation and amortisation expense		**34.75**	51.57
D. Other expenses			
Power charges	**1.43**		0.87
Less: Recovered from contractors and employees	**0.03**		0.13
		1.40	0.74
Rent		**0.44**	1.28
Repairs and maintenance			
Buildings	**0.65**		0.86
Plant and equipment	**-**		0.55
Others	**4.45**		2.42
		5.10	3.83
Cost of captive coal		**46.23**	785.42
Insurance		**0.09**	0.04
Rates and taxes		**0.95**	0.81
Communication expenses		**1.30**	1.96
Travelling expenses		**3.68**	5.52
Tender expenses		**-**	0.03
Advertisement and publicity		**0.46**	0.71
Security expenses		**6.65**	19.80
Entertainment expenses		**0.77**	0.91
Expenses for guest house		**0.74**	1.31
Professional charges and consultancy fee		**5.81**	7.51

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Legal expenses	**0.11**	0.35
EDP hire and other charges	**0.38**	0.68
Printing and stationery	**0.15**	0.42
Miscellaneous expenses	**8.11**	26.43
Total (D)	**82.37**	857.75
E. Less: Other income		
Interest from advances to contractors	**0.69**	4.83
Interest others	**0.33**	1.20
Miscellaneous income	**0.22**	0.26
Total (E)	**1.24**	6.29
F. Net actuarial losses on defined benefit plans	**1.06**	(0.10)
Grand total (A+B+C+D-E+F) *	**410.85**	1,269.79

*Carried to Capital work-in-progress - (Note 3)

41. Due to outbreak of COVID-19 globally and in India, the Group has made an initial assessment of its likely adverse impact on business and its associated financial risks.The Group is mainly in the business of generation and sale of electricity which is an essential service as emphasized by the Ministry of Power (MOP), Government of India (GOI). By taking a number of proactive steps and keeping in view the safety of all its stakeholders, the Group has ensured the availability of its power plants to generate power and has continued to supply power during the period of lockdown.

On the directions of MOP, the Central Electricity Regulatory Commission (CERC) issued an order dated 3 April 2020 whereby it directed that Late Payment Surcharge (LPSC) shall apply at a reduced rate of 12% p.a. instead of the normal rate of 18% p.a. if any delayed payment beyond 45 days from the date of presentation of the bills falls between 24 March 2020 and 30 June 2020. Accordingly, the LPSC for the year 2020-21 is expected to be lower by ₹ 58.88 crore approximately. Further as per the directions of MOP dated 15 & 16 May 2020, issued in accordance with the announcement of GOI under the Atmanirbhar Bharat special economic and comprehensive package, the Group has decided to defer the capacity charges of ₹2,670.30 crore to DISCOMs for the lock-down period on account of COVID-19 pandemic for the power not scheduled by the DISCOMs, to be payable without interest after the end of the lockdown period in three equal monthly instalments and has allowed a rebate of ₹ 1,586.70 crore on the capacity charges billed during the lock-down period to DISCOMs on account of COVID-19, in the financial year 2020-21. These amounts are provisional and may vary due to reconciliation of related data. Due to the above, there is no material impact on the profits of the Company for the year ended 31 March 2020.

The Group believes that the impact due to the outbreak of COVID-19 is likely to be short-term in nature and does not anticipate any medium to long-term risks in the Group's ability to continue as a going concern and meeting its liabilities as and when they fall due. Impact assessment of COVID-19 is a continuing process considering the uncertainty involved thereon. The Group will continue to closely monitor any material changes to the future economic conditions.

42. a) The Group has a system of obtaining periodic confirmation of balances from banks and other parties. There are no unconfirmed balances in respect of bank accounts and borrowings from banks & financial institutions. With regard to receivables for energy sales, the Group sends demand intimations to the beneficiaries with details of amount paid and balance outstanding which can be said to be automatically confirmed on receipt of subsequent payment from such beneficiaries. In addition, reconciliation with beneficiaries and other customers is generally done on quarterly basis. So far as trade/other payables and loans and advances are concerned, the balance confirmation letters/emails with the negative assertion as referred in the Standard on Auditing (SA) 505 (Revised) 'External Confirmations', were sent to the parties. Some of such balances are subject to confirmation/reconciliation. Adjustments, if any will be accounted for on confirmation/reconciliation of the same, which in the opinion of the management will not have a material impact.

b) In the opinion of the management, the value of assets, other than property, plant and equipment and non-current investments, on realisation in the ordinary course of business, will not be less than the value at which these are stated in the Balance Sheet.

43. The levy of transit fee/entry tax on supplies of fuel to some of the power stations has been paid under protest as the matters are subjudice at various courts. In case the Group gets refund/demand from fuel suppliers/tax authorities on settlement of these cases, the same will be passed on to respective beneficiaries.

44. The environmental clearance ("clearance") granted by the Ministry of Environment and Forest, Government of India (MoEF) for one of the Company's project consisting of three units of 800 MW each, was challenged before the National Green Tribunal (NGT). The NGT disposed off the appeal, inter alia, directing that the order of clearance be remanded to the MoEF to pass an order granting or declining clearance to the project proponent afresh in accordance with the law and the judgement of the NGT and for referring the matter to the Expert Appraisal Committee ("Committee") for its re-scrutiny, which shall complete the process within six months from the date of NGT order. NGT also directed that the environmental clearance shall be kept in abeyance and the Company shall maintain status quo in relation to the project during the period of review by the Committee or till fresh order is passed by the MoEF, whichever is earlier. The Company filed an appeal challenging the NGT order before the Hon'ble Supreme Court of India which stayed the order of the NGT and the matter is sub-judice. All the units of the project have been declared commercial in the earlier years. The carrying cost of the project as at 31 March 2020 is ₹ **15,662.28 crore** (31 March 2019: ₹ 15,598.80 crore). Management is confident that the approval for the project shall be granted, hence no provision is considered necessary.

45. a) The Company is executing a hydro power project in the state of Uttrakhand, where all the clearances were accorded. A case was filed in Hon'ble Supreme Court of India after the natural disaster in Uttrakhand in June 2013 to review whether the various existing and ongoing hydro projects have contributed to environmental degradation. Hon'ble Supreme Court of India on 7 May 2014, ordered that no further construction shall be undertaken in the projects under consideration until further orders, which included the said hydro project of the Company. In the proceedings, Hon'ble Supreme Court is examining to allow few projects which have all clearances which includes the project of the Company where the work has been stopped. Aggregate cost incurred on the project up to 31 March 2020 is ₹ **163.40 crore** (31 March 2019: ₹ 163.33 crore). Management is confident that the approval for proceeding with the project shall be granted, hence no provision is considered necessary.

b) During the year, penstock I - feeding 02 (two) units (50 MW each) of Kopili Hydro Power Station, Umrongso, Assam of the NEEPCO, a subsidiary of the Company, got ruptured on 7 October 2019 following a load through off and tripping of Unit -I (50 MW). Three other units were in full load during the mishap. Rupture happened at three locations of penstock including at location immediately downstream of valve house. Penstock protection valve closing mechanism was damaged in the incident and therefore, the valve could not be closed to isolate the penstock, consequently thereafter, the power house was flooded upto EOT crane beam level within a very short period. At present, Kopili (4 X 50 MW) system in in shutdown condition.Estimated carrying cost of the assets damaged due to aforesaid mishap amounts to ₹ **101.68 crore** as per internal assessment by NEEPCO, has been provided for during the year. The subsidiary has lodged a initial insurance claim for an amount of ₹250.00 crore and further action in this matter is in progress.

46. Disclosure as per Ind AS 1 'Presentation of financial statements'

a) Changes in significant accounting policies:

During the year, following changes to the accounting policies have been made:

i) Consequent to applicability of Ind AS 116 - 'Leases' w.e.f. 1 April 2019, the accounting policies relating to leases (C.20) have been modified.

ii) Certain other changes have also been made in the policies nos. A, B.1, B.3, B.4, C.1, C.2, C.3, C.4, C.6, C.7, C.9, C.12, C.13, C.14, C.15, C.16, C.17, C.19, C.21, C.23, C.28, D.2, D.6, D.10 and D.11 for improved disclosures. There is no impact on the financial statements due to these changes, however, the policy numbers have been rearranged in the current year as required.

47. The Company was hitherto charging depreciation on all solar and wind power plants following the rates and methodology notified by CERC Tariff Regulations. During the year, on review it was observed that some of the solar / wind power plants of the Company are set up under competitive bidding route and hence CERC Tariff Regulations are not applicable to such plants.

Keeping in view the above, during the year the Company has assessed the useful life of those assets through technical evaluation, for charging depreciation / amortisation of property, plant and equipment. Consequently, the depreciation / amortisation on these assets has been computed retrospectively based on change in useful lives and methodology with cumulative impact given in the current year after rectifying the useful lives and methodology. Due to the above rectification, depreciation and amortisation expenses for the year and the corresponding deferred revenue on account of government grant are lower by ₹ **322.40 crore** (including ₹ 223.18 crore for the period upto 31 March 2019) and ₹ **47.70 crore** (including ₹ 33.32 crore for the period upto 31 March 2019), respectively. Since the impact on account of above rectification is not material to the financial statements, the comparative amounts for the prior periods have not been restated.

48. Disclosure as per Ind AS 2 'Inventories'

(a) Amount of inventories consumed and recognised as expense during the year is as under:

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Fuel cost	**57,185.62**	54,395.78
Others (included in Note 38 - Other expenses)	**1,526.88**	1,263.38
Total	**58,712.50**	55,659.16

(b) Carrying amount of inventories pledged as security for borrowings as at 31 March 2020 is ₹ **11,138.71 crore** (31 March 2019: ₹ 5,300.42 crore).

49. Disclosure as per Ind AS 12 'Income taxes'

(I) (a) Income tax expense

i) Income tax recognised in statement of profit and loss

₹ Crore

Particulars	For the year ended	
	31 March 2020	31 March 2019
Current tax expense		
Current year	**2,782.89**	3,391.25
Taxes for earlier years	**2,743.64**	(103.81)
Pertaining to regulatory deferral account balances (A)	**1,032.07**	(1,012.13)
Total current tax expense (B)	**6,558.60**	2,275.31
Deferred tax expense		
Origination and reversal of temporary differences	**5,231.41**	2,190.00
Less: MAT credit entitlement	**1,410.40**	8,257.38
Total deferred tax expense (C)	**3,821.01**	(6,067.38)
Income tax expense (D=B+C-A)	**9,347.54**	(2,779.94)
Pertaining to regulatory deferral account balances	**1,032.07**	(1,012.13)
Total tax expense including tax on movement in regulatory deferral account balances	**10,379.61**	(3,792.07)

ii) Income tax recognised in other comprehensive income

₹ Crore

Particulars	For the year ended					
	31 March 2020			31 March 2019		
	Before tax	Tax expense/ (benefit)	Net of tax	Before tax	Tax expense/ (benefit)	Net of tax
Net actuarial gains/(losses) on defined benefit plans	(372.10)	66.52	(305.58)	(238.93)	51.89	(187.04)
Net gains/(losses) on fair value of equity instruments	(41.64)	-	(41.64)	(16.74)	-	(16.74)
Share of other comprehensive income/ (expense) of joint ventures accounted for using the equity method	(0.50)	-	(0.50)	(1.07)	-	(1.07)
Exchange differences on translation of foreign operations	40.00	-	40.00	11.67	-	11.67
	(374.24)	66.52	(307.72)	(245.07)	51.89	(193.18)

(b) **Tax losses carried forward**

There are no unused tax losses to be carried forward as on 31 March 2020 and 31 March 2019.

(c) **Dividend distribution tax on proposed dividend not recognised at the end of the reporting period**

For the year ended 31 March 2020, the Directors have recommended the payment of final dividend amounting to ₹ **2,622.06 crore** (31 March 2019: ₹ 2,473.64 crore). The dividend distribution tax on this proposed dividend amounting to ₹ **Nil** (31 March 2019: ₹ 506.62 crore) has not been recognised since the proposed dividend is subject to the approval of share holders in the ensuing annual general meeting. Further, the dividend distribution tax has been withdrawn w.e.f. 1 April 2020 pursuant to the amendment made in the Finance Act, 2020.

(II) Other disclosures

(a) During the year, the GOI has introduced Vivad se Vishwas Scheme (VsVs) through 'The Direct Tax Vivad Se Vishwas Act, 2020'. Some of the Group companies have decided to settle its pending Income Tax disputes by opting for the VsVs scheme. The Group has created additional tax provision amounting to ₹ 2,723.57 crore keeping in view the terms & conditions of the scheme. Accordingly, the amount being disclosed under contingent liabilities towards disputes with Income Tax Authorities together with possible reimbursements, has been considered as Nil (Refer Note 69) . Further, the company is in the process of completion of procedural formalities under the scheme and the same will be settled after reconciliation of dues with the income tax department.

(b) In the previous year, for the first time the Company recognized cumulative MAT credit available to the Company amounting to ₹ 8,257.38 crore, as the same is likely to give future economic benefits in the form of availability of set off against future income tax liability. Out of the above, an amount of ₹7,615.10 crore was recognized as payable to beneficiaries through regulatory deferral account balances.

50. Disclosure as per Ind AS 19 'Employee benefits'

(i) Defined contribution plans:

Pension

The defined contribution pension scheme of the Group for its employees which is effective from 1 January 2007, is administered through a separate trust. The obligation of the Group is to contribute to the trust to the extent of amount not exceeding 30% of basic pay and dearness allowance less employer's contribution towards provident fund, gratuity, post retirement medical facility (PRMF) or any other retirement benefits. An amount of ₹**161.24 crore** (31 March 2019: ₹ 256.21 crore) for the year is recognized as expense on this account and charged to the statement of profit and loss.

(ii) Defined benefit plans:

A. Provident fund

The Group pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. The Group has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Group has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented. Further, contribution to employees pension scheme is paid to the appropriate authorities.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the provident fund plan as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Net defined benefit (asset)/liability - Current	(71.32)	(94.58)

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Opening balance	9,747.00	8,795.87	9,841.58	8,876.52	(94.58)	(80.65)
Current service cost recognized in statement of profit and loss	346.58	367.36	-	-	346.58	367.36
Interest cost/(income)	755.40	660.26	(722.78)	(660.26)	32.62	-
Total	1,101.98	1,027.62	(722.78)	(660.26)	379.20	367.36
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	0.09	-	-	-	0.09	-
Financial assumptions	1.36	(0.24)	-	-	1.36	(0.24)
Experience adjustment	58.05	117.72	-	-	58.05	117.72
Return on plan assets excluding interest income	-	-	(68.86)	(131.41)	(68.86)	(131.41)
Total	59.50	117.48	(68.86)	(131.41)	(9.36)	(13.93)
Other						
Contribution by participants	927.54	948.45	927.54	948.45	-	0.00
Contribution by employer	-	-	346.58	367.36	(346.58)	(367.36)
Benefits paid	1,322.24	1,142.42	1,322.24	1,142.42	-	-
Closing balance	10,513.78	9,747.00	10,585.10	9,841.58	(71.32)	(94.58)

Pursuant to paragraph 57 of Ind AS 19, accounting by an entity for defined benefit plans, inter-alia, involves determining the amount of the net defined benefit liability (asset) which shall be adjusted for any effect of limiting a net defined benefit asset to the asset ceiling prescribed in paragraph 64. As per Para 64 of Ind AS 19, in case of surplus in a defined benefit plan, an entity shall measure the net defined benefit asset at the lower of actual surplus or the value of the assets ceiling determined using the discount rate. The asset ceiling is the present value of any economic benefits available in the form of refunds from the plan or reductions in future contributions to the plan. Further, paragraph 65 provides that a net defined benefit asset may arise where a defined benefit plan has been overfunded or where actuarial gains have arisen.

As per the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952, the Group has no right to the benefits either in the form of refund from the plan or lower future contribution to the plan towards the net surplus of ₹ **71.32 crore** (31 March 2019: ₹ 94.58 crore) determined through actuarial valuation. Accordingly, Group has not recognised the surplus as an asset, and the actuarial gains in 'Other Comprehensive Income', as these pertain to the Provident Fund Trust and not to the Group.

B. Gratuity and pension

a) The Group has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 0.20 crore on superannuation, resignation, termination, disablement or on death, considering the provisions of the Payment of Gratuity Act,1972, as amended.

b) The Group has pension schemes at two of its stations in respect of employees taken over from erstwhile state government power utilities.

The existing schemes stated at (a) and at one of the power stations at (b) above are funded by the Group and are managed by separate trusts. Pension scheme of another power station in respect of employees taken from erstwhile State Government Power Utility is unfunded. The liability for gratuity and the pension schemes as above is recognised on the basis of actuarial valuation.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the gratuity and pension plan and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Net defined benefit (asset)/liability :		
Gratuity (funded)	177.44	15.56
Gratuity (non-funded)	191.21	179.15
Pension (funded)	203.54	168.72
Pension (non-funded)	388.29	358.68
	960.48	722.11
Non-current	536.44	500.94
Current	424.04	221.17

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Opening balance	2,923.31	2,970.30	2,201.20	1,618.73	722.11	1,351.57
Included in profit or loss:						
Current service cost	118.41	112.81	-	-	118.41	112.81
Past service cost	-	0.20	-	-	-	0.20
Interest cost (income)	223.54	224.27	(160.96)	(123.32)	62.58	100.95
Total amount recognized in profit or loss	341.95	337.28	(160.96)	(123.32)	180.99	213.96

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**(1.17)**	-	**-**	-	**(1.17)**	-
Financial assumptions	**173.62**	(22.94)	**0.01**	-	**173.61**	(22.94)
Experience adjustment	**(25.93)**	49.35	**-**	-	**(25.93)**	49.35
Return on plan assets excluding interest income	**-**	-	**(12.40)**	(27.63)	**(12.40)**	(27.63)
Total amount recognized in other comprehensive income	**146.52**	26.41	**(12.39)**	(27.63)	**134.11**	(1.22)

Out of the above an amount of ₹ **12.56 crore** (31 March 2019:₹ (-) 3.60 crore) has been transferred to expenditure during construction period / development of coal mines.

Other						
Contribution by employer	**-**	-	**15.55**	797.56	**(15.55)**	(797.56)
Benefits paid	**389.56**	410.68	**328.38**	366.04	**61.18**	44.64
Closing balance	**3,022.22**	2,923.31	**2,061.72**	2,201.20	**960.48**	722.11

Out of the above net liability, an amount of ₹ **176.26 crore** (31 March 2019: ₹ 54.84 crore) has been adjusted with the amount recoverable from the trust.

C. Post-Retirement Medical Facility (PRMF)

The Group has Post-Retirement Medical Facility (PRMF), under which the retired employees and their spouses are provided medical facilities in the Group hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Group. The liability for the same is recognised annually on the basis of actuarial valuation. A trust has been constituted for its employees superannuated on or after 1 January 2007, for the sole purpose of providing post retirement medical facility to them.

Based on the actuarial valuation obtained in this respect, the following table sets out the status of the PRMF and the amounts recognised in the Group's financial statements as at balance sheet date:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Net defined benefit (asset)/liability - (funded)	**258.85**	70.02
Net defined benefit (asset)/liability - (non-funded)	**70.26**	59.02
	329.11	129.04
Non-current	**65.87**	123.75
Current	**263.24**	5.29

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset)/liability	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Opening balance	**1,764.90**	1,466.93	**1,635.86**	1,200.73	**129.04**	266.20
Included in profit or loss:						
Current service cost	**51.59**	48.54	**-**	-	**51.59**	48.54
Past service cost	**-**	-	**-**	-	**-**	-
Interest cost (income)	**136.07**	111.27	**(120.48)**	(91.00)	**15.59**	20.27
Total amount recognized in profit or loss	**187.66**	159.81	**(120.48)**	(91.00)	**67.18**	68.81
Included in other comprehensive income:						
Remeasurement loss (gain):						
Actuarial loss (gain) arising from:						
Demographic assumptions	**(1.02)**	-	**-**	-	**(1.02)**	-
Financial assumptions	**116.75**	(16.88)	**-**	-	**116.75**	(16.88)
Experience adjustment	**165.81**	246.14	**-**	-	**165.81**	246.14
Return on plan assets excluding interest income	**-**	-	**(42.38)**	(5.56)	**(42.38)**	(5.56)
Total amount recognized in other comprehensive income	**281.54**	229.26	**(42.38)**	(5.56)	**239.16**	223.70

Out of the above an amount of ₹ **8.77 crore** (31 March 2019 : ₹11.75 crore) has been transferred to expenditure during construction period / development of coal mines.

Other						
Contribution by participants	**-**	-	**-**	16.02	**-**	(16.02)
Contribution by employer	**-**	-	**102.62**	406.55	**(102.62)**	(406.55)
Benefits paid	**123.38**	91.10	**119.73**	84.00	**3.65**	7.10
Closing balance	**2,110.72**	1,764.90	**1,781.61**	1,635.86	**329.11**	129.04

Out of the above net liability, an amount of ₹ **113.30 crore** (31 March 2019 : ₹ 22.36 crore) has been adjusted with the amount recoverable from the trust.

D. Other retirement benefit plans

Other retirement benefit plans include baggage allowance for settlement at home town for employees and dependents and farewell gift to the superannuating employees. The scheme above is unfunded and liability for the same is recognised on the basis of actuarial valuation.

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Net defined benefit (asset)/liability (non-funded) :	**196.35**	180.84
Non-current	**174.20**	159.43
Current	**22.15**	21.41

Movement in net defined benefit (asset)/liability

₹ Crore

Particulars	Defined benefit obligation	
	As at 31 March 2020	As at 31 March 2019
Opening balance	180.84	154.64
Included in profit or loss:		
Current service cost	10.12	8.41
Past service cost	-	-
Interest cost (income)	13.89	11.64
Total amount recognized in profit or loss	24.01	20.05
Included in other comprehensive income:		
Remeasurement loss (gain):		
Actuarial loss (gain) arising from:		
Demographic assumptions	(0.06)	-
Financial assumptions	11.37	(1.74)
Experience adjustment	(9.91)	14.69
Return on plan assets excluding interest income	-	-
Total amount recognized in other comprehensive income	1.40	12.95
Other		
Contribution paid by employer	-	-
Benefits paid	9.90	6.80
Closing balance	196.35	180.84

E. Plan assets

Plan assets comprise the following :

₹ Crore

Particulars	As at 31 March 2020			As at 31 March 2019		
	Quoted	Unquoted	Total	Quoted	Unquoted	Total
State government securities	4,827.26	-	4,827.26	4,220.23	-	4,220.23
Central government securities	1,998.64	-	1,998.64	1,993.26	-	1,993.26
Corporate bonds and term deposits	4,620.76	73.73	4,694.49	4,399.18	74.20	4,473.38
Money market instruments/liquid mutual fund	22.22	-	22.22	17.55	-	17.55
Equity and equity linked investments	127.60	-	127.60	226.91	-	226.91
Investments with insurance companies	-	2,785.84	2,785.84	-	2,377.88	2,377.88
Total (excluding accrued interest)	11,596.48	2,859.57	14,456.05	10,857.12	2,452.08	13,309.20

As at 31 March 2020, an amount of ₹ **280.00 crore** (31 March 2019: ₹ 350.00 crore) is included in the value of plan assets (in respect of the reporting enterprise's own financial instruments (Corporate bonds).

Actual return on plan assets is ₹ **1,146.68 crore** (31 March 2019: ₹ 1039.18 crore).

F. Defined benefit obligations

i. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date:

Particulars	As at 31 March 2020	As at 31 March 2019
Discount rate	6.75%	7.75%
Expected return on plan assets		
Gratuity	6.75%	7.75%
Pension	6.75%	7.75%
PRMF	6.75%	7.75%
Annual increase in costs	6.50%	6.50%
Salary escalation rate	6.50%	6.50%

The estimates of future salary increases considered in actuarial valuation, take account of inflation, seniority, promotion and other relevant factors, such as supply and demand in the employment market. Further, the expected return on plan assets is determined considering several applicable factors mainly the composition of plan assets held, assessed risk of asset management and historical returns from plan assets.

ii. Sensitivity analysis

Reasonably possible changes at the reporting date to one of the relevant actuarial assumptions, holding other assumptions constant, would have affected the defined benefit obligation by the amounts shown below.

₹ Crore

Particulars	As at 31 March 2020		As at 31 March 2019	
	Increase	Decrease	Increase	Decrease
Discount rate (0.5% movement)	(431.29)	461.89	(400.95)	429.58
Annual increase in costs (0.5% movement)	153.19	(147.47)	129.95	(107.67)
Salary escalation rate (0.5% movement)	298.00	(290.07)	290.17	(282.87)

Although the analysis does not take account of the full distribution of cash flows expected under the plan, it does provide an approximation of the sensitivity of the assumptions shown.

The sensitivity analysis above have been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

G. Risk exposure

Through its defined benefit plans, the Company is exposed to a number of risks, the most significant of which are detailed below:

a) Asset volatility

The plan liabilities are calculated using a discount rate set with reference to bond yields; if plan assets underperform this yield, this will create a deficit. Most of the plan asset investments are in fixed income securities with high grades and in government securities. These are subject to interest rate risk and the fund manages interest rate risk with derivatives to minimise risk to an acceptable level. A portion of the funds are invested in equity securities and in alternative investments which have low correlation with equity securities. The equity securities are expected to earn a return in excess of the discount rate and contribute to the plan deficit. The Group has a risk management strategy where the aggregate amount of risk exposure on a portfolio level is maintained at a fixed range. Any deviations from the range are corrected by rebalancing the portfolio. The Group intends to maintain the above investment mix in the continuing years.

b) Changes in discount rate

A decrease in discount rate will increase plan liabilities, although this will be partially offset by an increase in the value of the plans' bond holdings.

c) Inflation risks

In the pension plans, the pensions in payment are not linked to inflation, so this is a less material risk.

d) Life expectancy

The pension plan obligations are to provide benefits for the life of the member, so increases in life expectancy will result in an increase in the plans' liabilities. This is particularly significant where inflationary increases result in higher sensitivity to changes in life expectancy.

The Group ensures that the investment positions are managed within an asset-liability matching (ALM) framework that has been developed to achieve long-term investments that are in line with the obligations under the employee benefit plans. Within this framework, the Group's ALM objective is to match assets to the pension obligations by investing in long-term fixed interest securities with maturities that match the benefit payments as they fall due and in the appropriate currency.

The Group actively monitors how the duration and the expected yield of the investments are matching the expected cash outflows arising from the employee benefit obligations. The Group has not changed the processes used to manage its risks from previous periods. The Group uses derivatives to manage some of its risk. Investments are well diversified, such that the failure of any single investment would not have a material impact on the overall level of assets.

A large portion of assets in 2020 consists of government and corporate bonds. The plan asset mix is in compliance with the requirements of the respective local regulations.

H. Expected maturity analysis of the defined benefit plans in future years

₹ Crore

Particulars	Less than 1 year	Between 1-2 years	Between 2-5 years	Over 5 years	Total
31 March 2020					
Gratuity and pension	**329.51**	**304.66**	**799.17**	**1,588.88**	**3,022.22**
Post-retirement medical facility (PRMF)	**122.71**	**150.67**	**536.15**	**1,301.18**	**2,110.72**
Provident fund	**1,176.02**	**1,016.75**	**2,844.94**	**5,476.07**	**10,513.78**
Other post-employment benefit plans	**23.81**	**20.62**	**54.87**	**97.05**	**196.35**
Total	**1,652.05**	**1,492.70**	**4,235.14**	**8,463.18**	**15,843.07**
31 March 2019					
Gratuity and pension	350.04	373.04	707.09	1,493.15	2,923.31
Post-retirement medical facility (PRMF)	103.29	102.16	281.20	1,278.24	1,764.90
Provident fund	1,036.26	948.32	2,612.04	5,150.38	9,747.00
Other post-employment benefit plans	22.88	18.86	52.05	87.05	180.84
Total	1,512.47	1,442.37	3,652.38	8,008.82	14,616.05

Expected contributions to post-employment benefit plans for the year ending 31 March 2021 are ₹ **611.95 crore**.

The weighted average duration of the defined benefit plan obligation at the end of the reporting period is **14.91 years** (31 March 2019: 14.91 years).

(iii) Other long term employee benefit plans

A. Leave

The Company provides for earned leave benefit (including compensated absences) and half-pay leave to the employees of the Company which accrue annually at 30 days and 20 days respectively. Earned leave (EL) is en-cashable while in service. Half-pay leaves (HPL) are en-cashable only on separation beyond the age of 50 years up to the maximum of 300 days. However, total number of leave (i.e. EL & HPL combined) that can be encashed on superannuation shall be restricted to 300 days and no commutation of half-pay leave shall be permissible. The scheme is unfunded and liability for the same is recognised on the basis of actuarial valuation. During the year, provision amounting to ₹ **287.53 crore** has been made on the basis of actuarial valuation at the year end and debited to statement of profit and loss (31 March 2019: ₹ 178.72 crore)

B. Other employee benefits

Provision for long service award and family economic rehabilitation scheme amounting to ₹ **10.77 crore** (31 March 2019: ₹ 10.53 crore) for the year have been made on the basis of actuarial valuation at the year end and debited to the statement of profit and loss.

51. Disclosure as per Ind AS 21 'The Effects of Changes in Foreign Exchange Rates'

The amount of exchange differences (net) debited to the statement of profit and loss, net of movement in regulatory deferral account balances, is ₹ **18.98 crore** (31 March 2019: credited to the statement of profit and loss ₹ 21.88 crore).

52. Disclosure as per Ind AS 23 'Borrowing Costs'

Borrowing costs capitalised during the year is ₹ **6,049.55 crore** (31 March 2019: ₹ 6,249.24 crore).

53. Disclosure as per Ind AS 24 'Related Party Disclosures'

a) List of Related parties:

i) Joint venture companies:

1. Utility Powertech Ltd.
2. NTPC-GE Power Services Private Ltd.
3. NTPC-SAIL Power Company Ltd.
4. NTPC Tamil Nadu Energy Company Ltd.
5. Ratnagiri Gas & Power Private Ltd.
6. Aravali Power Company Private Ltd.
7. NTPC BHEL Power Projects Private Ltd.
8. Meja Urja Nigam Private Ltd.
9. Transformers and Electricals Kerala Ltd.
10. National High Power Test Laboratory Private Ltd.
11. Energy Efficiency Services Ltd.
12. CIL NTPC Urja Private Ltd.
13. Anushakti Vidhyut Nigam Ltd.
14. Hindustan Urvarak & Rasayan Ltd.
15. Konkan LNG Ltd. (previously Konkan LNG Private Ltd.)
16. Trincomalee Power Company Ltd.
17. Bangladesh-India Friendship Power Company Private Ltd.

Joint venture company of NEEPCO, a Subsidiary of the Company

1. KSK Dibbin Hydro Power Private Ltd

ii) Key Management Personnel (KMP):

Parent Company:

Whole Time Directors

Shri Gurdeep Singh	Chairman and Managing Director	
Shri A.K. Gupta	Director (Commercial)	
Shri Prakash Tiwari	Director (Operations)	
Shri A.K. Gautam[1]	Director (Finance)	W.e.f. 18 October 2019
Shri Saptarshi Roy	Director (Human Resources)	Upto 31 March 2020
Shri S.K. Roy	Director (Projects)	Upto 30 November 2019
Shri P.K. Mohapatra	Director (Technical)	Upto 31 July 2019
Shri K. Sreekant[2]	Director (Finance)	W.e.f. 29 March 2018 to 2 November 2018 and W.e.f. 12 February 2019 to 12 August 2019

Independent Directors

Dr. Gauri Trivedi	Non-executive Director	Upto 15 November 2019
Shri Seethapathy Chander	Non-executive Director	Upto 12 June 2019
Shri M.P. Singh	Non-executive Director	
Shri Pradeep Kumar Deb	Non-executive Director	
Shri Shashi Shekhar	Non-executive Director	

Shri Subhash Joshi	Non-executive Director	
Shri Vinod Kumar	Non-executive Director	
Dr. K.P.K. Pillay	Non-executive Director	W.e.f. 30 July 2018
Dr. Bhim Singh	Non-executive Director	W.e.f. 30 July 2018
Government Nominee Directors		
Shri Vivek Kumar Dewangan	Non-executive Director	W.e.f. 28 April 2018
Shri Ashish Upadhyaya	Non-executive Director	W.e.f. 22 January 2020
Ms. Archana Agarwal	Non-executive Director	W.e.f. 7 August 2018 upto 22 April 2019
Shri Aniruddha Kumar	Non-executive Director	Upto 30 July 2018
Chief Financial Officer and Company Secretary		
Shri Sudhir Arya	Chief Financial Officer	Upto 30 July 2019
Ms. Nandini Sarkar	Company Secretary	W.e.f. 1 August 2018
Shri K.P. Gupta	Company Secretary	Upto 31 July 2018

1. Chief Financial Officer w.e.f. 1 August 2019
2. Holding additional charge, in addition to Director (Finance), Power Grid Corporation of India Ltd.

Subsidiary Companies:

1. NTPC Vidyut Vyapar Nigam Ltd.

Shri A.K. Gupta	Chairman	Upto 29/06/2018
Shri P.K. Mohapatra	Chairman	W.e.f 29/06/2018 upto 31/07/2019
Shri A.K. Gupta	Chairman	W.e.f 07/08/2019
Shri Pramod Kumar	Director	Upto 30/11/2018
Shri C.V. Anand	Director	Upto 09/10/2019
Ms. A. Satyabhama	Director	Upto 31/07/2018
Shri A.K. Gautam	Director	W.e.f. 03/12/2018
Ms. Nandini Sarkar	Director	W.e.f. 03/08/2018
Shri Rajnish Bhagat	Director	W.e.f. 11/10/2019
Shri A. K. Garg	CEO	Up to 14/06/2018
Shri A.K. Juneja	CEO	W.e.f 03/08/2018 up to 13/08/2018
Shri Rajnish Bhagat	CEO	W.e.f 11/09/2018 up to 03/06/2019
Shri A.K. Poddar	CEO	W.e.f 18/07/2019 up to 31/12/2019
Shri Mohit Bhargava	CEO	W.e.f 16/01/2020
Shri Kumar sanjay	CFO	
Shri Nitin Mehra	Company Secretary	

2. NTPC Electric Supply Company Ltd.

Shri Saptarshi Roy	Chairman & Director	Upto 31 March 2020
Shri Sudhir Arya	Director	Upto 29 July 2019
Shri Praveen Saxena	Director	
Shri Rajendra Mohan Arya	Director	W.e.f.28 August 2019

3. Kanti Bijlee Utpadan Nigam Ltd.

Shri Prakash Tiwari	Chairman (Non-Executive)	
Shri P. Amrit	Non-Executive Director	Upto 16 August 2018
Shri R. Lakshmanan	Non-Executive Director	Upto 16 August 2018
Shri Ajay Dua	Non-Executive Director	
Shri M.P. Sinha	Non-Executive Director	Upto 27 April 2018

Ms. Sangeeta Bhatia	Non-Executive Director	Upto 9 October 2019
Shri S. Narendra	Non-Executive Director	W.e.f. 4 May 2018
Ms. Shoba Pattabhiraman	Non-Executive Director	W.e.f 1 November 2019
Shri P.K. Sinha	Chief Executive Officer	Upto 21 July 2018
Shri S. Gaurishankar	Chief Executive Officer	W.e.f 22 July 2018 upto 17 August 2018
Shri U. Banerjee	Chief Executive Officer	W.e.f 17 August 2018 upto 17 February 2020
Shri Subrata Mandal	Chief Executive Officer	W.e.f 18 February 2020
Shri V.K.Mittal	Chief Finance Officer	
Ms. Ruchi Aggarwal	Company Secretary	Upto 16 March 2020

4. Bhartiya Rail Bijlee Company Limited

Shri A.K. Gupta	Non-executive Director	
Shri S. Narendra	Non-executive Director	W.e.f. 23 May 2018
Shri R.K. Jain	Non-executive Director	W.e.f. 16 July 2018
Ms. Renu Narang	Non-executive Director	W.e.f. 19 November 2019
Ms. Sangeeta Bhatia	Non-executive Director	Upto 31 August 2019
Shri Sudhir Garg	Non-executive Director	Upto 9 February 2018
Shri Shalabh Goel	Non-executive Director	Upto 15 June 2018
Shri K.S. Garbyal	Non-executive Director	Upto 31 January 2018
Shri M.P. Sinha	Non-executive Director	Upto 27 April 2018
Shri C Sivakumar	Chief Executive Officer	
Shri Manoj Srivastava	Chief Finance Officer	
Shri Vishal Garg	Company Secretary	

5. Patratu Vidyut Utpadan Nigam Ltd.

Shri Saptarshi Roy	Chairman	Upto 25 June 2018 and w.e.f 23 January 2020 upto 31 March 2020
Shri S. K. Roy	Director & Chairman	As chairman w.e.f. 18 July 2018 (as Director w.e.f. 29 November 2017) upto 30 November 2019
Shri P. K. Mohapatra	Director	Upto 30 April 2018
Shri L. Khiangte, IAS	Director	W.e.f. 20 November 2019
Shri Avnish Srivastava	Director	W.e.f. 15 October 2019
Ms. Nandini Sarkar	Director	W.e.f. 15 October 2019
Shri G. Venu	Director	W.e.f. 21 May 2018 Upto 21 August 2018
Shri T. R. Datta	Director	W.e.f. 18 July 2018 Upto 31 July 2019
Ms. Sangeeta Bhatia	Director	W.e.f. 23 August 2018 Upto 31 August 2019
Dr. Nitin Madan Kulkarni, IAS	Director	Upto 31 October 2018
Ms. Vandana Dadel, IAS	Director	W.e.f. 21 November 2018 Upto 7 November 2019
Shri A. K. Sinha	CEO	Upto 25 July 2018
Shri Sudarsan Chakrabarti	CEO	W.e.f. 2 August 2018
Shri A. K. Acharya	CFO	
Shri Sipan K. Garg	Company Secretary	

6. Nabinagar Power Generating Company Ltd.

Shri A. K. Gupta	Chairman	
Shri Sudhir Arya	Non-Executive Director	Upto 29.07.2019
Ms. Sangeeta Bhatia	Non-Executive Director	Upto 9.10.2019
Shri C.V.Anand	Non-Executive Director	W.e.f. 30.07.2019
Ms. Alka Saigal	Non-Executive Director	W.e.f. 06.11.2019
Shri S. Narendra	Non-Executive Director	W.e.f. 04.05.2018
Shri Balaji Iyengar	Chief Executive Officer	Upto 13.04.2019
Shri M.K.S. Rajput	Chief Executive Officer	W.e.f. 13.04.2019 upto 14.05.2019
Shri Vijai Singh	Chief Executive Officer	W.e.f. 14.05.2019
Shri M.K. Singh	Chief Financial Officer	W.e.f. 12.09.2018 upto 14.05.2019
Shri S.K. Rath	Chief Financial Officer	W.e.f. 14.05.2019
Shri Manish Kumar	Company Secretary	

7. NTPC Mining Ltd.

Shri A. K. Gupta	Chairman
Shri Parth Mazumdar	Non-Executive Director
Shri Aditya Dar	Non-Executive Director

8. THDC India Ltd.

Shri D V Singh	Chairman & Managing Director	
Shri Vijay Goel	Director (Personnel)	
Shri J. Behera	Director (Finance)	W.e.f. 16 August 2019
Shri R K Bishnoi	Director (Technical)	W.e.f. 1 September 2019
Shri H L Arora	Director (Technical)	Upto 31 August 2019
Ms. Rashmi Sharma	Company Secretary	

9. North Eastern Electric Power Corporation Ltd.

Shri V K Singh	Chairman & Managing Director	W.e.f. 1 September 2019
Shri A G West Kharkongor	Chairman & Managing Director	Upto 31 August 2019
Shri V K Singh	Director (Technical)	
Shri M Shiva Shunmuganathan	Director (Finance)	
Shri Anil Kumar	Director (Personnel)	

iii) Post Employment Benefit Plans:

1. NTPC Limited Employees Provident Fund
2. NTPC Employees Gratuity Fund
3. NTPC Post Retirement Employees Medical Benefit Fund
4. NTPC Limited Defined Contribution Pension Trust
5. THDC Employees Provident Fund Trust
6. THDCIL Employees Defined Contribution Superannuation Pension Trust
7. THDCIL Post Retirement Medical Facility Fund Trust
8. NEEPCO Employees Provident Fund Trust
9. NEEPCO Employees Defined Contribution Superannuation Scheme Trust
10. NEEPCO Employees Social Security Scheme Trust
11. NEEPCO Employees Group Gratuity Assurance Fund Trust

iv) Entities under the control of the same government:

The Parent company is a Central Public Sector Undertaking (CPSU) controlled by Central Government by holding majority of shares (Note 19). Pursuant to Paragraph 25 and 26 of Ind AS 24, entities over which the same government has control or joint control of, or significant influence, then the reporting entity and other entities shall be regarded as related parties. Transactions with these parties are carried out at market terms at arm length basis. The Group has applied the exemption available for government related entities and have made limited disclosures in the financial statements. Such entities with which the Company has significant transactions include but not limited to Coal India Ltd., Singareni Coalfields Ltd., GAIL (India) Ltd., BHEL Ltd., SAIL Ltd., Indian Oil Corporation Ltd., Bharat Petroleum Corporation Ltd.

v) Others:

1. NTPC Education and Research Society
2. NTPC Foundation

b) Transactions with the related parties are as follows:

₹ Crore

Particulars	Joint Venture Companies	
	For the year ended	
	31 March 2020	31 March 2019
i) Sales/purchase of goods and services during the year		
- Contracts for works/services for services received by the Group	1,346.57	1,430.91
- Contracts for works/services for services provided by the Group	41.55	37.33
- Purchase of goods	38.77	92.47
ii) Sales/purchase of assets	3.26	14.34
iii) Deputation of employees	223.34	199.87
iv) Dividend received	205.60	99.39
v) Equity contributions made	970.57	222.69
vi) Loans granted	12.40	-
vii) Interest on loan	0.79	0.60
viii) Guarantees received	18.01	13.99

Note: Refer Note no. 64 for other commitments with Joint Venture Companies.

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Transactions with post employment benefit plans		
- Contributions made during the year	824.28	852.01
Compensation to Key management personnel		
- Short term employee benefits	15.54	18.44
- Post employment benefits	1.27	1.04
- Other long term benefits	0.92	1.04
- Termination benefits	1.51	0.35
- Sitting fee	0.73	0.73
Total compensation to key management personnel	19.97	21.60

Transactions with the related parties under the control of the same government: ₹ Crore

Sl. No.	Name of the Company	Nature of transaction by the company	For the year ended 31 March 2020	For the year ended 31 March 2019
1	Bharat Coking Coal Ltd.	Purchase of coal	1,830.89	1,248.12
2	Central Coalfields Ltd.		5,604.56	3,573.72
3	Eastern Coalfields Ltd.		9,585.79	8,175.98
4	Mahanadi Coalfields Ltd.		4,691.21	4,464.44
5	Northern Coalfields Ltd.		9,895.57	9,429.26
6	South Eastern Coalfields Ltd.		4,903.98	5,328.59
7	Western Coalfields Ltd.		1,035.30	572.32
8	Singareni Collieries Company Ltd.		5,855.21	6,854.74
9	Coal India Ltd.		33.96	288.81
10	Bharat Heavy Electricals Ltd.	Purchase of equipment & erection services	2,357.17	2,994.38
		Purchase of spares	482.12	565.69
		Receipt of maintenance services	1,102.75	1,048.25
11	GAIL (India) Ltd.	Purchase of natural gas	2,226.82	2,304.37
12	Indian Oil Corporation Ltd.	Purchase of oil products	1,069.14	686.21
13	Bharat Petroleum Corporation Ltd.	Purchase of natural gas and oil products	353.31	270.36
14	Steel Authority of India Ltd.	Purchase of steel and iron products	251.18	232.98
15	Rural Electrification Corporation Ltd.	Consultancy services provided by the Group	40.29	0.69
16	Rites Ltd	Receipt of maintenance services	680.61	1,113.79
17	POSOCO	Open Access Booking	38.34	297.10
18	Power Grid Corporation of India Ltd.		37.40	6.07
19	Others		0.16	0.16
20	Damodar Valley Corporation	Sale of Bilateral Energy	890.76	917.06
21	Other entities	Purchase of equipment & erection services	370.41	210.99
		Purchase of spares	35.02	32.03
		Receipt of maintenance services	581.04	607.76
		Consultancy and Other Services provided by the Group	56.36	68.94
		Sale of Solar Energy	36.09	34.85

₹ Crore

Transactions with others listed at (a) (v) above	For the year ended 31 March 2020	For the year ended 31 March 2019
- Contracts for works/services for services received by the Group	60.88	12.43

c) **Outstanding balances with related parties are as follows:**

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Amount recoverable towards loans from		
- Joint venture companies	**19.09**	6.00
- Key management personnel	**0.03**	0.12
- Others	**0.60**	0.60
Amount recoverable other than loans from		
- Joint venture companies	**109.33**	99.70
- Post employment benefit plans	**37.42**	77.20
- Others	**0.42**	0.14
Amount payable to		
- Joint venture companies	**391.82**	420.02
- Post employment benefit plans	**230.54**	132.18

d) **Individually significant transactions**

₹ Crore

Particulars	Nature of relationship	Amount	
		For the year ended 31 March 2020	For the year ended 31 March 2019
Contracts for works/services for services received by the Group			
Utility Powertech Ltd.	Joint venture company	**1,159.39**	1,055.50
NTPC BHEL Power Projects Private Ltd.	Joint venture company	**99.28**	137.34
NTPC-GE Power Services Private Ltd.	Joint venture company	**79.35**	223.51
Contracts for works/services for services provided by the Group			
NTPC-SAIL Power Company Ltd.	Joint venture company	**14.18**	11.10
Meja Urja Nigam Private Ltd.	Joint venture company	**12.05**	13.10
Sale/purchase of goods			
Energy Efficiency Services Ltd.	Joint Venture Company	**38.01**	41.68
Dividend received			
NTPC-SAIL Power Company Ltd.	Joint venture company	**50.00**	20.00
Aravali Power Company Private Ltd.	Joint venture company	**146.83**	71.65
Energy Efficiency Services Ltd.	Joint venture company	**4.47**	4.01
Utility Powertech Ltd.	Joint venture company	**4.00**	3.50
NTPC-GE Power Services Private Ltd.	Joint venture company	**0.30**	0.23
Equity contributions made			
Meja Urja Nigam Private Ltd.	Joint venture company	**262.31**	110.00
Energy Efficiency Services Ltd.	Joint venture company	**218.11**	-
Bangladesh-India Friendship Power Company Pvt.Ltd.	Joint venture company	**166.89**	-
NTPC-Tamil Nadu Energy Company Ltd.	Joint venture company	**12.50**	5.61
Hindustan Urvarak & Rasayan Ltd.	Joint venture company	**310.76**	107.08
Loans granted			
National High Power Test Laboratory Private Ltd.	Joint venture company	**12.40**	-
Guarantees received			
Utility Powertech Ltd.	Joint venture company	**17.80**	13.60
NTPC-GE Power Services Private Ltd.	Joint venture company	**0.21**	0.39

e) Terms and conditions of transactions with the related parties

(i) Transactions with the related parties are made on normal commercial terms and conditions and at arm length price.

(ii) The Group is assigning jobs on contract basis, for sundry works in plants/stations/offices to M/s Utility Powertech Ltd (UPL), a 50:50 joint venture between the Parent Company and Reliance Infrastructure Ltd. UPL inter-alia undertakes jobs such as overhauling, repair, refurbishment of various mechanical and electrical equipment of power stations. The Group has entered into Power Station Maintenance Agreement with UPL from time to time. The rates are fixed on cost plus basis after mutual discussion and after taking into account the prevailing market conditions.

(iii) The Group is seconding its personnel to Joint venture companies as per the terms and conditions agreed between the companies, which are similar to those applicable for secondment of employees to other companies and institutions. The cost incurred by the group towards superannuation and employee benefits are recovered from these companies.

(iv) Loans granted to joint venture companies are detailed below:

Sl. No.	Name of the joint venture company	Loan granted (Amount in ₹ crore)	Rate of interest (p.a.)	Repayment schedule	Purpose	Year of grant of loan
1	National High Power Test Laboratory Private Ltd.	18.40	10% (quarterly rest)	Principal and interest repayable in twenty semi-annual installments from 30 September 2022 .	For repayment of loans/ contractual obligations	2019-20

(v) Consultancy services provided by the Group to Joint venture companies are generally on nomination basis at the terms, conditions and principles applicable for consultancy services provided to other parties.

(vi) Outstanding balances of joint venture companies at the year-end are unsecured and settlement occurs through banking transaction. These balances other than loans are interest free. The Group has not recorded any impairment of receivables relating to amounts owed by related parties. This assessment is undertaken in each financial year through examining the financial position of the related party and the market in which the related party operates.

(vii) Restrictions on disposal of investments and commitments towards further investments in respect of joint venture companies are disclosed in Note 64.

54. Disclosure as per Ind AS 33 'Earnings per Share'

(i) Basic and diluted earnings per share attributable to owners of the parent company (in ₹)

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
From operations including movement in regulatory deferral account balances (a) **[A/D]**	**11.72**	13.88
From regulatory deferral account balances (b) **[B/D]**	**4.92**	(4.12)
From operations excluding movement in regulatory deferral account balances (a)-(b) **[C/D]**	**6.80**	18.00
Nominal value per share	**10.00**	10.00

(ii) Profit attributable to equity shareholders (used as numerator) (₹ crore)

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
From operations including movement in regulatory deferral account balances (a) [A]	**11,600.23**	13,736.68
From regulatory deferral account balances (b) [B]	**4,872.01**	(4,071.32)
From operations excluding movement in regulatory deferral account balances (a)-(b) [C]	**6,728.22**	17,808.00

(iii) Weighted average number of equity shares (used as denominator) (in Nos.)

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Opening balance of issued equity shares	**9,89,45,57,280**	8,24,54,64,400
Bonus equity shares issued during financial year 2018-19*	-	1,64,90,92,880
Weighted average number of equity shares for Basic and Diluted EPS [D]	**9,89,45,57,280**	9,89,45,57,280

*The Parent Company had issued 1,64,90,92,880 equity shares of ₹ 10/- each as fully paid bonus shares during the financial year 2018-19 in the ratio of one equity share of ₹ 10/- each for every five equity shares held.

55. Disclosure as per Ind AS 36 'Impairment of Assets'

As required by Ind AS 36, an assessment of impairment of assets of the Company was carried out and following has been assessed:

The recoverable amount of the property, plant and equipment & intangible assets of the Cash Generating Units (CGU) of the parent company is value in use and amounts to ₹ **2,39,455.07 crore** (31 March 2019: ₹ 1,64,752.24 crore). The discount rate used for the computation of value in use for the generating plant is **8.00%** (31 March 2019: 9.33%) and for solar plant is **7.78%** (31 March 2019: 8.49%).

56. Disclosure as per Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets'

Movement in provisions:

₹ Crore

Particulars	Provision for obligations incidental to land acquisition		Provision for tariff adjustment		Others		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Carrying amount at the beginning of the year	3,763.80	3,601.31	98.77	330.10	2,069.79	1,414.95	5,932.36	5,346.36
Additions during the year	498.21	812.69	91.91	45.36	231.67	645.16	821.79	1,503.21
Amounts used during the year	(507.48)	(457.64)	-	-	(218.85)	(14.05)	(726.33)	(471.69)
Reversal / adjustments during the year	(0.24)	(192.56)	-	(276.69)	(386.27)	23.73	(386.51)	(445.52)
Carrying amount at the end of the year	3,754.29	3,763.80	190.68	98.77	1,696.34	2,069.79	5,641.31	5,932.36

i) Provision for obligations incidental to land acquisition

Provision for obligations incidental to land acquisition includes expenditure on rehabilitation & resettlement (R&R) including the amounts payable to the project affected persons (PAPs) towards land, expenditure for providing community facilities and expenditure in connection with environmental aspects of the project. The Company has estimated the provision based on the Rehabilitation Action Plan (RAP) approved by the board/competent authority or agreements/directions/demand letters of the local/government authorities. The outflow of said provision is expected to be incurred immediately on fulfilment of conditions by the land oustees/receipts of directions of the local/ government authorities.

ii) Provision for tariff adjustment

Billing upto 31 March 2019 was done based on tariff orders issued under Regulation 2014 except few stations where billing is done on provisional basis due to non-receipt of tariff orders. In such cases, accounting is done based on trued up cash expenditure as per Regulation 2014. Provision for tariff adjustment of ₹ **91.91 crore** (31 March 2019: ₹45.36 crore) is mainly towards the estimated interest payable to beneficiaries at the time of issue of tariff orders. Further, consequent to the dismissal of the Company's appeal against the said CERC order by the Hon'ble Supreme Court of India, provision for tariff adjustments of ₹ **Nil** (31 March 2019: ₹ 276.69 crore) was adjusted by corresponding adjustment in revenue from operations.

iii) Provision - Others

(a) Provision for others includes ₹ **101.05 crore** (31 March 2019: ₹ 85.14 crore) towards cost of unfinished minimum work programme demanded by the Ministry of Petroleum and Natural Gas (MoP&NG) including interest thereon in relation to block AA-ONN-2003/2 [Refer Note 59], ₹ **1,551.18 crore** (31 March 2019: ₹ 1,952.13 crore) towards provision for cases under litigation and ₹ **2.41 crore** (31 March 2019: ₹ 5.13 crore) towards provision for shortage in property, plant and equipment on physical verification pending investigation.

(b) The Company had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. After commencement of the operations, the operator had raised several disputes, invoked arbitration and raised substantial claims on the Company. Based on the interim arbitral award and subsequent directions of the Hon'ble

Supreme Court of India, an amount of ₹ 356.31 crore was paid upto 31 March 2019. In the previous year, the Arbitral Tribunal had awarded a claim of ₹ 1,891.09 crore plus applicable interest in favour of the operator. The Company aggrieved by the arbitral award and considering legal opinion obtained, had filed an appeal before the Hon'ble High Court of Delhi (Hon'ble High Court) against the said arbitral award in its entirety. Considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets', Significant Accounting Policies of the Company and the principle of conservatism, an amount of ₹ 394.07 crore was estimated and provided for as at 31 March 2019 and balance amount of ₹ 1,875.73 crore was disclosed as contingent liability, along with applicable interest.

During the year, against the appeal of the Company, Hon'ble High Court vide its order dated 23 September 2019 held that subject to deposit of ₹ 500.00 crore by the Company with the Registrar General of the Court within six weeks, execution of the impugned award shall remain stayed till the next date of hearing and upon handing over the entire infrastructure in terms of the contract by the operator to the Company, the Registrar General shall release the amount to the operator against a bank guarantee. The said amount was deposited with the Hon'ble High Court on 5 November 2019. Hon'ble High Court vide its order dated 8 January 2020 directed the parties to commence formal handing over of the infrastructure in the presence of appointed Local Commissioner and also, directed release of ₹ 500.00 crore to the operator by the Registrar General subject to the outcome of this application of the Company for formal handing over of the infrastructure. On 17 January 2020, unconditional BG was submitted by the operator to Registrar General and ₹ 500.00 crore was released to operator by the Hon'ble High Court. Further,₹ 356.31 crore paid to operator has been booked to fuel cost and the corresponding provision has been reversed during the current year.

As per orders of Hon'ble High Court, formal handing over of the infrastructure has started on 20 January 2020 at the project site. However, due to certain law and order issues initially and further due to COVID-19 pandemic, Local Commissioner's visit has been deferred.The handing over of the infrastructure facility has not yet completed.

Pending final disposal of the appeal by the Hon'ble High Court, considering the provisions of Ind AS 37 'Provisions, Contingent Liabilities and Contingent Assets' and Significant Accounting Policies of the Company, provision has been updated by interest to ₹ **37.92 crores** as at 31 March 2020 (31 March 2019 : ₹ 394.07 crore) and the balance amount of ₹ **2,014.84 crore** (31 March 2019: ₹ 1,875.73 crore) has been disclosed as contingent liability.

Also Refer Note 67 and 69.

iv) In respect of provision for cases under litigation, outflow of economic benefits is dependent upon the final outcome of such cases.

v) In all these cases, outflow of economic benefits is expected within next one year.

vi) Sensitivity of estimates on provisions

The assumptions made for provisions relating to current period are consistent with those in the earlier years. The assumptions and estimates used for recognition of such provisions are qualitative in nature and their likelihood could alter in next financial year. It is impracticable for the group to compute the possible effect of assumptions and estimates made in recognizing these provisions.

vii) Contingent liabilities and contingent assets

Disclosure with respect to claims against the Group not acknowledged as debts and contingent assets are made in Note 69.

57. Disclosure as per Ind AS 38 'Intangible Assets'

Research expenditure charged to revenue during the year is ₹ **139.16 crore** (31 March 2019: ₹ 54.01 crore).

58. Disclosure as per Ind AS 103 'Business Combinations'

During the year, the Company has acquired the entire stake of Government of India in the paid up equity share capital of THDC India Ltd. (THDCIL) and North Eastern Electric Power Corporation Ltd (NEEPCO). Being a common control acquisition, the accounting has been done as per Appendix C to Ind AS 103 "Business Combination" as per pooling of interest method under which assets and liabilities of the combining entities are reflected at the carrying amounts and no adjustments are made to reflect fair values, or recognize any new assets or liabilities.

Further, restatement of previous year financial statements has been done as if the business combination had occurred from the beginning of preceding period in compliance with Appendix C of Ind AS 103 'Business Combination'. Accordingly, the Consolidated Balance Sheet as at March 31, 2019, Consolidated Statement of Profit and loss , Consolidated Statement of Changes in Equity and Consolidated Statement of Cash Flows for the year ended 31 March 2019 have been restated. The difference between the share capital of these companies and the consideration paid has been recognized as Capital reserve-common control' as at April 1, 2018. Further, the total cash consideration for acquisition of these companies amounting to ₹11,500.00 crore paid in March 2020 has been considered as current liability of the previous year and disclosed under 'Current liabilities-Other financial liabilities' (Refer Note 28).

The details of the acquisitions are as under:

(A) Acquisition of THDC India Limited (THDCIL)

(i) THDC India Limited is a power utility engaged in the generation of electricity.

(ii) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, Government of India (GOI), for the strategic disinvestment of Government of India's shareholding in THDC India Limited (THDCIL) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company on 27 March 2020 has acquired 74.496% shareholding held by the President of India (2,73,09,406 equity shares of face value ₹ 1,000 per share) in THDC India Limited ("THDCIL"), for a total cash consideration of ₹ 7,500.00 crore. Consequently, THDCIL has become the subsidiary of the Company w.e.f. 27 March 2020.

(iii) The difference between the consideration paid ₹ 7,500.00 crore and the value of 74.496 % stake in net identifiable assets of THDCIL on the date of acquisition amounts to ₹ 7,101.31 crore.

(iv) Consequent to this acquisition, the difference of ₹ 4,807.51 crore between the share capital of THDC as at 1 April 2018 of ₹ 2,692.49 crore and the consideration of ₹ 7,500.00 crore has been recognized as "Capital reserve-common control" as at April 1, 2018. Refer Note 20.

(B) Acquisition of North Eastern Electric Power Corporation Ltd. (NEEPCO)

(i) North Eastern Electric Power Corporation Ltd. (NEEPCO) is a power utility engaged in the generation of electricity, primarily operating in the North-Eastern Region of India.

(ii) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, GOI, for the strategic disinvestment of GOI's shareholding in North Eastern Electric Power Corporation Limited (NEEPCO) to NTPC Limited along with transfer of management control. Pursuant to the baove, the Company on 27 March 2020 has also acquired 100.00% shareholding held by the President of India (3,60,98,09,800 equity shares of face value ₹ 10 per share) in North Eastern Electric Power Corporation Ltd. ("NEEPCO"), for a total cash consideration of ₹ 4,000.00 crore. Consequently, NEEPCO has become the subsidiary of the Company w.e.f. 27 March 2020.

(iii) The difference between the consideration paid ₹ 4,000.00 crore and the value of 100.00% stake in net identifiable assets of NEEPCO on the date of acquisition amounts to ₹ 6,408.35 crore.

(iv) Consequent to this acquisition, the difference of ₹ 547.19 crore between the share capital of NEEPCO as at 1 April 2018 of ₹ 3,452.81 crore and the consideration of ₹ 4,000.00 crore has been recognized as "Capital reserve-common control" as at April 1, 2018. Refer Note 20.

59. Disclosure as per Ind AS 106, 'Exploration for and Evaluation of Mineral Resources'

a) The Company along-with some public sector undertakings had entered into Production Sharing Contracts (PSCs) with GOI for three oil exploration blocks namely KG-OSN-2009/1, KG-OSN-2009/4 and AN-DWN-2009/13 under VIII round of New Exploration Licensing Policy (NELP VIII) with 10% participating interest (PI) in each of the blocks.

In the case of Block AN-DWN-2009/13 and KG-OSN-2009/1, Oil and Natural Gas Corporation Ltd. (ONGC) was the operator and the Company along-with the consortium partners have relinquished both the blocks to Directorate General of Hydrocarbons (DGH).

Based on the un-audited statement of the accounts for the above blocks forwarded by ONGC, the operator, the Company's share in the assets and liabilities and expenses is as under:

₹ Crore

Particulars	**As at 31 March 2020 (Unaudited)**	As at 31 March 2019 (Unaudited)
Assets	**0.01**	0.01
Liabilities	**0.49**	0.49
Capital commitments [Unfinished Minimum Work Programme (MWP)]	**-**	-

₹ Crore

Particulars	**As at 31 March 2020 (Unaudited)**	As at 31 March 2019 (Unaudited)
Expenses	**-**	0.43

For the year ended 31 March 2020 and 31 March 2019, there are no income and operating/investing cash flow from exploration activities.

The exploration activities in block KG-OSN-2009/4 were suspended w.e.f. 11 January 2012 due to non-clearance by the Ministry of Defence, GOI. Subsequently, DGH vide letter dated 29 April 2013 has informed ONGC that the block is cleared conditionally wherein block area is segregated between No Go zone, High-risk zone and Permitted zone. As the permitted area is only 38% of the total block area the consortium has submitted proposal to DGH for downward revision of MWP of initial exploration period. DGH has agreed for drilling of one well and have instructed to carry out airborne Full Tensor Gravity Gradiometer (FTG) survey in conditionally & partial cleared area in lieu of MoD proportionate reduced 317 Sq. Km. 3D survey, 589 LKM of 2D survey and drilling of 2 wells.

ONGC has completed drilling of one well. Airborne Full Tensor Gravity Gradiometer (FTG) survey work is also completed. The Company along-with the consortium partners has decided to relinquish the block and Oil and Natural Gas Corporation Ltd. (ONGC), the operator, has submitted an application to Directorate General of Hydrocarbons (DGH) in this regard.

b) Exploration activities in the block AA-ONN-2003/2 were abandoned in January 2011 due to unforeseen geological conditions and withdrawal of the operator. Attempts to reconstitute the consortium to accomplish the residual exploratory activities did not yield result. In the meanwhile, Ministry of Petroleum & Natural Gas, GoI demanded in January 2011 the cost of unfinished minimum work programme from the consortium with NTPC's share being USD 7.516 million. During the year, provision in this respect has been updated to ₹ 101.04 crore from ₹ 85.14 crore along-with interest. The Company has sought waiver of the claim citing force majeure conditions at site leading to discontinuation of exploratory activities.

The Company has accounted for expenditure of ₹ **16.03 crore** (31 March 2019: ₹ 12.10 crore) towards updation of liabilities relating to MWP and other liabilities of M/s Geopetrol International, the operator to complete the winding up activities of the Block. The Company's share in the assets and liabilities are as under:

₹ **Crore**

Particulars	**As at 31 March 2020 (Unaudited)**	As at 31 March 2019 (Unaudited)
Assets	**9.19**	9.19
Liabilities (including unfinished MWP)	**103.32**	87.29

Provision of ₹ **8.26 crore** as at 31 March 2020 (31 March 2019: ₹ 8.26 crore) has been made towards the assets under exploration and estimated obsolescence in the inventory.

For the year ended 31 March 2020 and 31 March 2019, there are no income and operating/investing cash flow from exploration activities. The value of assets reported above is based on statement received from the operator in the earlier years.

c) The Company had entered into production sharing contracts (PSC) with GOI for exploration block namely CB-ONN-2009/5 VIII round of New Exploration Licensing Policy (NELP VIII) with 100% participating interest (PI) in the block.

MWP for the block has been completed. No oil or gas of commercial value was observed in any of the wells. Accordingly, the block has been relinquished to DGH, GOI.

Company's share in assets and liabilities and expenses is as under:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Assets	**6.11**	6.13
Liabilities	**0.25**	0.27

₹ **Crore**

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Expenses	**0.01**	0.39
Operating cash flows from exploration activities	**-**	0.40

Provision of ₹ **6.07 crore** as at 31 March 2020 (31 March 2019: ₹ 6.07 crore) has been made towards estimated obsolescence in the inventory.

For the year ended 31 March 2020 and 31 March 2019, there are no income and investing cash flow from exploration activities.

d i) Coal production commenced from Pakri-Barwadih coal block (PB), during FY 19-20, about 9.42 MMT coal have been extracted from PB mine. Exploration and evaluation activities are taking place at under ground mine area/dip side area of PB block. At Dulanga and Talaipalli coal mine extraction has already started and at Chatti-Bariatu and Kerandari coal mining projects land acquisition and other mine development activities are in progress. these mines are also disclosed in Note 3 - Capital work in progress under 'Development of coal mines'.

ii) Exploration and evaluation activities are in progress at Banai, Bhalumuda and Mandakini - B coal blocks allotted by the GOI. As advised by MoC, separate mining plans for Banai and Bhalamuda blocks are under preparation by CMPDIL. In respect of Mandakini-B coal block, Mining Plan approved by MoC and Feasibility Report has been prepared by CMPDIL. Mining infrastructure development activities are in progress. Section-7 (CBA Act) notification has been issued by MoC.

iii) In the previous year, the Company took over Barauni Thermal Power Station from Bihar State Power Generation Company Limited (BSPGCL). Ministry of Coal, Government of India has transferred Badam coal mine, the linked coal mine of Barauni TPS, to NTPC on 2 September 2019.

Assets and liabilities of coal exploration and evaluation activities as mentioned at d)(ii) and (iii) are as under:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Assets	**292.46**	238.95
Liabilities	**7.15**	10.25

For the year ended 31 March 2020 and 31 March 2019, there are no income, expenses and operating cash flows from coal exploration activities.

60. Disclosure as per Ind AS 108 'Operating segments'

A. General Information

The Group has two reportable segments, as described below, which are the Group's strategic business units. The strategic business units offer different products and services, and are managed separately because they require different technology and marketing strategies. For each of the strategic business units, the Chief Operating Decision Maker (CODM) reviews internal management reports on at least a quarterly basis.

The following summary describes the operations in each of the Group's reportable segments:

Generation of energy: Generation and sale of bulk power to State Power Utilities.

Others: It includes providing consultancy, project management & supervision, energy trading, oil and gas exploration and coal mining.

Information regarding the results of each reportable segment is included below. Performance is measured based on segment profit before income tax, as included in the internal management reports that are reviewed by the Board of Directors. Segment profit is used to measure performance as management believes that such information is the most relevant in evaluating the results of certain segments relative to other entities that operate within these industries.

Transfer prices between operating segments are on an arm's length basis in a manner similar to transactions with third parties.

B. Information about reportable segments and reconciliations to amounts reflected in the financial statements:

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	For the year ended		For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Segment revenue								
Revenue from external customers*	**1,01,578.45**	92,051.50	**7,503.00**	7,563.50	**-**	-	**1,09,081.45**	99,615.00
Inter-segment revenue	**1,876.36**	1,795.27	**1,774.80**	28.44	**(3,651.16)**	(1,823.71)	**-**	-
	1,03,454.81	93,846.77	**9,277.80**	7,591.94	**(3,651.16)**	(1,823.71)	**1,09,081.45**	99,615.00
Other income	**2,986.80**	2,673.59	**148.06**	44.65	**(5.86)**	-	**3,129.00**	2,718.24
	1,06,441.61	96,520.36	**9,425.86**	7,636.59	**(3,657.02)**	(1,823.71)	**112,210.45**	1,02,333.24
Unallocated corporate interest and other income							**162.13**	199.81
Total	**1,06,441.61**	96,520.36	**9,425.86**	7,636.59	**(3,657.02)**	(1,823.71)	**1,12,372.58**	1,02,533.05
Segment result (including net movements in regulatory deferral account balances)**	**30,688.92**	16,286.30	**605.39**	383.84	**-**	-	**31,294.31**	16,670.14
Unallocated corporate interest and other income							**162.13**	199.81
Unallocated corporate expenses, interest and finance charges							**9,580.25**	7,299.70
Profit before share of net profits of investments accounted for using equity method and tax							**21,876.19**	9,570.25
Add: Share of net profits of joint ventures accounted for using equity method							**405.40**	672.17
Profit before tax							**22,281.59**	10,242.42
Income tax expense (including tax on net movements in regulatory deferral account balances)							**10,379.61**	(3,792.07)
Profit after tax							**11,901.98**	14,034.49

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Depreciation and amortisation expense	**10,177.45**	8,595.25	**34.92**	0.39	**10,212.37**	8,595.64
Non-cash expenses other than depreciation and amortisation	**268.93**	718.42	**111.46**	14.32	**380.39**	732.74
Capital expenditure	**25,751.10**	42,852.92	**1,539.59**	1,032.48	**27,290.69**	43,885.40

₹ Crore

Particulars	Generation of energy		Others		Inter-segment eliminations		Total	
	As at		As at		As at		As at	
	31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019	**31 March 2020**	31 March 2019
Segment assets	**2,49,707.52**	1,93,688.62	**8,496.37**	6,587.89	**(342.40)**	(323.38)	**2,57,861.49**	1,99,953.13
Unallocated corporate and other assets							**119,525.64**	1,46,708.03
Total assets	**2,49,707.52**	1,93,688.62	**8,496.37**	6,587.89	**(342.40)**	(323.38)	**3,77,387.13**	3,46,661.16
Segment liabilities	**25,614.76**	22,585.32	**5,254.41**	4,399.11	**(342.40)**	(323.38)	**30,526.77**	26,661.05
Unallocated corporate and other liabilities							**2,28,021.20**	2,08,643.90
Total liabilities	**25,614.76**	22,585.32	**5,254.41**	4,399.11	**(342.40)**	(323.38)	**2,58,547.97**	2,35,304.95

* Generation segment includes ₹ **60.93 crore** (31 March 2019: (-) ₹ 2,235.15 crore) for sales related to earlier years.

** Generation segment result would have been ₹ **30,627.99 crore** (31 March 2019: ₹ 15,535.88 crore) without including the sales related to earlier years amounting to ₹ **60.93 crore (31 March 2019: (-) ₹ 2,235.15 crore) and related expenses amounting to ₹ Nil (31 March 2019: (-) ₹ 2,985.57 crore).**

Reconciliation of Assets and Liabilities

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Segment assets (A)	**2,57,861.49**	1,99,953.13
Unallocated corporate and other assets:		
Non current investments	**9,306.59**	8,132.31
Capital work in progress including intangible assets under development	**98,508.47**	1,18,396.86
Capital advances	**7,200.98**	6,972.36
Cash and cash equivalents and other bank balances	**2,199.60**	2,125.14
Other current assets	**155.85**	6,254.76
Other unallocable assets	**2,154.15**	4,826.60
Total unallocated corporate and other assets (B)	**1,19,525.64**	1,46,708.03
Total Assets (A+B)	**3,77,387.13**	3,46,661.16
Segment liabilities(A)	**30,526.77**	26,661.05
Unallocated corporate and other liabilities:		
Non current borrowings	**1,86,428.08**	1,57,380.42
Deferred tax liability	**7,617.11**	3,928.11
Borrowings current	**16,556.23**	17,368.85
Capital liabilities	**16,722.62**	17,104.45
Liability towards acquisition of THDCIL and NEEPCO	**-**	11,500.00
Other unallocable liabilities	**697.16**	1,362.07
Total unallocated corporate and other liabilities (B)	**2,28,021.20**	2,08,643.90
Total Liabilities (A+B)	**258,547.97**	2,35,304.95

Reconciliation of profit after tax

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Segment result (including net movements in regulatory deferral account balances) (A)	**31,294.31**	16,670.14
Unallocated corporate interest and other income (B)		
Other income	**162.13**	199.81
Sub-total (B)	**162.13**	199.81
Unallocated corporate expenses, interest and finance costs(C)		
Finance costs	**8,116.85**	5,604.65
Employee benefits expense	**741.25**	843.29
Depreciation and amortisation expense	**143.79**	73.39
Other expenses	**578.36**	778.37
Sub total (C)	**9,580.25**	7,299.70
Profit before tax (including net movements in regulatory deferral account balances) [D=(A+B-C)]	**21,876.19**	9,570.25
Share of net profits of joint ventures accounted for using equity method (E)	**405.40**	672.17
Profit before tax (F=D+E)	**22,281.59**	10,242.42
Income tax expense (including tax on net movements in regulatory deferral account balances) (G)	**10,379.61**	(3,792.07)
Profit after tax (H=F-G)	**11,901.98**	14,034.49

The operations of the Group are mainly carried out within the country and therefore there is no reportable geographical segment.

C. Information about geographical areas

Segment revenue - Others include export sale of energy through trading amounting to ₹**1,788.41 crore** (31 March 2019: ₹ 1,511.48 crore) to neighbouring countries of Nepal and Bangladesh by M/s NVVN Ltd., a subsidiary of the Company.

D. Information about major customers

Revenue from customers under 'Generation of energy' segment which is more than 10% of the Group's total revenues is Nil.

61. Financial Risk Management

The Group's principal financial liabilities comprise loans and borrowings in foreign as well as domestic currency, trade payables and other payables. The main purpose of these financial liabilities is to finance the Group's operations. The Group's principal financial assets include loans, trade and other receivables, and cash and short-term deposits that derive directly from its operations. The Group also holds equity investments and enter into derivative contracts such as forward contracts, options and swaps. Derivatives are used exclusively for hedging purposes and not as trading or speculative instruments.

The Group is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Group's exposure to each of the above risks, the Group's objectives, policies and processes for measuring and managing risk.

Risk	Exposure arising from	Measurement	Management
Credit Risk	Trade receivables, unbilled revenue, derivative financial instruments, financial assets measured at amortised cost and cash and cash equivalents.	Ageing analysis Credit ratings	Credit limits, letters of credit and diversification of bank deposits.
Liquidity risk	Borrowings and other liabilities	Rolling cash flows forecast	Availability of committed credit lines and borrowing facilities
Market risk – foreign currency risk	- Future commercial transactions - Recognised financial assets and liabilities not denominated in Indian rupee (₹)	Cash flow forecasting	Forward foreign exchange contracts Foreign currency options Currency and interest rate swaps and principal only swaps
Market risk – interest rate risk	Non-current borrowings at variable rates	Sensitivity analysis	Different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.)

Risk management framework

The Group's activities make it susceptible to various risks. The Group has taken adequate measures to address such concerns by developing adequate systems and practices.

In order to institutionalize the risk management in the Group, an elaborate Enterprise Risk Management (ERM) framework has been developed. The Board of Directors has overall responsibility for the establishment and oversight of the parent company's risk management framework. As a part of the implementation of ERM framework, a 'Risk Management Committee (RMC)' with functional directors as its members has been entrusted with the responsibility to identify and review the risks, formulate action plans and strategies to mitigate risks on short-term as well as long-term basis.

The RMC meets every quarter to deliberate on strategies. Risks are regularly monitored through reporting of key performance indicators. Outcomes of RMC are submitted for information of the Board of Directors.

Credit risk

Credit risk is the risk of financial loss to the Group if a customer or counterparty to a financial instrument fails to meet its contractual obligations resulting in a financial loss to the Group. Credit risk arises principally from trade receivables, unbilled revenue, loans, cash and cash equivalents and deposits with banks and financial institutions.

Trade receivables & unbilled revenue

The Group primarily sells electricity to bulk customers comprising mainly state utilities owned by State Governments. The Group has a robust payment security mechanism in the form of Letters of Credit (LC) backed by the Tri-Partite Agreement (TPA). The TPAs were signed among the Govt. of India, RBI and the individual State Governments subsequent to the issuance of the One Time Settlement Scheme of SEBs dues during 2001-02 by the GOI, which were valid till October 2016. Govt of India subsequently approved the extension of these TPAs for another period of 10 years. Most of the States have signed these extended TPAs and signing is in progress for the balance states.

CERC Tariff Regulations allow payment against monthly bill towards energy charges within a period of forty five days from the date of bill and levy of surcharge @ 18% p.a. on delayed payment beyond forty five days.

A default occurs when in the view of management there is no significant possibility of recovery of receivables after considering all available options for recovery.

As per the provisions of the TPA, the customers are required to establish LC covering 105% of the average monthly billing of the Company for last 12 months. The TPA also provided that if there is any default in payment of current dues by any State Utility the outstanding dues can be deducted from the State's RBI account and paid to the concerned CPSU. There is also provision of regulation of power by the Group in case of non payment of dues and non-establishment of LC.

In addition to above, MoP vide its communications dated 28 June 2019 and subsequent clarifications, further emphasised on ensuring availability of suitable payment security mechanism to be maintained by DISCOMs. Further, to liquidate the outstanding dues of the discoms towards the generating companies, GOI has announced a Scheme for offering ₹ 90,000.00 crore in soft loans under the Atmanirbhar Bharat package. The Discoms are expected to take the benefit of the this Scheme and pay their outstanding dues.

These payment security mechanisms have served the Group well over the years. The Group has not experienced any significant impairment losses in respect of trade receivables in the past years. Since the Group has its power stations as well as customers spread over various states of India, geographically there is no concentration of credit risk.

Unbilled revenue primarily relates to the Group's right to consideration for work completed but not billed at the reporting date and have substantially the same risk characteristics as the trade receivables for the same type of contracts.

Investments

The Group limits its exposure to credit risk by investing in only Government of India Securities, State Government Securities and other counterparties have a high credit rating. The management actively monitors the interest rate and maturity period of these investments. The Group does not expect the counterparty to fail to meet its obligations, and has not experienced any significant impairment losses in respect of any of the investments.

Loans

The Group has given loans to employees, joint venture companies and other parties. Loans to the employee are secured against the mortgage of the house properties and hypothecation of vehicles for which such loans have been given in line with the policies of the Company. The loan provided to group companies are collectible in full and risk of default is negligible. Loan to APIIC is against a guarantee given by the Government of Andhra Pradesh vide GO dated 3 April 2003.

Cash and cash equivalents

The Group held cash and cash equivalents of ₹ **589.52 crore** (31 March 2019: ₹ 323.74 crore). The cash and cash equivalents are held with banks with high rating.

Deposits with banks and financial institutions

The Group held deposits with banks and financial institutions of ₹ **2,624.77 crore** (31 March 2019: ₹ 2,609.69 crore). In order to manage the risk, Group places deposits with only high rated banks/institutions.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)		
Non-current investments	**50.28**	91.92
Non-current loans	**511.08**	476.13
Other non-current financial assets	**1,227.88**	1,302.70
Cash and cash equivalents	**589.52**	323.74
Bank balances other than cash and cash equivalents	**2,624.77**	2,609.69
Current loans	**252.67**	248.16
Other current financial assets*	**796.62**	330.58
Total (A)	**6,052.82**	5,382.92
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL) as per simplified approach		
Trade receivables	**20,370.80**	12,363.52
Unbilled revenue	**12,231.18**	8,750.66
Total (B)	**32,601.98**	21,114.18
Total (A+B)	**38,654.80**	26,497.10

* Excluding unbilled revenue (Refer Note 16)

(ii) **Provision for expected credit losses**

(a) **Financial assets for which loss allowance is measured using 12 month expected credit losses**

The Group has assets where the counter-parties have sufficient capacity to meet the obligations and where the risk of default is very low. Accordingly, no loss allowance for impairment has been recognised.

(b) **Financial assets for which loss allowance is measured using life time expected credit losses as per simplified approach**

The Group has customers (State government utilities) with capacity to meet the obligations and therefore the risk of default is negligible or nil. Further, management believes that the unimpaired amounts that are past due by more than 30 days are still collectible in full, based on historical payment behaviour and extensive analysis of customer credit risk. Hence, no impairment loss has been recognised during the reporting periods in respect of trade receivables and unbilled revenue.

(iii) **Ageing analysis of trade receivables**

The ageing analysis of the trade receivables is as below:

₹ Crore

Ageing	Not due	0-30 days past due	31-60 days past due	61-90 days past due	91-120 days past due	More than 120 days past due	Total
Gross carrying amount as at 31 March 2020	**5,064.29**	**3,330.47**	**2,064.59**	**1,221.85**	**663.58**	**8,214.59**	**20,559.37**
Gross carrying amount as at 31 March 2019	6,399.23	1,160.30	735.58	728.55	233.74	3,254.65	12,512.05

(iv) **Reconciliation of impairment loss provisions**

The movement in the allowance for impairment in respect of financial assets during the year was as follows:

₹ Crore

Particulars	Trade receivables	Advances	Claims recoverable	Total
Balance as at 1 April 2018	147.24	0.15	0.12	147.51
Impairment loss recognised	1.29	-	14.95	16.24
Amounts written off	-	0.01	-	0.01
Balance as at 31 March 2019	148.53	0.14	15.07	163.74
Impairment loss recognised	88.18	-	-	88.18
Amounts written off / written back	48.14	-	14.95	63.09
Balance as at 31 March 2020	**188.57**	**0.14**	**0.12**	**188.83**

Based on historic default rates, the Group believes that no impairment allowance is necessary in respect of any other financial assets as the amounts of such allowances are not significant.

Liquidity risk

Liquidity risk is the risk that the Group will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash or another financial asset. The Group's approach to managing liquidity is to ensure, as far as possible, that it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group has an appropriate liquidity risk management framework for the management of short, medium and long term funding and liquidity management requirements. The Group manages liquidity risk by maintaining adequate cash reserves, banking facilities and reserve borrowing facilities by continuously monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities.

The Group's treasury department is responsible for managing the short term and long term liquidity requirements of the Group. Short term liquidity situation is reviewed daily by Treasury department. The Board of directors has established policies to manage liquidity risk and the Group's treasury department operates in line with such policies. Any breaches of these policies are reported to the Board of Directors. Long term liquidity position is reviewed on a regular basis by the Board of Directors and appropriate decisions are taken according to the situation.

Typically the Group ensures that it has sufficient cash on demand to meet expected operational expenses for a month, including the servicing of financial obligations, this excludes the potential impact of extreme circumstances that cannot reasonably be predicted, such as natural disasters.

As part of the CERC regulations, tariff inter alia includes recovery of capital cost. The tariff regulations also provide for recovery of energy charges, operations and maintenance expenses and interest on normative working capital requirements. Since billing to the customers are generally on a monthly basis, the Group maintains sufficient liquidity to service financial obligations and to meet its operational requirements.

(i) Financing arrangements

The Group had access to the following undrawn borrowing facilities at the end of the reporting period:

₹ Crore

Particulars	31 March 2020	31 March 2019
Fixed-rate borrowings		
Term loans	**150.00**	83.00
Foreign currency loans	**-**	3,207.17
Floating-rate borrowings		
Cash credit	**3,598.32**	4,612.73
Term loans	**23,140.70**	19,804.66
Foreign currency loans	**7,061.70**	3,828.81
Total	**33,950.72**	31,536.37

(ii) Maturities of financial liabilities

The following are the contractual maturities of derivative and non-derivative financial liabilities, based on contractual cash flows:

31 March 2020 **₹ Crore**

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	614.22	3,241.16	1,893.00	19,714.50	24,125.33	**49,588.21**
Rupee term loans from banks	1,213.69	1,616.41	3,982.35	16,753.96	45,474.97	**69,041.38**
Rupee term loans from others	383.65	1,130.35	1,510.22	5,635.69	11,552.26	**20,212.17**
Finance lease obligations	92.70	64.11	83.73	156.69	2,278.02	**2,675.25**
Foreign currency notes	189.88	180.03	5,803.00	13,028.70	11,066.90	**30,268.51**
Secured foreign currency loans from banks	0.25	77.32	77.32	135.32	-	**290.21**
Unsecured foreign currency loans from banks and financial institutions	176.39	1,511.08	1,166.79	2,074.26	8,051.70	**12,980.22**
Unsecured foreign currency loans (guaranteed by GOI)	36.30	287.54	315.77	994.92	1,801.62	**3,436.15**
Commercial paper and cash credit	13,264.33	3,422.76	-	-	-	**16,687.09**
Trade and other payables	21,897.61	6,732.92	1,147.42	984.53	2,159.29	**32,921.77**

31 March 2019 ₹ Crore

Contractual maturities of financial liabilities	Contractual cash flows					
	3 months or less	3-12 months	1-2 years	2-5 years	More than 5 years	Total
Non-derivative financial liabilities						
Secured bonds	1,160.94	1,675.34	2,500.50	12,391.26	24,335.08	42,063.12
Rupee term loans from banks	386.10	1,739.10	2,440.55	12,835.54	34,192.05	51,593.34
Rupee term loans from others	348.22	743.50	1,187.10	5,309.09	12,991.28	20,579.19
Finance lease obligations	5.04	32.92	36.85	49.74	682.68	807.23
Foreign currency notes	185.10	255.22	-	10,977.00	13,709.80	25,127.12
Secured foreign currency loans from banks	0.50	70.94	70.94	195.12	-	337.50
Unsecured foreign currency loans from banks and financial institutions	197.69	2,979.63	1,520.13	2,380.07	6,258.49	13,336.01
Unsecured foreign currency loans (guaranteed by GOI)	28.51	246.65	282.56	856.17	1,696.21	3,110.10
Commercial paper and cash credit	15,994.89	1,500.77	-	-	-	17,495.66
Trade and other payables	15,406.44	9,874.87	2,057.58	831.34	567.20	28,737.43
Derivative financial liabilities						
Full currency swaps	-	15.77	-	-	-	15.77

Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Group's income. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimising the return.

The Board of directors is responsible for setting up of policies and procedures to manage market risks of the Group. All such transactions are carried out within the guidelines set by the risk management committee.

Current risk

The Group is exposed to foreign currency risk on certain transactions that are denominated in a currency other than entity's functional currency, hence exposure to exchange rate fluctuations arises. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

The currency profile of financial assets and financial liabilities as at 31 March 2020 and 31 March 2019 are as below:

31 March 2020 ₹ Crore

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	-	-	-	-	**-**
Cash and cash equivalents	0.35	-	-	0.07	**0.42**
Other financial assets	1.35	-	0.83	0.54	**2.72**
Total	**1.70**	-	**0.83**	**0.61**	**3.14**
Financial liabilities					
Foreign currency bonds	21,800.90	4,240.85	-	4,226.76 *	**30,268.51**
Unsecured foreign currency loans from banks and financial institutions	5,303.65	2,005.32	9,107.39	-	**16,416.36**
Secured foreign currency loans from banks	290.21	-	-	-	**290.21**
Trade payables and other financial liabilities	2,059.98	1,122.31	95.30	17.49	**3,295.08**
Total	**29,454.74**	**7,368.48**	**9,202.69**	**4,244.25**	**50,270.16**

* ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹2,000.00 crore-₹ denominated USD settled Masala bonds.

CONSOLIDATED FINANCIAL STATEMENTS

31 March 2019 ₹ **Crore**

Particulars	USD	EURO	JPY	Others	Total
Financial assets					
Trade and other receivables	0.05	-	-	1.18	1.23
Cash and cash equivalents	0.53	-	-	3.67	4.20
Other financial assets	1.09	-	-	0.49	1.58
Total	1.67	-	-	5.34	7.01
Financial liabilities					
Foreign currency bonds	16,940.30	3,960.07	-	4,226.76*	25,127.13
Unsecured foreign currency loans from banks and financial institutions	7,424.59	2,204.97	6,832.31	-	16,461.87
Secured foreign currency loans from banks	337.50	-	-	-	337.50
Trade payables and other financial liabilities	2,492.17	1,032.80	106.55	148.83	3,780.35
Total	27,194.56	7,197.84	6,938.86	4,375.59	45,706.85

* ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹2,000.00 crore-₹ denominated USD settled Masala bonds.

Out of the above, an amount of ₹ **Nil** (31 March 2019: ₹ 15.77 crore) is hedged by derivative instruments. In respect of the balance exposure, gain/(loss) on account of exchange rate variations on all foreign currency loans and foreign currency monetary items (up to COD) is recoverable from beneficiaries. Therefore, currency risk in respect of such exposure would not be very significant.

Sensitivity analysis

Since the impact of strengthening or weakening of INR against USD, Euro, JPY and other currencies on the statement of profit and loss would not be very significant; therefore, sensitivity analysis for currency risk is not disclosed.

Embedded derivatives

Certain contracts of the Company for construction of power plants with vendors awarded through ICB (International Competitive Bidding) are denominated in third currency i.e. a currency which is not the functional currency of any of the parties to the contract. The Company has sought an opinion from the Expert Advisory Committee (EAC) of The Institute of Chartered Accountants of India (ICAI) w.r.t. applicability of provisions of Ind AS 109-'Financial Instruments' for accounting of embedded derivatives in such contracts. Pending receipt of opinion from EAC, the company has not considered such transactions as an embedded derivative. On receipt of opinion from EAC, appropriate action shall be taken in this regard.

Interest rate risk

The Group is exposed to interest rate risk arising mainly from non-current borrowings with floating interest rates. The Group is exposed to interest rate risk because the cash flows associated with floating rate borrowings will fluctuate with changes in interest rates. The Group manages the interest rate risks by entering into different kinds of loan arrangements with varied terms (e.g. fixed rate loans, floating rate loans, rupee term loans, foreign currency loans, etc.).

At the reporting date the interest rate profile of the Group's interest-bearing financial instruments is as follows:

₹ Crore

Particulars	31 March 2020	31 March 2019
Financial Assets:		
Loan to related parties	**19.72**	6.72
Loans to others	**24.26**	25.07
Bank deposits	**2,695.11**	2,498.20
Total	**2,739.09**	2,529.99
Financial Liabilities:		
Fixed-rate instruments		
Bonds	**49,583.55**	42,057.94
Foreign currency loans/notes*	**35,419.45**	30,645.32
Rupee term loans	**410.49**	444.36
Commercial paper and cash credit	**13,819.32**	15,502.90
Finance lease obligations	**855.61**	186.41
Sub Total	**1,00,088.42**	88,836.93
Variable-rate instruments		
Foreign currency loans/notes	**11,026.44**	10,725.69
Rupee term loans	**88,843.06**	72,983.98
Cash credit	**2,736.92**	1,992.76
Sub Total	**1,02,606.42**	85,702.43
Total	**2,02,694.84**	1,74,539.36

* Includes ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹ 2,000 crore ₹ denominated USD settled Masala bonds (31 March 2019 : includes ₹ 2000.00 crore - ₹ denominated USD settled Green Masala Bonds and ₹ 2,000 crore ₹ denominated USD settled Masala bonds).

Fair value sensitivity analysis for fixed-rate instruments

The Group's fixed rate instruments are carried at amortised cost. They are therefore not subject to interest rate risk, since neither the carrying amount nor the future cash flows will fluctuate because of a change in market interest rates.

Cash flow sensitivity analysis for variable-rate instruments

A change of 50 basis points in interest rates at the reporting date would have increased (decreased) profit or loss by the amounts shown below. This analysis assumes that all other variables, in particular foreign currency rates, remain constant. The analysis is performed on the same basis for the previous year.

₹ Crore

	Profit or loss	
	50 bp increase	**50 bp decrease**
31 March 2020		
Foreign currency loans/notes	**(43.65)**	**43.65**
Rupee term loans	**(355.17)**	**355.17**
Cash credit	**(4.91)**	**4.91**
	(403.73)	**403.73**
31 March 2019		
Foreign currency loans/notes	(42.00)	42.00
Rupee term loans	(326.68)	326.68
Cash credit	(1.86)	1.86
	(370.54)	370.54

Of the above mentioned increase in the interest expense, an amount of ₹ **162.47 crore** (31 March 2019: ₹ 148.40 crore) is expected to be capitalised and recovered from beneficiaries through tariff.

62. Fair Value Measurements

(a) Financial instruments by category

₹ Crore

Particulars	31 March 2020			31 March 2019		
	FVTPL	FVTOCI	Amortised Cost	FVTPL	FVTOCI	Amortised Cost
Financial assets						
Investments - Equity instruments	3.78	46.50	-	3.78	88.14	-
Trade Receivables	-	-	20,370.80	-	-	12,363.52
Loans	-	-	763.75	-	-	724.29
Cash and cash equivalents	-	-	589.52	-	-	323.74
Other bank balances	-	-	2,624.77	-	-	2,609.69
Finance lease receivables	-	-	464.37	-	-	520.00
Derivative financial assets	-	-	-	1.28	-	-
Other financial assets	-	-	13,791.31	-	-	9,862.66
Total	3.78	46.50	38,604.52	5.06	88.14	26,403.90
Financial liabilities						
Borrowings	-	-	1,85,572.47	-	-	157,194.01
Commercial paper and cash credit	-	-	16,556.23	-	-	17,368.85
Lease obligations	-	-	855.61	-	-	186.41
Trade payables	-	-	10,176.68	-	-	8,662.53
Payable for capital expenditure	-	-	16,722.62	-	-	17,104.45
Other financial liabilities	-	-	2,920.73	-	-	14,729.86
Total	-	-	2,32,804.34	-	-	215,246.11

(b) Fair value hierarchy

This section explains the judgements and estimates made in determining the fair values of the financial instruments that are (a) recognised and measured at fair value and (b) measured at amortised cost and for which fair values are disclosed in the financial statements. To provide an indication about the reliability of the inputs used in determining fair value, the Group has classified its financial instruments into the three levels prescribed under the accounting standard. An explanation of each level follows underneath the table.

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2020	Level 1	Level 2	Level 3	Total
Financial assets:				
Investments in quoted equity instruments - PTC India Ltd.	46.50	-	-	46.50
Investments in unquoted equity instruments	-	-	3.78	3.78
	46.50	-	3.78	50.28

₹ Crore

Financial assets and liabilities measured at fair value- recurring fair value measurement as at 31 March 2019	Level 1	Level 2	Level 3	Total
Financial assets:				
Derivative financial assets				
- Principal only swaps	-	-	1.28	1.28
Investments in quoted equity instruments - PTC India Ltd.	88.14	-	-	88.14
Investments in unquoted equity instruments	-	-	3.78	3.78
	88.14	-	5.06	93.20

The Group has an established control framework with respect to the measurement of fair values. This includes a valuation team that has overall responsibility for overseeing all significant fair value measurements and reports directly to the Director (Finance). The valuation team regularly reviews significant unobservable inputs and valuation adjustments. If third party information, such as broker quotes or pricing services, is used to measure fair values, then the valuation team assesses the evidence obtained from the third parties to support the conclusion that these valuations meet the requirements of Ind AS, including the level in the fair value hierarchy in which the valuations should be classified. Significant valuation issues are reported to the audit committee.

Fair values are categorised into different levels in a fair value hierarchy based on the inputs used in the valuation techniques as follows:

Level 1: Level 1 hierarchy includes financial instruments measured using quoted prices. This includes investments in quoted equity instruments. Quoted equity instruments are valued using quoted prices on national stock exchange.

Level 2: The fair value of financial instruments that are not traded in an active market is determined using valuation techniques which maximise the use of observable market data and rely as little as possible on entity specific estimates. If all significant inputs required to fair value an instrument are observable, the instrument is included in level 2. This level includes mutual funds which are valued using the closing NAV.

Level 3: If one or more of the significant inputs is not based on observable market data, the instrument is included in level 3. The fair value of financial assets and liabilities included in Level 3 is determined in accordance with generally accepted pricing models based on discounted cash flow analysis using prices from prevailing market transactions and dealer quotes of similar instruments.

There have been no transfers in either direction for the years ended 31 March 2020 and 31 March 2019.

(c) Valuation technique used to determine fair value:

Specific valuation techniques used to fair value of financial instruments include:

i) For financial instruments other than at ii), iii) and iv) - the use of quoted market prices.

ii) For investments in mutual funds - Closing NAV is used.

iii) For financial liabilities (vendor liabilities, debentures/bonds, foreign currency notes, domestic/foreign currency loans): Discounted cash flow; appropriate market borrowing rate of the entity as of each balance sheet date used for discounting.

iv) For financial assets (employee loans) - Discounted cash flow; appropriate market rate (SBI lending rate) as of each balance sheet date used for discounting.

(d) Fair value of financial assets and liabilities measured at amortised cost

₹ Crore

Particulars	Level	As at 31 March 2020		As at 31 March 2019	
		Carrying amount	Fair value	Carrying amount	Fair value
Financial assets					
Loans	3	763.75	774.18	724.29	723.41
Finance lease receivables	3	464.37	464.37	520.00	520.00
Claims recoverable	3	821.55	821.55	785.27	785.27
Trade receivables	3	20,370.80	20,370.80	12,363.52	12,363.52
Cash and cash equivalents	1	589.52	589.52	323.74	323.74
Bank balances other than cash and cash equivalents	1	2,624.77	2,624.77	2,609.69	2,609.69
Other financial assets	3	12,969.76	12,969.76	9,078.67	9,078.67
Total		38,604.52	38,614.95	26,405.18	26,404.30
Financial liabilities					
Bonds/Debentures	1	8,898.25	9,920.36	-	-
	2	204.60	248.22	6,138.42	6,217.40
	3	40,480.70	44,641.00	35,919.52	37,372.56
Foreign currency notes	1	-	-	3,541.49	3,671.86
	2	21,755.39	21,700.87	13,355.17	13,805.42
	3	8,440.39	9,070.10	8,152.40	8,658.54
Foreign currency loans	3	16,540.32	16,875.39	16,659.44	16,851.92
Rupee term loans	2	7,736.28	7,857.03	7,744.07	7,826.54
	3	81,516.54	81,517.67	65,683.50	65,681.05
Lease Obligations	3	855.61	855.61	186.41	186.41
Borrowings - current	1	16,556.23	16,556.23	17,368.85	17,368.85
Trade payables & payable for capital expenditure	2	29.12	30.51	563.75	567.61
	3	26,870.18	26,846.36	25,203.23	25,100.84
Other financial liabilities	3	2,920.73	2,920.73	14,729.86	14,729.86
Total		2,32,804.34	2,39,040.08	2,15,246.11	2,18,038.86

The carrying amounts of current trade receivables, current trade payables, payable for capital expenditure, cash and cash equivalents and other financial assets and liabilities are considered to be the same as their fair values, due to their short-term nature.

The carrying values for finance lease receivables approximates the fair value as these are periodically evaluated based on credit worthiness of customer and allowance for estimated losses is recorded based on this evaluation. Also, carrying amount of claims recoverable approximates its fair value as these are recoverable immediately.

The fair values for loans, borrowings, non-current trade payables and payable for capital expenditure were calculated based on cash flows discounted using a current discount rate. They are classified at respective levels based on availability of quoted prices and inclusion of observable/non observable inputs.

63. Capital Management

The Group's objectives when managing capital are to:

- safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders and

- maintain an appropriate capital structure of debt and equity.

The Board of Directors has the primary responsibility to maintain a strong capital base and reduce the cost of capital through prudent management in deployment of funds and sourcing by leveraging opportunities in domestic and international financial markets so as to maintain investors, creditors & markets' confidence and to sustain future development of the business. The Board of Directors monitors the return on capital, which the Company defines as returns from operating activities divided by total shareholders' equity deployed in operating activities. The Board of Directors also monitors the level of dividends to equity shareholders in line with the dividend distribution policy of the Company.

Under the terms of major borrowing facilities, the Group is required to comply with the following financial covenants:

(i) Total liability to networth ranges between 2:1 to 3:1.

(ii) Ratio of EBITDA to interest expense shall not at any time be less than 1.75 : 1.

(iii) Debt service coverage ratio not less than 1.10:1 (in case of foreign currency borrowings).

There have been no breaches in the financial covenants of any interest bearing borrowings.

The Group monitors capital, using a medium term view of three to five years, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Group is not subject to externally imposed capital requirements.

The Group monitors capital using gearing ratio which is net debt divided by total equity. Net debt comprises of non-current and current borrowings less cash and cash equivalent. Equity includes equity share capital and reserves that are managed as capital. The gearing ratio at the end of the reporting period was as follows:

₹ Crore

Particulars	**As at 31 March 2020**	As at 31 March 2019
Borrowings	**202,984.31**	174,749.27
Less: Cash and cash equivalent	**589.52**	323.74
Net Debt	**202,394.79**	174,425.53
Total Equity	**122,156.35**	114,264.41
Net Debt to Equity ratio	**1.66**	1.53

64. Disclosure as per Ind AS 112 'Disclosure of Interest in Other Entities'

(a) Subsidiary companies

The group's subsidiaries at 31 March 2020 are set out below. Unless otherwise stated, they have share capital consisting solely of equity shares that are held directly by the group, and the proportion of ownership interests held equals the voting rights held by the group. The country of incorporation or registration is also their principal place of business.

Name of subsidiary company	Place of business/ country of incorporation	Ownership interest held by the group as at		Ownership interest held by non-controlling interests as at		Principal activities
		31 March 2020	31 March 2019	**31 March 2020**	31 March 2019	
NTPC Electric Supply Company Ltd. (NESCL)	India	**100.00**	100.00	**-**	-	Consultancy & Distribution of energy
NTPC Vidyut Vyapar Nigam Ltd. (NVVN)	India	**100.00**	100.00	**-**	-	Trading of energy
Kanti Bijlee Utpadan Nigam Ltd. (KBUNL)	India	**100.00**	100.00	**-**	-	Generation of energy
Bhartiya Rail Bijlee Company Ltd. (BRBCL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Patratu Vidyut Utpadan Nigam Ltd. (PVUNL)	India	**74.00**	74.00	**26.00**	26.00	Generation of energy
Nabinagar Power Generating Company Ltd. (NPGCL)	India	**100.00**	100.00	**-**	-	Generation of energy
NTPC Mining Ltd. (NML)	India	**100.00**	NA	**-**	NA	Coal mining
THDC India Ltd. (THDCIL)	India	**74.496**	74.496	**25.504**	25.504	Generation of energy
North Eastern Electric Power Corporation Ltd. (NEEPCO)	India	**100.00**	100.00	**-**	-	Generation of energy

(1) The shareholders of the NESCL in its Extra-ordinary General Meeting held on 24 March, 2015, inter alia, approved the proposal for transfer and vesting of all existing operations of NESCL together with all assets and liabilities relating to such operations to NTPC Limited, the Parent Company, with effect from 1 April, 2015. After obtaining the aforesaid approval, an agreement was entered into with the Parent Company to implement such transfer. In pursuance of the above, it does not have any operations w.e.f 1 April 2015.

(2) NTPC Mining Ltd has been incorporated on 29 August 2019 as a wholly owned subsidiary of the Company for taking up coal mining business.

(3) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, Government of India (GOI), for the strategic disinvestment of Government of India's shareholding in THDC India Limited (THDCIL) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired 74.496% of paid up share capital in THDCIL , held by GOI for an aggregate consideration of ₹ 7,500 crore, on 27 March 2020. Consequently, THDCIL has become the subsidiary of the Company w.e.f. 27 March 2020.

(4) The Cabinet Committee on Economic Affairs in its meeting held on November 21, 2019, granted an 'in-principle' approval to the proposal of the Department of Investment and Public Asset Management, Ministry of Finance, GOI, for the strategic disinvestment of GOI's shareholding in North Eastern Electric Power Corporation Limited (NEEPCO) to NTPC Limited along with transfer of management control. Pursuant to the above, the Company has acquired entire paid up share capital in NEEPCO, held by GOI for an aggregate consideration of ₹ 4,000 crore, on 27 March 2020. Consequently, NEEPCO has become wholly owned subsidiary of the Company w.e.f. 27 March 2020.

(b) Non-controlling interests (NCI)

Set out below is summarised financial information for each subsidiary that has non-controlling interest. The amounts disclosed for each subsidiary are before inter-company eliminations.

Summarised balance sheet ₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Current assets	1,083.55	759.58	378.33	314.76	2,813.65	1,905.59
Current liabilities	874.82	973.21	701.55	348.43	2,230.88	2,256.74
Net current assets/ (liabilities)	208.73	(213.63)	(323.22)	(33.67)	582.77	(351.15)
Non-current assets	8,122.66	7,962.96	3,214.86	1,821.71	14,548.75	13,584.43
Non-current liabilities	5,459.19	5,384.14	2,220.33	1,473.08	5,166.64	3,977.18
Net non-current assets	2,663.47	2,578.82	994.53	348.63	9,382.11	9,607.25
Regulatory deferral account debit balances	-	-	-	-	186.22	87.81
Regulatory deferral account credit balances	129.41	0.05	-	-	618.63	569.97
Net assets	2,742.79	2,365.14	671.31	314.96	9,532.47	8,773.94
Accumulated NCI	711.48	582.94	174.54	81.89	2,431.17	2,243.37

Summarised statement of profit and loss for the year ended ₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Total income	2,334.11	1,210.02	-	-	2,469.11	2,912.50
Profit/(loss) for the year	258.46	8.88	(0.41)	(1.38)	920.25	1,189.91
Other comprehensive income/(expense)	-	-	-	-	(16.82)	(4.03)
Total comprehensive income/(expense)	258.46	8.88	(0.41)	(1.38)	903.43	1,185.88
Profit/(loss) allocated to NCI	67.20	2.31	(0.11)	(0.36)	230.41	302.45
Dividends paid to NCI	-	-	-	-	32.13	108.23

Summarised cash flows for the year ended ₹ Crore

Particulars	Bhartiya Rail Bijlee Company Ltd.		Patratu Vidyut Utpadan Nigam Ltd.		THDC India Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Cash flows from/ (used in) operating activities	923.88	475.84	34.56	(460.39)	701.55	1,542.81
Cash flows from/ (used in) investing activities	(474.98)	(663.08)	(678.96)	(160.81)	(1,601.07)	(1,210.06)
Cash flows from/ (used in) financing activities	(272.51)	205.03	645.14	617.58	976.11	(913.38)
Net increase/ (decrease) in cash and cash equivalents	176.39	17.79	0.74	(3.62)	76.59	(580.63)

(c) Details of significant restrictions

In respect of investments in subsidiary companies, the Group has restrictions for their disposal as under:

₹ Crore

Name of the Subsidiary	Period of restrictions for disposal of investments as per related agreements	Amount invested	
		As at 31 March 2020	As at 31 March 2019
Bhartiya Rail Bijlee Company Ltd.	5 years from the date of commercial operation of the last unit of the project.	**1,774.12**	1,721.12
Kanti Bijlee Utpadan Nigam Ltd.	5 years from the date of commercial operation. Further, as per loan agreement, minimum equity of 51% shall be maintained at all times until final settlement of loan i.e., 4 years moratorium period and subsequently 11 years for repayment.	**1,610.67**	1,510.68
Patratu Vidyut Utpadan Nigam Ltd.	5 years from the date of signing of agreement or till the date of commercial operation of the last new unit of Phase-I, whichever is later.	**498.12**	234.12
Nabinagar Power Generating Company Ltd.	NTPC shall not transfer/assign or pledge shares until final settlement of loan i.e. 5 years moratorium and subsequently 15 years for repayment.	**4,417.01**	3,987.16
THDC India Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company.	**7,500.00**	-
North Eastern Electric Power Corporation Ltd.	Save and except with prior written consent of GOI, NTPC shall not take any action that may result in shareholding / or total voting power in the subsidiary falling below 51% and shall not take any action that may result in the subsidiary ceasing to be a government company. Further, NTPC shall continue to hold 100% of paid up capital and voting power in the subsidiary till all amounts repayable under the loan agreement executed between the subsidiary and KfW are repaid.	**4,000.00**	-
Total		**19,799.92**	7,453.08

(d) Change in parent's ownership interest in Subsidiary

During the year ended 31 March 2020, there are no changes in parent's ownership interest in subsidiaries. However, during the year ended 31 March 2019, the parent's ownership interest in KBUNL changed from 72.64% to 100%. The effect of the same is as under:

₹ Crore

Particulars	Owners interest		Minority interest		Total	
	Share capital	Other equity (other than share application money pending allotment)	Share capital	Other equity (other than share application money pending allotment)	Share capital	Other equity (other than share application money pending allotment)
As at 1 April 2018	1,042.89	(183.77)	392.78	(69.22)	1,435.67	(252.99)
Further equity investment during the year	467.78		(392.78)		75.00	-
Share in statement of profit and loss for the year		107.28		(8.54)	-	98.74
Impact of change in ownership interest (100%-72.64% = 27.36%) adjusted in retained earnings (Refer Note 20)		(77.76)		77.76	-	-
As at 31 March 2019	1,510.67	(154.25)	-	-	1,510.67	(154.25)

(e) Joint operations

The group has entered into production sharing contracts (PSCs) with GoI for some exploration blocks whose principal place of business is in India. For detailed disclosures of these joint operations, refer Note 59.

(f) Interests in joint venture companies

List of joint venture companies as at 31 March 2020 in which the group has interest, is as below. These entities have share capital consisting solely of equity shares, which are held directly by the group. The country of incorporation or registration is also their principal place of business, and the proportion of ownership interest is the same as the proportion of voting rights held.

₹ Crore

Name of joint venture company	Place of business/ country of incorporation	Ownership interest held by the group (in %) as at		Accounting method	Carrying amount as at	
		31 March 2020	31 March 2019		31 March 2020	31 March 2019
Utility Powertech Ltd.	India	50.00	50.00	Equity method	72.25	59.07
NTPC-GE Power Services Private Ltd. $	India	50.00	50.00	Equity method	6.34	6.43
NTPC-SAIL Power Company Ltd.	India	50.00	50.00	Equity method	1,369.93	1,249.12
NTPC Tamil Nadu Energy Company Ltd.	India	50.00	50.00	Equity method	1,575.37	1,376.96
Ratnagiri Gas & Power Private Ltd. $	India	25.51	25.51	Equity method	-	-
Konkan LNG Ltd.	India	14.82	14.82	Equity method	34.38	-
Aravali Power Company Private Ltd.	India	50.00	50.00	Equity method	2,993.91	2,936.53
NTPC BHEL Power Projects Private Ltd. *$	India	50.00	50.00	Equity method	-	-
Meja Urja Nigam Private Ltd.	India	50.00	50.00	Equity method	1,303.22	1,284.75
Transformers and Electricals Kerala Ltd. **$	India	44.60	44.60	Equity method	46.87	41.67
National High Power Test Laboratory Private Ltd. $	India	20.00	20.00	Equity method	21.97	26.08
Energy Efficiency Services Ltd. $	India	47.15	36.36	Equity method	556.88	301.45
CIL NTPC Urja Private Ltd. $	India	50.00	50.00	Equity method	0.02	0.02
Anushakti Vidhyut Nigam Ltd. $	India	49.00	49.00	Equity method	0.01	0.01
Hindustan Urvarak and Rasayan Ltd.	India	29.67	29.67	Equity method	753.77	443.54
KSK Dibbin Hydro Power Private Ltd. (Joint venture of Subsidiary Company, NEEPCO Ltd.) $	India	30.00	30.00	Equity method	32.37	32.33
Trincomalee Power Company Ltd. $	Srilanka	50.00	50.00	Equity method	1.31	1.58
Bangladesh-India Friendship Power Company Pvt.Ltd. $	Bangladesh	50.00	50.00	Equity method	487.71	280.85

$ The financial statements are un-audited and certified by the management of respective companies and have been considered for Consolidated Financial Statements of the Group. The figures appearing in their respective financial statements may change upon completion of their audit.

* The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from NTPC BHEL Power Projects Private Ltd. (NTPC-BHEL), a Joint venture of the Group. As NTPC-BHEL was formed by a directive from the GOI, approval of exit from GOI is awaited.

** The Board of Directors of NTPC Limited in its meeting held on 28 April 2016 accorded in principle approval for withdrawal from Transformers and Electricals Kerala Ltd. (TELK), a Joint Venture of the Group. GOI has accorded its approval for exit of NTPC from the joint venture. The decison of the Board of Directors of NTPC Limited and approval of GOI has been conveyed to the Government of Kerala (JV Partner) & TELK. The government of Kerala has requested NTPC to review the decision. The matter is under examination.

(i) Ratnagiri Gas and Power Pvt. Ltd. (joint venture company)(RGPPL) has accumulated losses due to which the Group has recognised accumulated losses equal to the cost of investments of RGPPL as at 31 March 2020. The Group has unrecognised share of losses in respect of RGPPL to ₹ **176.72 crore** as at 31 March 2020 (31 March 2019: ₹ 1,720.96 crore) as per their unaudited financial statements for the year ended 31 March 2020.

(ii) The Group has unrecognised share of losses in respect of Konkan LNG Limited (KLL) (joint venture company) amounting to ₹ **Nil** as at 31 March 2020 (31 March 2019: ₹ 10.86 crore) as per their audited financial statements for the year ended 31 March 2020.

(iii) NTPC BHEL Power Projects Pvt Ltd (NTPC BHEL) (joint venture company) has accumulated losses due to which the Group has recognised accumulated losses equal to the cost of investments of NTPC BHEL as at 31 March 2020. The Group has unrecognised share of losses in respect of NTPC BHEL amounting to ₹ **60.07 crore** as at 31 March 2020 (31 March 2019: ₹ 16.44 crore) as per their unaudited financial statements for the year ended 31 March 2020.

(iv) Summarised financial information of joint venture companies of the group

The tables below provide summarised financial information of joint venture companies of the group. The information disclosed reflects the amounts presented in the financial statements of the relevant joint venture companies and not the group's share of those amounts.

Summarised balance sheet

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC-Tamil Nadu Energy Company Ltd.		Ratnagiri Gas & Power Private Ltd.		Konkan LNG Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Current assets												
Cash and cash equivalents	42.32	39.47	3.11	5.30	130.35	52.03	29.75	16.55	117.43	187.41	18.10	7.45
Other assets	395.28	410.49	130.31	138.02	598.60	470.50	3,694.52	2,521.80	648.98	563.31	514.17	519.09
Total current assets	437.60	449.96	133.42	143.32	728.95	522.53	3,724.27	2,538.35	766.41	750.72	532.27	526.54
Total non-current assets	60.35	44.39	5.38	4.75	4,028.12	3,475.83	7,115.20	7,623.86	1,263.27	1,580.56	3,679.26	3,399.28
Current liabilities												
Financial liabilities (excluding trade payables and provisions)	156.26	141.34	2.02	0.01	462.83	328.34	2,397.82	2,506.99	182.42	3,871.64	12.10	185.49
Other liabilities	175.69	208.95	123.47	134.76	268.00	176.00	1,276.40	590.54	420.12	431.51	145.86	107.36
Total current liabilities	331.95	350.29	125.49	134.77	730.83	504.34	3,674.22	3,097.53	602.54	4,303.15	157.96	292.85
Non-current liabilities												
Financial liabilities (excluding trade payables and provisions)	3.45	4.35	-	-	50.76	35.06	3,966.23	4,306.66	1,369.31	1,492.45	3,821.40	3,705.23
Other liabilities	18.05	21.57	0.64	0.45	1,232.96	960.72	585.17	492.76	10.73	9.58	0.18	0.11
Total non-current liabilities	21.50	25.92	0.64	0.45	1,283.72	995.78	4,551.40	4,799.42	1,380.04	1,502.03	3,821.58	3,705.34
Regulatory deferral account debit balances	-	-	-	-	-	-	540.80	501.15	-	-	-	-
Regulatory deferral account credit balances	-	-	-	-	-	-	-	-	-	-	-	-
Share application money pending allotment	-	-	-	-	-	-	-	12.50	-	-	-	-
Net assets	144.50	118.14	12.67	12.85	2,742.52	2,498.24	3,154.65	2,753.91	47.10	(3,473.90)	231.99	(72.37)

Reconciliation to carrying amounts

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC-Tamil Nadu Energy Company Ltd.		Ratnagiri Gas & Power Private Ltd.		Konkan LNG Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Opening net assets	118.14	98.01	12.85	8.98	2,498.24	2,184.21	2,753.91	2,623.40	(3,473.90)	(2,899.86)	(72.37)	(754.73)
Profit/(loss) for the year	32.27	28.55	0.56	2.92	368.96	362.33	375.46	119.20	(174.10)	(574.04)	270.27	(386.58)
Other comprehensive income/(expense)	3.74	0.01	(0.02)	-	(4.54)	(1.89)	(0.01)	(0.02)	-	-	(0.01)	-
Dividends paid	(9.64)	(8.44)	(0.72)	(0.54)	(120.56)	(48.22)	-	-	-	-	-	-
Other adjustments*	(0.01)	0.01	-	1.49	0.42	1.81	25.29	11.33	3,695.10	-	34.10	1,068.94
Closing net assets	144.50	118.14	12.67	12.85	2,742.52	2,498.24	3,154.65	2,753.91	47.10	(3,473.90)	231.99	(72.37)
Group's share in %	50.00	50.00	50.00	50.00	50.00	50.00	50.00	50.00	25.51	25.51	14.82	14.82
Group's share in INR	72.25	59.07	6.34	6.43	1,371.26	1,249.12	1,577.33	1,376.96	-	-	34.38	-
Goodwill/(Restricted reserves)	-	-	-	-	(1.33)	-	(1.96)	-	-	-	-	-
Carrying amount	72.25	59.07	6.34	6.43	1,369.93	1,249.12	1,575.37	1,376.96	-	-	34.38	-

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

Particulars	Utility Powertech Ltd.		NTPC-GE Power Services Pvt. Ltd.		NTPC-SAIL Power Company Ltd.		NTPC-Tamil Nadu Energy Company Ltd.		Ratnagiri Gas & Power Private Ltd.		Konkan LNG Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Revenue from operations	1,186.13	1,045.25	102.99	231.09	2,852.93	2,656.59	3,897.14	4,089.07	2,041.61	2,051.85	484.86	328.49
Other income	11.59	11.33	0.67	1.26	38.53	82.62	226.99	15.63	75.68	66.20	293.31	6.20
Depreciation and amortisation	1.23	1.26	0.85	0.28	156.80	149.06	488.41	500.18	400.58	481.31	102.41	93.58
Interest expense	1.83	1.61	0.64	0.96	14.02	22.50	627.83	578.94	141.71	151.55	182.06	312.71
Income tax expense/(income)	17.00	17.82	(0.15)	1.33	1.23	38.80	183.36	156.87	-	-	23.03	113.61
Profit/(loss) for the year	32.27	28.55	0.56	2.92	368.96	362.33	375.46	119.20	(174.10)	(574.04)	270.27	(386.58)
Other comprehensive income/(expense)	3.74	0.01	(0.02)	-	(4.54)	(1.89)	(0.01)	(0.02)	-	-	(0.01)	-
Total comprehensive income/(expense)	36.01	28.56	0.54	2.92	364.42	360.44	375.45	119.18	(174.10)	(574.04)	270.26	(386.58)
Dividends received	-	-	-	-	-	-	-	-	-	-	-	-

CONSOLIDATED FINANCIAL STATEMENTS

Summarised balance sheet

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Current assets										
Cash and cash equivalents	210.30	129.01	0.43	1.49	77.50	79.60	0.01	6.31	2.53	12.77
Other assets	3,505.53	3,633.82	217.61	315.62	584.06	83.79	190.41	160.43	10.46	4.90
Total current assets	3,715.83	3,762.83	218.04	317.11	661.56	163.39	190.42	166.74	12.99	17.67
Total non-current assets	6,541.46	6,774.22	387.26	418.33	11,039.03	10,219.81	13.32	34.38	337.29	336.35
Current liabilities										
Financial liabilities (excluding trade payables and provisions)	723.08	808.08	79.25	102.70	1,434.26	954.91	37.04	55.92	-	-
Other liabilities	77.54	143.38	387.48	348.19	109.04	46.31	61.62	42.97	63.41	60.64
Total current liabilities	800.62	951.46	466.73	450.89	1,543.30	1,001.22	98.66	98.89	63.41	60.64
Non-current liabilities										
Financial liabilities (excluding trade payables and provisions)	2,992.38	3,452.81	-	-	7,401.52	6,700.95	-	-	176.77	162.82
Other liabilities	11.49	11.28	258.71	317.43	-	-	-	8.81	0.25	0.18
Total non-current liabilities	3,003.87	3,464.09	258.71	317.43	7,401.52	6,700.95	-	8.81	177.02	163.00
Regulatory deferral account debit balances	5.74	5.76	-	-				-	-	-
Regulatory deferral account credit balances	285.41	254.21	-	-	149.33	1.53	-	-	-	-
Share application money pending allotment	-	-	-	-	-	110.00	-	-	-	-
Net assets	6,173.13	5,873.05	(120.14)	(32.88)	2,606.44	2,569.50	105.08	93.42	109.85	130.38

Reconciliation to carrying amounts

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Opening net assets	5,873.05	5,236.12	(32.88)	8.81	2,569.50	2,471.65	93.42	82.74	130.38	138.95
Profit/(loss) for the year	619.67	781.22	(26.15)	(53.02)	(607.68)	(2.15)	8.41	4.34	(21.84)	(8.72)
Other comprehensive income/(expense)	0.32	0.08	-	(0.19)	-	-	-	(0.12)	(0.04)	(0.05)
Dividends paid	(354.01)	(172.76)	-	-	-	-	-	-	-	-
Other adjustments*	34.10	28.39	(61.11)	11.52	644.62	100.00	3.25	6.46	1.35	0.20
Closing net assets	6,173.13	5,873.05	(120.14)	(32.88)	2,606.44	2,569.50	105.08	93.42	109.85	130.38
Group's share in %	50.00	50.00	50.00	50.00	50.00	50.00	44.60	44.60	20.00	20.00
Group's share in INR	3,086.57	2,936.53	-	-	1,303.22	1,284.75	46.87	41.67	21.97	26.08
Goodwill/(Restricted reserves)	(92.66)	-	-	-	-	-	-	-	-	-
Carrying amount	2,993.91	2,936.53	-	-	1,303.22	1,284.75	46.87	41.67	21.97	26.08

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

Particulars	Aravali Power Company Private Ltd.		NTPC BHEL Power Projects Private Ltd.		Meja Urja Nigam Private Ltd.		Transformers and Electricals Kerala Ltd.		National High Power Test Laboratory Private Ltd.	
	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019	As at 31 March 2020	As at 31 March 2019
Revenue from operations	3,138.77	4,152.11	60.90	73.51	578.24	-	203.25	210.07	11.37	26.03
Other income	189.30	232.89	0.16	0.51	19.13	-	1.45	2.93	0.19	0.41
Depreciation and amortisation	422.28	416.51	6.73	7.28	298.66	-	1.28	1.56	7.64	8.36
Interest expense	323.87	364.91	1.66	2.42	384.21	-	5.76	5.67	16.67	15.83
Income tax expense/(income)	127.16	(370.16)	(9.19)	(29.07)	(175.20)	2.04	-	3.65	-	-
Profit/(loss) for the year	619.67	781.22	(26.15)	(53.02)	(607.68)	(2.15)	8.41	4.34	(21.84)	(8.72)
Other comprehensive income/(expense)	0.32	0.08	-	(0.19)	-	-	-	(0.12)	(0.04)	(0.05)
Total comprehensive income/(expense)	619.99	781.30	(26.15)	(53.21)	(607.68)	(2.15)	8.41	4.22	(21.88)	(8.77)
Dividends received	-	-	-	-	-	-	-	-	-	-

Summarised balance sheet

Particulars	Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2020	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019
Current assets														
Cash and cash equivalents	**177.73**	424.96	**0.04**	0.06	**0.02**	0.02	**232.67**	11.61	**0.13**	0.12	**0.27**	0.96	**227.88**	10.20
Other assets	**4,451.64**	2,991.00	**-**	-	**-**	-	**43.16**	0.22	**7.02**	7.96	**0.25**	0.26	**9.10**	84.43
Total current assets	**4,629.37**	3,415.96	**0.04**	0.06	**0.02**	0.02	**275.83**	11.83	**7.15**	8.08	**0.52**	1.22	**236.98**	94.63
Total non-current assets	**4,479.91**	3,448.41	**-**	-	**-**	-	**8,559.38**	2,475.84	**112.95**	110.60	**2.12**	2.28	**7,988.48**	4,419.45
Current liabilities														
Financial liabilities (excluding trade payables and provisions)	**1,221.68**	1,100.08	**-**	-	**-**	-	**1,591.20**	106.00	**1.60**	1.61	**-**	-	**270.54**	568.91
Other liabilities	**1,870.26**	1,894.43	**0.01**	0.02	**-**	-	**51.62**	347.70	**0.53**	0.59	**0.03**	0.34	**10.73**	10.72
Total current liabilities	**3,091.94**	2,994.51	**0.01**	0.02	**-**	-	**1,642.82**	453.70	**2.13**	2.20	**0.03**	0.34	**281.27**	579.63
Non-current liabilities														
Financial liabilities (excluding trade payables and provisions)	**4,731.66**	3,030.17	**-**	-	**-**	-	**4,344.70**	703.11	**9.98**	8.68	**-**	-	**6,968.77**	3,372.75
Other liabilities	**104.59**	10.61	**-**	-	**-**	-	**306.99**	0.12	**0.07**	0.03	**-**	-		
Total non-current liabilities	**4,836.25**	3,040.78	**-**	-	**-**	-	**4,651.69**	703.23	**10.05**	8.71	**-**	-	**6,968.77**	3,372.75
Regulatory deferral account debit balances	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Regulatory deferral account credit balances	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Share application money pending allotment	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Net assets	**1,181.09**	**829.08**	**0.03**	**0.04**	**0.02**	**0.02**	**2,540.70**	**1,330.74**	**107.92**	**107.77**	**2.61**	**3.16**	**975.42**	**561.70**

Reconciliation to carrying amounts

Particulars	Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2020	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019
Opening net assets	**829.08**	566.68	**0.04**	0.05	**0.02**	0.02	**1,330.74**	996.10	**107.77**	107.44	**3.16**	3.66	**561.70**	380.63
Profit/(loss) for the year	**44.92**	83.82	**(0.01)**	(0.01)	**-**	-	**0.05**	13.41	**0.15**	0.33	**(0.60)**	(0.62)	**-**	-
Other comprehensive income/(expense)	**(0.48)**	(0.22)	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Dividends paid	**(11.44)**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Other adjustments*	**319.01**	178.80	**-**	-	**-**	-	**1,209.91**	321.23	**-**	-	**0.05**	0.12	**413.72**	181.07
Closing net assets	**1,181.09**	829.08	**0.03**	0.04	**0.02**	0.02	**2,540.70**	1,330.74	**107.92**	107.77	**2.61**	3.16	**975.42**	561.70
Group's share in %	**47.15**	36.36	**50.00**	50.00	**49.00**	49.00	**29.67**	33.33	**30.00**	30.00	**50.00**	50.00	**50.00**	50.00
Group's share in INR	**556.88**	301.45	**0.02**	0.02	**0.01**	0.01	**753.77**	443.54	**32.37**	32.33	**1.31**	1.58	**487.71**	280.85
Goodwill/(Restricted reserves)	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Carrying amount	**556.88**	301.45	**0.02**	0.02	**0.01**	0.01	**753.77**	443.54	**32.37**	32.33	**1.31**	1.58	**487.71**	280.85

* Includes adjustments on account of further investment by the joint venture partners.

Summarised statement of profit and loss for the year ended

Particulars	Energy Efficiency Services Ltd.		CIL NTPC Urja Private Ltd.		Anushakti Vidhyut Nigam Ltd.		Hindustan Urvarak and Rasayan Ltd.		KSK Dibbin Hydro Power Private Ltd.		Trincomalee Power Company Ltd.		Bangladesh-India Friendship Power Company Pvt. Ltd.	
	As at 31 March 2020	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019	**As at 31 March 2020**	As at 31 March 2019
Revenue from operations	**1,865.98**	1,829.27	**-**	-	**-**	-	**1.53**	-	**-**	-	**-**	-	**-**	-
Other income	**68.09**	93.82	**-**	-	**-**	-	**15.89**	32.06	**0.51**	0.66	**0.05**	-	**-**	-
Depreciation and amortisation	**496.75**	331.49	**-**	-	**-**	-	**4.13**	0.18	**0.20**	0.20	**-**	-	**-**	-
Interest expense	**322.61**	187.84	**-**	-	**-**	-	**1.32**	-	**0.12**	0.11	**-**	-	**-**	-
Income tax expense/(income)	**(17.70)**	59.01	**-**	-	**-**	-	**0.02**	5.51	**-**	-	**(0.01)**	-	**-**	-
Profit/(loss) for the year	**44.92**	83.82	**(0.01)**	(0.01)	**-**	-	**0.05**	13.41	**0.15**	0.33	**(0.60)**	(0.62)	**-**	-
Other comprehensive income/(expense)	**(0.48)**	(0.22)	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-
Total comprehensive income/(expense)	**44.44**	83.60	**(0.01)**	(0.01)	**-**	-	**0.05**	13.41	**0.15**	0.33	**(0.60)**	(0.62)	**-**	-
Dividends received	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-	**-**	-

(v) Commitments and contingent liabilities in respect of joint venture companies

The Group has commitments of ₹ **2,900.40 crore** (31 March 2019: ₹ 3,504.83 crore) towards further investment in the joint venture companies as at 31 March 2020.

The Group has commitments of bank guarantee of 0.50 % of total contract price to be undertaken by NTPC-BHEL Power Projects Private Ltd. limited to a cumulative amount of ₹ **75.00 crore** (31 March 2019: ₹ 75.00 crore).

The Group has agreed to provide unconditional and irrevocable financial support to NTPC GE Power Services Ltd. (a joint venture company) for meeting financial qualifying requirement for execution of Flue Gas De-sulfurisation (FGD) projects in India. Such support shall be provided by way of Letter of Undertaking to a cumulative exposure up to the award value of the contract(s) not exceeding ₹ 600.00 crore and cumulative exposure of the Company, in proportion to shareholding, would not exceed ₹ **300.00 crore** (31 March 2019: ₹ Nil).

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Contingent liabilities		
Share of contingent liabilities incurred jointly with other investors of the joint venture companies	**894.03**	1,022.64
Possible reimbursements	**215.47**	314.49
Capital commitments	**5,515.49**	10,968.70

(vi) Details of significant restrictions

In respect of investments in joint venture companies, the Group has restrictions for their disposal as under:

₹ **Crore**

Name of the joint venture company	**Period of restrictions for disposal of investments as per related agreements**	**Amount invested as at**	
		31 March 2020	31 March 2019
Transformers and Electricals Kerala Ltd.	3 years from the date of acquisition (i.e.19.06.2009) or upgradation capacity enhancement scheme whichever is later.	**31.34**	31.34
NTPC BHEL Power Projects Private Ltd.	3 years from the date of completion of first EPC contract of single order value of not less than ₹500 crore or till further such time as mutually agreed.	**50.00**	50.00
National High Power Test Laboratory Private Ltd.	5 years from the date of incorporation (i.e. 22.05.2009) or completion of project whichever is later.	**30.40**	30.40
CIL NTPC Urja Private Ltd.	5 years from the date of incorporation (i.e. 27.04.2010) or commercial operation whichever is later.	**0.08**	0.08
Trincomalee Power Company Ltd.	12 years from the initial operation date.	**15.20**	15.20
Bangladesh-India Friendship Power Company Private Ltd.	15 years from the date of commercial operation date.	**444.72**	277.83
Meja Urja Nigam Private Ltd.	5 years from the date of incorporation (i.e. 02.04.2008) or commercial operation whichever is later.	**1,581.64**	1,259.33
Hindustan Urvarak & Rasayan Ltd.	(a) 5 years from the date of incorporation (15.06.2016) or 2 years from commercial operation date of any one of the proposed projects at Sindri, Gorakhpur and Barauni or date of allotment of shares for first time, whichever is later. (b) As per Sponsors Support undertaking , NTPC shall jointly and severally with the other sponsors provide additional funds to meet all cost overrun incurred/to be incurred in relation to the Project. Further, NTPC shall jointly with the other sponsors, retain of 51% of total equity share capital of the JV and management control until the final settlement date of the loan facility (door to door tenure of 15 years).	**751.09**	440.32
Total		**2,904.47**	2,104.50

65. Disclosure as per Ind AS 114, 'Regulatory Deferral Accounts'

(i) Nature of rate regulated activities

The Group is mainly engaged in generation and sale of electricity. The price to be charged by the Group for electricity sold to its beneficiaries is determined by the CERC which provides extensive guidance on the principles and methodologies for determination of the tariff for the purpose of sale of electricity. The tariff is based on allowable costs like interest, depreciation, operation & maintenance expenses, etc. with a stipulated return.

This form of rate regulation is known as cost-of-service regulations which provide the Group to recover its costs of providing the goods or services plus a fair return.

(ii) Recognition and measurement

(a) As per the CERC Tariff Regulations, any gain or loss on account of exchange risk variation during the construction period shall form part of the capital cost till the declaration of Commercial Operation Date (COD) to be considered for calculation of tariff. The CERC during the past period in tariff orders for various stations has allowed exchange differences incurred during the construction period in the capital cost. Accordingly, exchange differences arising during the construction period is within the scope of Ind AS 114.

Further, any loss or gain on account of exchange differences on foreign currency loans for opearting stations shall be recoverable from / payable to beneficiaries on actual payment basis, as per the said Regulations. Accordingly, such exchange differences are also within the scope of Ind AS 114.

In view of the above, exchange differences arising from settlement/translation of monetary item denominated in foreign currency to the extent recoverable from or payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations are recognized on an undiscounted basis as 'Regulatory deferral account debit/credit balance' by credit/debit to 'Movements in Regulatory deferral account balances' and adjusted from the year in which the same becomes recoverable from or payable to the beneficiaries. Accordingly, an amount of ₹**1,279.54 crore** for the year ended as at 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: (-) ₹ 26.26 crore accounted as 'Regulatory deferral account debit balance'.)

(b) Revision of pay scales of employees of PSEs w.e.f. 1 January 2017 has been implemented based on the guidelines issued by Department of Public Enterprises (DPE). The guidelines provide payment of superannuation benefits @ 30% of basic + DA to be provided to the employees of CPSEs which includes gratuity at the enhanced ceiling of ₹ 0.20 crore from the existing ceiling of ₹ 0.10 crore. As per Proviso 8(3) of Terms and Conditions of Tariff Regulations 2014 applicable for the period 2014-19, truing up exercise in respect of Change in Law or compliance of existing law will be taken up by CERC. The increase in gratuity from ₹ 0.10 crore to ₹ 0.20 crore falls under the category of 'Change in law' and a regulatory asset has been created. The Payment of Gratuity Act,1972 has since been amended and the ceiling has been increased to ₹ 0.20 crore.

Considering the methodology followed by the CERC for allowing impact of the previous pay revision, various tariff orders issued by the CERC under Regulations, 2014 and the above-mentioned provision related to the change in law of CERC Tariff Regulations, 2014, a regulatory asset has been created (Regulatory deferral account debit balance) towards the increase in O&M expenditure due to the pay revision. This has been taken up with CERC through truing up tariff petition. An amount of ₹ **37.27 crore** for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance' (31 March 2019: ₹ 206.07 crore).

(c) CERC Regulations provide that deferred tax liability upto 31 March 2009 shall be recovered from the beneficiaries as and when the same gets materialized. Further, for the period commencing from 1 April 2014, CERC Tariff Regulations provide for grossing up of the return on equity based on effective tax rate for the financial year based on the actual tax paid during the year on the generation income. The Company has recognised a regulatory deferral account debit balance for such deferred tax liabilities (net) in the financial statements. Regulatory deferral account debit balance for deferred tax liability for the period commencing from 1 April 2014 will be reversed in future years when the related deferred tax liability forms part of current tax. Accordingly, an amount of ₹ **3,852.00 crore** (31 March 2019: (-) ₹ 5,457.17 crore) for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance'.

(d) The petition filed by the Parent Company before CERC for reimbursement of the expenditure on transportation of ash, has been favourably considered by CERC vide order dated 5 November 2018 and it was allowed to reimburse the actual additional expenditure incurred towards transportation of ash in terms of MOEF notification under change in law, as additional O&M expenses, w.e.f. 25 January 2016 subject to prudence check. Keeping in view the above, regulatory asset has been created towards ash transportation expenses in respect of stations where there is shortfall in revenue from sale of ash over and above ash transportation expenses. Accordingly, an amount of ₹ **647.56 crore** (31 March 2019: ₹ 179.29 crore) for the year ended 31 March 2020 has been accounted for as 'Regulatory deferral account debit balance'.

(e) CERC while determining the annual fixed cost of the Tuirial Hydro Electric Project (TrHEP) of NEEPCO, a subsidiary of the Company, for the period of 30.10.2017 to 31.03.2019 by CERC, allowed depreciation @2% for the said purposes in line with the decision of the Public Investment Board (PIB) of the Govt. of India. The rates and methodology as per the CERC tariff regulations based on which depreciation for TrHEP has been calculated and charged to the Statement of Profit & Loss vary from that allowed to recover through tariff as per the CERC order. Due to higher rate of depreciation as per the CERC regulations, depreciation charged for the first 12 (twelve) years of operation TrHEP will be more than that of the depreciation recoverable through tariff, which will be reversed in future periods during remaining period of normative life of the generating station. Accordingly, the lower depreciation realized during the earlier period of its operation will be recovered/adjusted during later period. In view of above, an amount of ₹ **41.18 crore** (31 March 2019: ₹ 57.24 crore) being the difference of depreciation to the extent recoverable/adjustable in future period has been recognized as Regulatory deferral account debit balances.

(f) Other expenses which the subsidiaries expect to get reimbursed by the Regulator under the tariff regulations amounting to ₹ **2.44 crore** (31 March 2019: (-) ₹ 44.20 crore) has been included in the regulatory deferral account balances considering the same falls within the scope of Ind AS 114.

(iii) Risks associated with future recovery/reversal of regulatory deferral account balances:

(a) demand risk due to changes in consumer attitudes, the availability of alternative sources of supply.

(b) regulatory risk on account of changes in regulations and submission or approval of a rate-setting application or the entity's assessment of the expected future regulatory actions.

(c) other risks including currency or other market risks, if any.

(iv) Reconciliation of the carrying amounts:

The regulated assets/liability recognized in the books to be recovered from or payable to beneficiaries in future periods are as follows:

a) Regulatory deferral account debit balance - Note 18

The regulatory assets recognized in the books to be recovered from the beneficiaries in future periods are as follows:

₹ **Crore**

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
A. Opening balance	**3,628.03**	8,776.95
B. Addition during the year	**5,859.99**	(5,085.03)
C. Adjustments during the year	**(134.38)**	(65.47)
D. Amount collected/refunded during the year	**44.09**	1.58
E. Regulatory deferral account balances recognized in the statement of profit and loss (B+D)	**5,904.08**	(5,083.45)
F. Closing balance (A+C+E)	**9,397.73**	3,628.03

b) Net movements in regulatory deferral account balances [I]	**5,904.08**	**(5,083.45)**
c) Tax on net movements in regulatory deferral account balances [II]	**1,032.07**	**(1,012.13)**
d) Total amount recognized in the statement of profit and loss during the year [I-II]	**4,872.01**	**(4,071.32)**

The Company expects to recover the carrying amount of regulatory deferral account debit balance over the life of the projects.

66. **Disclosure as per Ind AS 115, 'Revenue from contracts with customers'**

I. **Nature of goods and services**

The revenue of the Group comprises of income from energy sales, sale of energy through trading, consultancy and other services. The following is a description of the principal activities:

(A) **Revenue from energy sales**

The major revenue of the Group comes from energy sales. The Group sells electricity to bulk customers, mainly electricity utilities owned by State Governments as well as private Discoms operating in States. Sale of electricity is generally made pursuant to long-term Power Purchase Agreements (PPAs) entered into with the beneficiaries.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for energy sales:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy sales	The Group recognises revenue from contracts for energy sales over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from energy sales is determined in terms of CERC Regulations as notified from time to time. The amount of revenue recognised for energy sales is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(B) **Revenue from energy trading, consultancy and other services**

(i) **Sale of Energy through trading**

(a) The Group is purchasing power from the developers and selling it to the Discoms on principal to principal basis.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (principal to principal basis)	The Group recognises revenue from contracts for sale of energy through trading over time as the customers simultaneously receive and consume the benefits provided by the Group. The tariff for computing revenue from sale of energy through trading is determined as per the terms of the agreements. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed on a monthly basis and are payable within contractually agreed credit period.

(b) For some of its revenue arrangements, the Group has determined that it is acting as an agent and has recognized revenue on such contracts net of power purchase cost based on the following factors:

a. Another party is primarily responsible for fulfilling the contract as the Group does not have the ability to direct the use of energy supplied or obtain benefits from supply of power.

b. The Group does not have inventory risk before or after the power has been delivered to customers as the power is directly supplied to customer.

c. The Group has no discretion in establishing the price for supply of power. The Group's consideration in these contracts is only based on the difference between sales price charged to procurer and purchase price given to supplier.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on agency nature:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading (agency nature)	The Group recognises revenue from such arrangements over time on net basis when the units of electricity are delivered to power procurers as the procurers simultaneously receive and consume the benefits from the Group's agency services. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(c) The Group carries out energy trading operations on commission basis. NVVN, a subsidiary of the Parent Company is a "Trader Member" of India Energy Exchange Ltd. (IEX) & Power Exchange India Ltd (PXIL) and undertakes trading of Power and REC on Power Exchange Platform of IEX and PXIL.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for sale of energy through trading on energy exchange:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Energy trading on energy exchange	The Group recognises revenue from contracts for commission for trading on energy exchange over time as the customers simultaneously receive and consume the benefits provided by the Group's performance. The commission for trading of energy is determined as per the terms of the respective agreement. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts.

(ii) Consultancy and other services

The Group undertakes consultancy and turnkey project contracts for domestic and international clients in the different phases of power plants viz. engineering, project management & supervision, construction management, operation & maintenance of power plants, research & development, management consultancy etc.

Below are the details of nature, timing of satisfaction of performance obligations and significant payment terms under contracts for consultancy and other services:

Product/ Service	Nature, timing of satisfaction of performance obligations and significant payment terms
Consultancy services	The Group recognises revenue from contracts for consultancy services over time as the customers simultaneously receive and consume the benefits provided by the Group. For the assets (e.g. deliverables, reports etc.) transferred under the contracts, the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from consultancy services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Operation and maintenance services	The Group recognises revenue from contracts for operation and maintenance services over time as the customers simultaneously receive and consume the benefits provided by the Group. The revenue from opertion and maintenance services is determined as per the terms of the contracts. The amount of revenue recognised is adjusted for variable consideration, wherever applicable, which are estimated based on the historical data available with the Group. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Deen Dayal Upadhyay Gramin Jyoti Yojna (DDUGJY Scheme)	The Group recognises revenue from work done under DDUGJY scheme over time as the assets do not have alternative use to the Group and the Group has enforceable right to payment for performance completed to date. The revenue from DDUGJY scheme is determined as per the terms of the contract. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.
Pradhan Mantri Sahaj Bijli Har Ghar Vojna (SAUBHAGYA Scheme)	The Group recognises revenue from work done under SAUBHAGYA scheme at a point in time when the Group transfers control of goods and services under the contract to the customers. The revenue from SAUBHAGYA scheme is determined as per the terms of the contracts. There is no component of variable consideration under the contract. The amounts are billed as per the terms of the contracts and are payable within contractually agreed credit period.

II. Disaggregation of revenue

In the following table, revenue is disaggregated by type of product and services, geographical market and timing of revenue recognition:

₹ Crore

Particulars	Generation of energy		Others		Total	
	For the year ended		For the year ended		For the year ended	
	31 March 2020	31 March 2019	31 March 2020	31 March 2019	31 March 2020	31 March 2019
Geographical markets						
India	1,01,578.83	92,050.65	5,711.39	6,050.83	1,07,290.22	98,101.48
Outside India	-	-	1,788.41	1,513.52	1,788.41	1,513.52
	1,01,578.83	92,050.65	7,499.80	7,564.35	1,09,078.63	99,615.00
Timing of revenue recognition						
Products and services transferred over time	1,01,578.83	92,050.65	7,499.80	7,564.35	1,09,078.63	99,615.00
	1,01,578.83	92,050.65	7,499.80	7,564.35	1,09,078.63	99,615.00

III. Reconciliation of revenue recognised with contract price:

₹ Crore

Particulars	For the year ended 31 March 2020	For the year ended 31 March 2019
Contract price	**1,09,551.42**	1,00,489.91
Adjustments for:		
Rebates	**(472.79)**	(874.91)
Revenue recognised	**1,09,078.63**	99,615.00

IV. Contract balances

Contract assets are recognised when there is excess of revenue earned over billings on contracts. Contract assets are transferred to unbilled revenue when there is unconditional right to receive cash, and only passage of time is required, as per contractual terms. The contract liabilities primarily relate to the advance consideration received from the customers which are referred as 'advances from customers / payable to beneficiaries'.

The following table provides information about trade receivables, unbilled revenue and advances from customers:

₹ Crore

Particulars	As at 31 March 2020		As at 1 April 2019	
	Current	Non-current	Current	Non-current
Trade receivables	**20,370.80**	-	12,363.52	-
Unbilled revenue	**12,231.18**	-	8,750.66	-
Advances from customers / Payable to beneficiaries	**843.01**	-	459.02	-

The amount of revenue recognised from performance obligations satisfied (or partially satisfied) in previous periods, mainly due to change in transaction prices is ₹ **60.93 crore** (31 March 2019 : (-) ₹ 2,235.15 crore).

V. Transaction price allocated to the remaining performance obligations

Performance obligations related to sale of energy:

Revenue from sale of energy is accounted for based on tariff rates approved by the CERC (except items indicated as provisional) as modified by the orders of Appellate Tribunal for Electricity to the extent applicable. In case of power stations, where the tariff rates are yet to be approved/items indicated provisional by the CERC in their orders, provisional rates are adopted considering the applicable CERC Tariff Regulations. Revenue from sale of energy is recognized once the electricity has been delivered to the beneficiary and is measured through a regular review of usage meters. Beneficiaries are billed on a periodic and regular basis. Therefore, transaction price to be allocated to remaining performance obligations cannot be determined reliably for the entire duration of the contract.

Performance obligations related to other contracts:

For rest of the contracts, transaction price for remaining performance obligations amounts to ₹ **747.23 crore** (31 March 2019: ₹ 715.45 crore) which shall be received over the contract period in proportion of the work performed/services provided by the Group.

VI. Practical expedients applied as per Ind AS 115:

a. The Group has not disclosed information about remaining performance obligations that have original expected duration of one year or less and where the revenue recognised corresponds directly with the value to the customer of the entity's performance completed to date.

b. The Group does not expect to have any contracts where the period between the transfer of the promised goods or services to the customer and payment by the customer exceeds one year. As a consequence, the Group has not adjusted any of the transaction prices for the time value of money.

VII. The Group has not incurred any incremental costs of obtaining contracts with a customer and therefore, not recognised an asset for such costs.

67. Disclosure as per Ind AS 116 'Leases'

(A) Transition to Ind AS 116

(a) Effective 1 April 2019, the Group adopted Ind AS 116 'Leases' and applied the standard to all lease contracts existing on 1 April 2019, using the modified retrospective method. Accordingly, the comparatives as at and for the year ended 31 March 2019 have not been restated. On the date of initial application, the Group recorded the lease liability at the present value of the remaining lease payments discounted at the incremental borrowing rate at the date of initial application and a corresponding right-of-use asset adjusted for the amount of prepaid or accrued payments on the lease.

(b) The Group has applied the following practical expedients on initial application of Ind AS 116:

(i) Applied a single discount rate to a portfolio of leases of similar assets in similar economic environment with a similar end date.

(ii) Applied the exemption not to recognize right-of-use assets and liabilities for leases with less than 12 months of lease term on the date of initial application.

(iii) Excluded the initial direct costs, if any, from the measurement of the right-of-use asset at the date of initial application.

(iv) Elected to use the practical expedient not to apply this Standard to contracts that were not previously identified as containing a lease applying Ind AS 17. Accordingly, Ind AS 116 is applied only to contracts that were previously identified as leases under Ind AS 17.

(v) Used hindsight when determining the lease term if the contract contains options to extend or terminate the lease.

(c) On transition to Ind AS 116, the Group has recognised lease liabilities and equivalent amount of right-of-use assets amounting to ₹ 54.71 crore. Further, land, buildings, plant & equipment and vehicles amounting to ₹ 5,343.32 crore have been classified/reclassified and presented as Right-of-use assets on the Balance Sheet.

(d) On transition to Ind AS 116, the weighted average incremental borrowing rate applied to lease liabilities recognised under Ind AS 116 is in range of 8.29% to 9.46%.

(e) The lease liabilities as at 1 April 2019 can be reconciled to the operating lease commitments as of 31 March 2019, as follows:

₹ Crore

Particulars	Amount
Operating lease commitments as at 31 March 2019 (future minimum lease payments in respect of non-cancellable leases)	6.40
Less: Effect of discounting on above	1.27
Discounted recognised lease liabilities as at 1 April 2019	5.13
Discounted recognised lease liabilities as at 1 April 2019 (Pertaining to cancellable leases commitments as on 31 March 2019)*	49.58
Total lease liabilities recognised as at 1 April 2019	54.71

* The lease liability pertain to cancellable leases commitments as on 31 March 2019 which were not required to be disclosed under erstwhile Ind AS 17.

(B) Group as Lessee

(i) The Group's significant leasing arrangements are in respect of the following assets:

(a) Premises for residential use of employees, offices and guest houses/ transit camps on lease which are not non-cancellable and are usually renewable on mutually agreeable terms. The company generally incurs amount on improvements which are significant to the respective lease and hence the cancellable period of the lease during which the company intends to continue considering the past experience / practice, is considered for the purpose of determining the lease period.

(b) The Group has taken electrical vehicles on operating lease for a period of five to six years, which can be further extended at mutually agreed terms. Lease rentals are subject to escalation of 10% per annum.

(c) A helicopter on wet lease basis.

(d) The Group has taken certain vehicles (other than electrical) on lease for a period of more than one year to four years, which can be further extended at mutually agreed terms. There are no escalations in the lease rentals as per terms of the agreement. However, the Group has purchase option for some of such vehicles at the end of the lease term.

(e) The Group had entered into an agreement for movement of coal through inland waterways for one of its stations. As per the agreement, the operator was to design, finance, build, operate and maintain the unloading and material handling infrastructure for 7 years after which it was to be transferred to the Company at ₹ 1/-. Refer Note no. 56 (iii)(b).

(f) The Group acquires land on leasehold basis for a period generally ranging from 5 years to 99 years from the government authorities which can be renewed further based on mutually agreed terms and conditions. The leases are non cancellable. These leases are capitalised at the present value of the total minimum lease payments to be paid over the lease term. Future lease rentals are recognised as 'Lease liablities' at their present values. The Right-of-use land is amortised considering the signifcant accounting policies of the Group.

In respect of leases at (d), (e) & (f) above, the carrying amount of the right-of-use asset and the lease liability at the date of initial application is the carrying amount of the lease asset and lease liability immediately before that date measured applying Ind AS 17.

(ii) The following are the carrying amounts of lease liabilities recognised and the movements during the year:

₹ Crore

Particulars	For the Year ended 31 March 2020
Opening Balance	186.41
- Additions in lease liabilities	707.20
- Interest cost during the year	40.71
- Payment of lease liabilities	(78.71)
Closing Balance	855.61
Current	118.20
Non Current	737.41

(iii) Maturity Analysis of the lease liabilities:

₹ Crore

Contractual undiscounted cash flows	As at 31 March 2020
3 months or less	92.70
3-12 Months	64.11
1-2 Years	83.73
2-5 Years	156.69
More than 5 Years	2,278.02
Lease liabilities as at 31 March 2020	2,675.25

(iv) The following are the amounts recognised in profit or loss:

₹ Crore

Particulars	For the Year ended 31 March 2020
Depreciation and amortisation expense for right-of-use assets	290.93
Interest expense on lease liabilities	40.71
Expense relating to short-term leases	14.89

(v) **The following are the amounts disclosed in the cash flow statement:**

₹ Crore

Particulars	For the year ended 31 March 2020
Cash Outlow from leases	93.60

(C) Leases as lessor

a) Finance leases

The Company had classified the arrangement with its customer for Stage I of a power station in the nature of lease based on the principles enunciated in Appendix C of Ind AS 17 - 'Leases' and accounted for as finance lease in accordance with those principles. This arrangement continues to be classified as finance lease after transition to Ind AS 116 - 'Leases'.

The power purchase agreement with the beneficiary is for a period of twenty five years from the date of transfer and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and for such further period of time as the parties may mutually agree.

The following are the amounts recognised in profit or loss: ₹ Crore

Partculars	For the year ended 31 March 2020	For the year ended 31 March 2019
i) Finance income on the net investment in the lease	59.90	70.84
ii) Income relating to variable lease payments not included in the measurement of the net investment in the lease	899.19	982.05

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ Crore

Particulars	As at 31 March 2020	As at 31 March 2019
Less than one year	108.54	112.10
Between one and two years	108.54	112.10
Between two and three years	108.54	112.10
Between three and four years	108.54	112.10
Between four and five years	214.16	112.10
More than five years	-	217.41
Total minimum lease payments	648.32	777.91
Less amounts representing unearned finance income	183.95	257.91
Present value of minimum lease payments	464.37	520.00

b) Operating leases

(1) The Company had classified the arrangement with its customer for two power stations (one thermal and one gas) as lease based on the principles enunciated in Appendix C of Ind AS 17 and accounted for as operating lease in accordance with those principles. These arrangements continue to be classified as operating lease after transition to Ind AS 116 'Leases'.

(i) Thermal Power Station

Power Purchase Agreements (PPA) signed with the beneficiary was operative for a period of five years from the date of take over of the plant and the agreement may be mutually extended, renewed or replaced by another agreement on such terms and conditions for such further period as the parties may mutually agree.

(ii) **Gas Power Station**

PPA signed with the beneficiary on 6 January 1995 was operative for five years from the date of commercial operation of last unit of the station and may be mutually extended, renewed or replaced by another agreement on such terms and on such further period of time as the parties may mutually agree. As per the supplementary agreement dated 15 February 2013 the validity period is extended for a further period of 12 years from 1 March 2013.

The following are the amounts recognised in profit or loss:

₹ **Crore**

Partculars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Lease Income	**156.18**	233.63
Income relating to variable lease payments that do not depend on an index or a rate	**973.13**	982.95

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Less than one year	**156.18**	229.91
Between one and two years	**19.58**	229.91
Between two and three years	**19.58**	92.48
Between three and four years	**19.58**	92.48
Between four and five years	**3.91**	92.47
More than five years	**-**	78.33
	218.83	815.58

(2) Land given on operating lease

The Group has enetered into two leases agreements with one of the vendor for right to use of freehold land of 24.50 acre and 67.73 acre for the period of two years w.e.f. from 25 January 2019 and 21 August 2019 respectively. The Group continues to classify the same as operating lease.

The following are the amounts recognised in profit or loss:

₹ **Crore**

Particulars	**For the year ended 31 March 2020**	For the year ended 31 March 2019
Lease Income	**1.54**	0.18
Income relating to variable lease payments that do not depend on an index or a rate	**-**	-

Undiscounted lease payments to be received on an annual basis for a minimum of each of the first five years and for the remaining years:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Less than one year	**2.05**	0.57
Between one and two years	**0.62**	0.47
Between two and three years	**-**	-
Between three and four years	**-**	-
Between four and five years	**-**	-
More than five years	**-**	-
	2.67	1.04

68. Disclosure as per Schedule III to the Companies Act,2013

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
Parent								
NTPC Limited								
31 March 2020	**92.97%**	**113,569.44**	**82.87%**	**10,112.81**	**104.87%**	**(327.22)**	**82.29%**	**9,785.59**
31 March 2019	94.00%	107,408.17	81.98%	11,749.89	103.94%	(201.87)	81.68%	11,548.02
Subsidiaries (Indian)								
Bhartiya Rail Bijlee Company Ltd.								
31 March 2020	**2.25%**	2,742.79	**2.12%**	258.46	**0.00%**	-	2.17%	258.46
31 March 2019	2.07%	2,365.14	0.06%	8.88	0.00%	-	0.06%	8.88
Kanti Bijlee Utpadan Nigam Ltd.								
31 March 2020	**1.28%**	**1,561.01**	**0.85%**	**103.98**	**0.00%**	**(0.01)**	**0.87%**	**103.97**
31 March 2019	1.19%	1,356.42	0.69%	98.74	0.00%	-	0.70%	98.74
NTPC Vidyut Vyapar Nigam Ltd.								
31 March 2020	**0.30%**	**370.29**	**0.14%**	**17.53**	**0.00%**	-	**0.15%**	**17.53**
31 March 2019	0.31%	352.75	0.46%	65.56	0.00%	-	0.46%	65.56
NTPC Electric Supply Company Ltd.								
31 March 2020	**0.04%**	**49.76**	**0.06%**	**7.38**	**0.00%**	-	**0.06%**	**7.38**
31 March 2019	0.04%	42.38	0.00%	(0.09)	0.00%	-	0.00%	(0.09)
Patratu Vidyut Utpadan Nigam Ltd.								
31 March 2020	**0.55%**	**671.31**	**0.00%**	**(0.41)**	**0.00%**	-	**0.00%**	**(0.41)**
31 March 2019	0.28%	314.96	-0.01%	(1.38)	0.00%	-	-0.01%	(1.38)
Nabinagar Power Generating Company Ltd.								
31 March 2020	**3.75%**	**4,575.00**	**0.91%**	**111.33**	**0.00%**	-	**0.94%**	**111.33**
31 March 2019	3.53%	4,029.54	-0.02%	(3.21)	0.00%	-	-0.02%	(3.21)
NTPC Mining Ltd.								
31 March 2020	**0.00%**	**0.05**	**0.00%**	-	**0.00%**	-	**0.00%**	-
31 March 2019	0.00%	-	0.00%	-	0.00%	-	0.00%	-
THDC India Ltd.								
31 March 2020	**7.80%**	**9,532.47**	**7.54%**	**920.25**	**5.39%**	**(16.82)**	**7.60%**	**903.43**
31 March 2019	7.68%	8,773.94	8.30%	1,189.91	2.08%	(4.03)	8.39%	1,185.88
North Eastern Electric Power Corporation Ltd.								
31 March 2020	**5.25%**	**6,408.35**	**1.36%**	**165.83**	**1.02%**	**(3.17)**	**1.37%**	**162.66**
31 March 2019	5.51%	6,292.65	1.47%	211.03	-1.09%	2.12	1.51%	213.15
Non-controlling interests in all subsidiaries								
31 March 2020	**2.72%**	**3,317.19**	**2.47%**	**301.75**	**1.37%**	**(4.29)**	**2.50%**	**297.46**
31 March 2019	2.55%	2,908.20	2.08%	297.81	0.53%	(1.03)	2.10%	296.78
Joint ventures (Investment as per equity method)								
Indian								
Utility Powertech Ltd.								
31 March 2020	**0.06%**	**72.25**	**0.13%**	**15.31**	**-0.60%**	**1.87**	**0.14%**	**17.18**
31 March 2019	0.05%	59.07	0.09%	13.55	-0.01%	0.01	0.10%	13.56

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
NTPC-GE Power Services Private Ltd.								
31 March 2020	**0.01%**	**6.34**	**0.00%**	**0.22**	**0.00%**	**(0.01)**	**0.00%**	**0.21**
31 March 2019	0.01%	6.43	0.02%	2.17	0.00%	-	0.02%	2.17
NTPC-SAIL Power Company Ltd.								
31 March 2020	**1.12%**	**1,369.93**	**1.43%**	**174.11**	**0.73%**	**(2.27)**	**1.45%**	**171.84**
31 March 2019	1.09%	1,249.12	1.24%	177.96	0.49%	(0.95)	1.25%	177.01
NTPC-Tamil Nadu Energy Company Ltd.								
31 March 2020	**1.29%**	**1,575.37**	**1.54%**	**187.74**	**0.00%**	**(0.01)**	**1.58%**	**187.73**
31 March 2019	1.21%	1,376.96	0.42%	59.65	0.01%	(0.01)	0.42%	59.64
Ratnagiri Gas and Power Private Ltd.								
31 March 2020	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2019	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Konkan LNG Ltd.								
31 March 2020	**0.03%**	**34.38**	**0.28%**	**34.38**	**0.00%**	**-**	**0.29%**	**34.38**
31 March 2019	0.00%	-	0.00%	-	0.00%	-	0.00%	-
Aravali Power Company Private Ltd.								
31 March 2020	**2.45%**	**2,993.91**	**2.26%**	**276.37**	**-0.05%**	**0.16**	**2.33%**	**276.53**
31 March 2019	2.57%	2,936.53	2.72%	390.08	-0.02%	0.04	2.76%	390.12
NTPC BHEL Power Projects Private Ltd.								
31 March 2020	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2019	0.00%	-	-0.03%	(4.39)	0.01%	(0.02)	-0.03%	(4.41)
Meja Urja Nigam Private Ltd.								
31 March 2020	**1.07%**	**1,303.22**	**-2.49%**	**(303.84)**	**0.00%**	**-**	**-2.56%**	**(303.84)**
31 March 2019	1.12%	1,284.75	-0.01%	(1.08)	0.00%	-	-0.01%	(1.08)
Transformers and Electricals Kerala Ltd.								
31 March 2020	**0.04%**	**46.87**	**0.04%**	**5.20**	**0.00%**	**-**	**0.04%**	**5.20**
31 March 2019	0.04%	41.67	0.03%	4.82	0.03%	(0.05)	0.03%	4.77
National High Power Test Laboratory Pvt. Ltd.								
31 March 2020	**0.02%**	**21.97**	**-0.03%**	**(4.10)**	**0.00%**	**(0.01)**	**-0.03%**	**(4.11)**
31 March 2019	0.02%	26.08	-0.01%	(1.70)	0.01%	(0.01)	-0.01%	(1.71)
Energy Efficiency Services Ltd.								
31 March 2020	**0.46%**	**556.88**	**0.17%**	**20.26**	**0.07%**	**(0.23)**	**0.17%**	**20.03**
31 March 2019	0.26%	301.45	0.19%	26.85	0.04%	(0.08)	0.19%	26.77
CIL NTPC Urja Private Ltd.								
31 March 2020	**0.00%**	**0.02**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2019	0.00%	0.02	0.00%	-	0.00%	-	0.00%	-
Anushakti Vidhyut Nigam Ltd.								
31 March 2020	**0.00%**	**0.01**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2019	0.00%	0.01	0.00%	-	0.00%	-	0.00%	-
Hindustan Urvarak and Rasayan Ltd.								
31 March 2020	**0.62%**	**753.77**	**0.00%**	**0.01**	**0.00%**	**-**	**0.00%**	**0.01**
31 March 2019	0.39%	443.54	0.03%	4.47	0.00%	-	0.03%	4.47

Name of the entity in the Group	Net Assets, i.e., total assets minus total liabilities as at		Share in profit or loss for the year ended		Share in other comprehensive income for the year ended		Share in total comprehensive income for the year ended	
	As % age of consolidated net assets	Amount	As % age of consolidated profit or loss	Amount	As % age of consolidated other comprehensive income	Amount	As % age of total comprehensive income	Amount
KSK Dibbin Hydro Power Private Ltd.								
31 March 2020	**0.03%**	**32.37**	**0.00%**	**0.04**	**0.00%**	**-**	**0.00%**	**0.04**
31 March 2019	0.03%	32.33	0.00%	0.10	0.00%	-	0.00%	0.10
Foreign								
Trincomalee Power Company Ltd.								
31 March 2020	**0.00%**	**1.31**	**0.00%**	**(0.30)**	**0.00%**	**-**	**0.00%**	**(0.30)**
31 March 2019	0.00%	1.58	0.00%	(0.31)	0.00%	-	0.00%	(0.31)
Bangladesh-India Friendship Power Company Private Ltd.								
31 March 2020	**0.40%**	**487.71**	**0.00%**	**-**	**0.00%**	**-**	**0.00%**	**-**
31 March 2019	0.25%	280.85	0.00%	-	0.00%	-	0.00%	-
Intra Group Eliminations								
31 March 2020	**-24.47%**	**(29,897.62)**	**-1.64%**	**(200.58)**	**-12.82%**	**40.00**	**-1.35%**	**(160.58)**
31 March 2019	-24.17%	(27,620.13)	0.30%	42.99	-6.01%	11.67	0.39%	54.66
Total								
31 March 2020	**100.00%**	**122,156.35**	**100.00%**	**12,203.73**	**100.00%**	**(312.01)**	**100.00%**	**11,891.72**
31 March 2019	100.00%	114,264.41	100.00%	14,332.30	100.00%	(194.21)	100.00%	14,138.09

69. Contingent liabilities and commitments

A. Contingent liabilities

a. Claims against the group not acknowledged as debts

(i) Capital works

Some of the contractors for supply and installation of equipment and execution of works at our projects have lodged claims on the Group for ₹**13,732.59 crore** (31 March 2019: ₹ 14,231.86 crore) seeking enhancement of the contract price, revision of work schedule with price escalation, compensation for the extended period of work, idle charges etc. These claims are being contested by the Group as being not admissible in terms of the provisions of the respective contracts.

The Group is pursuing various options under the dispute resolution mechanism available in the contracts for settlement of these claims. It is not practicable to make a realistic estimate of the outflow of resources if any, for settlement of such claims pending resolution.

(ii) Land compensation cases

In respect of land acquired for the projects, the erstwhile land owners have claimed higher compensation before various authorities/courts which are yet to be settled. Against such cases, contingent liability of ₹ **537.93 crore** (31 March 2019: ₹ 517.68 crore) has been estimated.

(iii) Fuel suppliers

Pending resolution of the issues with the coal companies, an amount of ₹ **2,997.23 crore** (31 March 2019: ₹ 3,009.74 crore) towards grade slippage pursuant to third party sampling has been estimated by the Group as contingent liability. Further, an amount of ₹ **1,223.20 crore** (31 March 2019: ₹ 878.52 crore) towards surface transportation charges, custom duty on service margin on imported coal etc. has been estimated by the Group as contingent liability.

The Group is pursuing with the fuel companies, related ministries and other options under the dispute resolution mechanism available for settlement of these claims.

(iv) Others

In respect of claims (including applicable interest) made by various State/Central Government departments/ Authorities towards building permission fee, penalty on diversion of agricultural land to non-agricultural use, non agricultural land assessment tax, water royalty, other claims, etc. and by others, contingent liability of ₹ **1565.30 crore** (31 March 2019: ₹ 1212.45 crore) has been estimated.

(v) Possible reimbursement in respect of (i) to (iii) above

The contingent liabilities referred to in (i) above, include an amount of ₹ **Nil** (31 March 2019: ₹ 682.19 crore) relating to the hydro power project stated in Note 9(b) - Other financial assets, for which Group envisages possible reimbursement from the GOI in full. In respect of balance claims included in (i) and in respect of the claims mentioned at (ii) above, payments, if any, by the Group on settlement of the claims would be eligible for inclusion in the capital cost for the purpose of determination of tariff as per CERC Tariff Regulations subject to prudence check by the CERC. In case of (iii), the estimated possible reimbursement by way of recovery through tariff as per Regulations is ₹ **4,149.16 crore** (31 March 2019: ₹ 3,639.64 crore).

b. Disputed tax matters

Disputed income tax/sales tax/excise and other tax matters pending before various Appellate Authorities amount to ₹ **2,490.74 crore** (31 March 2019: ₹ 9,508.27 crore). Many of these matters were adjudicated in favour of the Group but are disputed before higher authorities by the concerned departments. In respect of these disputed cases, the Group estimate possible reimbursement of ₹ **1,778.54 crore** (31 March 2019: ₹ 5,140.55 crore). The amount paid under dispute/adjusted by the authorities in respect of the cases amounts to ₹ **488.31 crore** (31 March 2019: ₹ 2,528.47 crore).

c. Others

Contingent liability in respect of bills discounted with banks against trade receivables amounts to ₹ **10,842.34 crore** (31 March 2019 ₹ 9,998.99 crore) (Refer Note-12). In case of any claim on the Group from the banks in this regard, entire amount shall be recoverable from the beneficiaries along with surcharge. Other contingent liabilities amount to ₹ **5,366.44 crore** (31 March 2019: ₹ 5,036.08 crore) which includes claim of ₹ **2,014.84 crore** (31 March 2019: ₹ 1,875.73 crore) not accepted by the Group. Refer Note 56 (iii)(b).

Electricity supplied by the sellers under SWAP arrangements of **66.7074 MUs** (31 March 2019: 232.9623 MUs) are yet to be returned for which the amount is not ascertainable.

Some of the beneficiaries have filed appeals against the tariff orders of the CERC. The amount of contingent liability in this regard is not ascertainable.

d. Joint venture companies

Refer Note 64 for contingent liability relating to joint venture companies.

B. Contingent assets

(i) While determining the tariff for some of the Parent Company's power stations, CERC has disallowed certain capital expenditure incurred by the Parent Company. The Parent Company aggrieved over such issues has filed appeals with the Appellate Tribunal for Electricity (APTEL)/Hon'ble Supreme Court against the tariff orders issued by the CERC. Based on past experience, the Parent Company believes that a favourable outcome is probable. However, it is impracticable to estimate the financial effect of the same as its receipt is dependent on the outcome of the judgement.

(ii) CERC (Terms & Conditions of Tariff) Regulations 2019-24 provide for levy of Late Payment Surcharge by generating company in case of delay in payment by beneficiaries beyond 45 days from the date of presentation of bill. However, in view of significant uncertainities in the ultimate collection from some of the beneficiaries against partial bills as resolved by the management, an amount of ₹ **650.42 crore** as at 31 March 2020 (31 March 2019: ₹ 443.20 crore) has not been recognised.

C. **Commitments**

a) Estimated amount of contracts remaining to be executed on capital account (property, plant & equipment and intangible assets) and not provided for as at 31 March 2020 is ₹ **72,196.59 crore** (31 March 2019: ₹ 55,636.66 crore). Details of the same are as under:

₹ **Crore**

Particulars	**As at 31 March 2020**	As at 31 March 2019
Property, plant and equipment	**72,119.33**	55,610.07
Intangible assets	**77.26**	26.59
Total	**72,196.59**	55,636.66

b) In respect the following investments of ₹ **1.40 crore** (31 March 2019: ₹ 1.40 crore), the Group has restrictions for their disposal as at 31 March 2020 as under:

₹ **Crore**

Name of the Company	**Period of restrictions for disposal of investments as per related agreements**	**Amount invested as at (Refer Note 7)**	
		31 March 2020	31 March 2019
International Coal Ventures Private Ltd.	5 years from the date of incorporation (i.e. 20.05.2009) or till such time an undertaking for non-disposal of such share is given to FI/Banks for their assistance to the Company whichever is later.	**1.40**	1.40
Total		**1.40**	1.40

Further, the Group has commitments of ₹ **507.79 crore** (31 March 2019: ₹ 507.79 crore) towards further investment in the other companies as at 31 March 2020.

c) Group's commitment towards the minimum work programme in respect of oil exploration activities of joint operations has been disclosed in Note 59.

d) Group's commitment in respect of lease agreements has been disclosed in Note 67.

e) Jhabua Power Limited (JPL), having an operational thermal power capacity of 1 x 600 MW was admitted to National Company Law Tribunal (NCLT) on 27 March 2019, and is presently undergoing Corporate Insolvency Resolution Process in NCLT. Invitation for Expression of Interest for submission of Resolution Plan for JPL was published by Resolution Professional on 19 August 2019. Subsequently, The Board of Directors of the Company had accorded in-principle approval for submission of Resolution Plan for acquisition of JPL. Subsequently, the Company has submitted the Resolution Plan to Resolution Professional on due date of 30 December 2019. Resolution Plan is currently under negotiation with Resolution Professional / Committee of Creditors.

f) Refer Note 64 for commitments relating to joint venture companies.

70. Information in respect of micro and small enterprises as at 31 March 2020 as required by Schedule III to the Companies Act, 2013 and Micro, Small and Medium Enterprises Development Act, 2006 (MSMED Act)

₹ Crore

Particulars	31 March 2020	31 March 2019
a) Amount remaining unpaid to any supplier:		
Principal amount	**773.62**	619.67
Interest due thereon	**0.19**	0.46
b) Amount of interest paid in terms of Section 16 of the MSMED Act along-with the amount paid to the suppliers beyond the appointed day.	-	-
c) Amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding the interest specified under the MSMED Act.	-	0.01
d) Amount of interest accrued and remaining unpaid	**0.19**	0.24
e) Amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowances as a deductible expenditure under Section 23 of MSMED Act	-	-

The payment to the vendors are made as and when they are due, as per terms and conditions of respective contracts.

71. Statement containing salient features of the financial statements of Subsidiaries/Joint Ventures of NTPC Ltd. pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014, in form AOC I is attached.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

These are the notes referred to in Consolidated Balance Sheet and Consolidated Statement of Profit and Loss

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

FORM NO. AOC.1

Statement containing salient features of the financial statements of Subsidiaries/Associate Companies/Joint Ventures of NTPC Ltd.

(Pursuant to first proviso to sub-section (3) of Section 129 read with Rule 5 of Companies (Accounts) Rules, 2014)

Part "A": Subsidiaries

(Amount in ₹ crore)

1.	Sl. No.	1	2	3	4	5	6	7	8	9
2.	Name of the Subsidiary	NTPC Electric Supply Company Ltd.	NTPC Vidyut Vyapar Nigam Ltd.	Kanti Bijlee Utpadan Nigam Ltd.	Bhartiya Rail Bijlee Company Ltd.	Patratu Vidyut Utpadan Nigam Ltd.	Nabinagar Power Generating Company Ltd.	NTPC Mining Ltd.	THDC India Ltd.	North Eastern Electric Power Corporation Ltd.
3.	The date since when subsidiary was acquired	21.08.2002	01.11.2002	06.09.2006	22.11.2007	15.10.2015	29.06.2018	29.08.2019	27.03.2020	27.03.2020
4.	Reporting period for the subsidiary concerned, if different from the holding company's reporting period	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)	Same as that of Holding Company (01.04.2019 -31.03.2020)
5.	Reporting currency and exchange rate as on the last date of the relevant financial year in the case of foreign subsidiaries.	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Share capital	0.08	20.00	1,560.67	2,353.84	517.74	4,417.01	0.05	3,665.88	3,609.81
7.	Reserves & surplus	49.68	350.29	0.34	388.95	153.57	157.99	-	5,866.59	2,798.54
8.	Total assets	49.76	1,784.79	5,235.76	9,206.21	3,593.19	16,188.52	0.05	17,548.62	16,063.22
9.	Total liabilities	(0.00)	1,414.50	3,674.75	6,463.42	2,921.88	11,613.52	-	8,016.15	9,654.87
10.	Investments	-	-	-	-	-	-	-	-	32.38
11.	Turnover	-	4,403.17	1,690.82	2,293.61	-	1,188.05	-	2,123.10	2,127.50
12.	Profit before taxation	10.17	24.11	131.24	155.65	(0.41)	134.85	-	1,030.35	241.42
13.	Provision for taxation	2.79	6.58	27.26	(102.81)	-	23.52	-	110.10	75.55
14.	Profit after taxation	7.38	17.53	103.98	258.46	(0.41)	111.33	-	920.25	165.87
15.	Proposed dividend	-	-	-	-	-	-	-	-	-
16.	% of Shareholding	100.00%	100.00%	100.00%	74.00%	74.00%	100.00%	100.00%	74.496%	100.00%

Notes:

1.	Subsidiaries which are yet to commence operations.	NTPC Mining Limited
2.	Subsidiaries which have been liquidated or sold during the year.	Nil

Part "B-1": Associates and Joint Ventures

Statement pursuant to Section 129(3) of The Companies Act, 2013.

Sl. No.	Name of Joint Ventures	Utility Powertech Ltd.	NTPC - GE Power Services Pvt. Ltd.	NTPC-SAIL Power Company Ltd.	NTPC Tamilnadu Energy Company Ltd.	Ratnagiri Gas and Power Pvt. Ltd.	Konkan LNG Ltd.	Aravali Power Company Pvt. Ltd.	NTPC-BHEL Power Projects Pvt. Ltd.	Meja Urja Nigam Pvt. Ltd.
1.	Latest Audited Balance Sheet Date	31.03.2020	31.03.2019	31.03.2020	31.03.2020	31.03.2019	31.03.2020	31.03.2020	31.03.2019	31.03.2020
2.	Date on which the Associate or Joint venture was associated or acquired	23.11.1995	27.09.1999	08.02.1999	23.05.2003	08.07.2005	26.03.2018	21.12.2006	28.04.2008	02.04.2008
3.	Shares of Joint Ventures held by the Company on the year end as at 31.03.2020									
-	- Number	20,00,000	30,00,000	49,02,50,050	1,42,81,06,112	83,45,56,036	13,97,52,264	1,43,30,08,200	5,00,00,000	1,58,16,39,800
-	- Amount of Investment in Joint Venture (₹ crore)	1.00	3.00	490.25	1,428.11	834.55	139.75	1,433.01	50.00	1,581.64
-	- Extent of Holding (%)	50.00%	50.00%	50.00%	50.00%	25.51%	14.82%	50.00%	50.00%	50.00%
4.	Description of how there is significant influence	NA	NA	NA	NA	NA	NA	NA	NA	NA
5.	Reason why the Joint Venture is not consolidated	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Networth atributable to Shareholding as per latest audited Balance Sheet (₹ crore)	72.25	6.34	1,369.93	1,575.37	(176.72)	34.38	2,993.91	(60.07)	1,303.22
7.	Profit/ Loss for the year (Total Comprehensive Income)									
i	Considered for Consolidation (₹ crore)	17.18	0.21	171.84	187.73	-	34.38	276.53	-	(303.84)
ii	Not Considered in Consolidation	NA	NA	NA	NA	(44.41)	NA	NA	(13.08)	NA

Sl. No.	Name of Joint Ventures	Transformers & Electricals Kerela Ltd.	National High Power Test Laboratory Pvt. Ltd.	Energy Efficiency Services Ltd.	CIL NTPC Urja Pvt. Ltd.	Anushakti Vidhyut Nigam Ltd.	Hindustan Urvarak & Rasayan Limited	KSK Dibbin Hydro Power Private Ltd.	Trincomalee Power Company Ltd.	Bangladesh-India Friendship Power Company Pvt. Ltd.
1.	Latest Audited Balance Sheet Date	31.03.2018	31.03.2019	31.03.2019	31.03.2019	31.03.2019	31.03.2020	31.03.2019	31.12.2018	30.06.2019
2.	Date on which the Associate or Joint venture was associated or acquired	19.06.2009	22.05.2009	10.12.2009	27.04.2010	27.01.2011	15.06.2016	27.03.2020	26.09.2011	31.10.2012
3.	Shares of Joint Ventures held by the Company on the year end as at 31.03.2020									
-	- Number	1,91,63,438	3,04,00,000	46,36,10,000	76,900	49,000	75,10,85,000	2,79,30,000	32,86,061	5,42,50,000
-	- Amount of Investment in Joint Venture (₹ crore)	31.34	30.40	463.61	0.08	0.05	751.09	27.93	15.20	444.72
-	- Extent of Holding (%)	44.60%	20.00%	47.15%	50.00%	49.00%	29.67%	30.00%	50.00%	50.00%
4.	Description of how there is significant influence	NA	NA	NA	NA	NA	NA	NA	NA	NA
5.	Reason why the Joint Venture is not consolidated	NA	NA	NA	NA	NA	NA	NA	NA	NA
6.	Networth atributable to Shareholding as per latest audited Balance Sheet (₹ crore)	46.87	21.97	556.88	0.02	0.01	753.77	32.37	1.31	487.71
7.	Profit/ Loss for the year (Total Comprehensive Income)									
i	Considered for Consolidation (₹ crore)	5.20	(4.11)	20.03	-	-	0.01	0.01	(0.30)	-
ii	Not Considered in Consolidation	NA	NA	NA	NA	NA	NA	NA	NA	NA

Notes:

A. Names of Joint Ventures which are yet to commence operations.

1 CIL NTPC Urja Private Ltd.

2 Anushakti Vidyut Nigam Ltd.

3 Hindustan Urvarak & Rasayan Limited

4 Trincomalee Power Company Ltd. (incorporated in Srilanka)

5 Bangladesh-India Friendship Power Company Private Ltd. (incorporated in Bangladesh)

B. Names of Associates or Joint Ventures which have been liquidated or sold during the year.

BF-NTPC Energy Systems Ltd. is in the process of voluntary winding up.

For and on behalf of the Board of Directors

(Nandini Sarkar)
Company Secretary

(A.K. Gautam)
Director (Finance)
DIN: 08293632

(Gurdeep Singh)
Chairman & Managing Director
DIN: 00307037

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
Place: Hazaribagh

Place : New Delhi
Dated : 27 June 2020

Digitally signed by signatory

INDEPENDENT AUDITORS' REPORT

TO THE MEMBERS OF NTPC LIMITED

Report on the Audit of the Consolidated Financial Statements

Opinion

We have audited the accompanying Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and its joint ventures, which comprise the Consolidated Balance Sheet as at 31 March, 2020, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows for the year then ended, and notes to the Consolidated Financial Statements, including a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "Consolidated Financial Statements").

In our opinion and to the best of our information and according to the explanations given to us the aforesaid Consolidated Financial Statements give the information required by the Companies Act, 2013 ('the Act') in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India, of the consolidated state of affairs (financial position) of the Group and its joint ventures as at March 31, 2020, and their consolidated net profit (financial performance including other comprehensive income), their consolidated changes in equity and consolidated cash flows for the year ended on that date.

Basis for Opinion

We conducted our audit of the Consolidated Financial Statements in accordance with the Standards on Auditing (SAs) specified under section 143(10) of the Act. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Consolidated Financial Statements section of our report. We are independent of the Group in accordance with the 'Code of Ethics' issued by the Institute of Chartered Accountants of India (ICAI) together with the ethical requirements that are relevant to our audit of the Consolidated Financial Statements under the provisions of the Act and the Rules made thereunder, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the ICAI's Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Consolidated Financial Statements.

Emphasis of Matter

Considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, we draw attention to the following matters in the notes to the Consolidated Financial Statements:

(a) Note No. 32(a)regarding billing and accounting of sales on provisional basis.

(b) Note No. 44 in respect of one of the projects of Holding Company consisting of three units of 800MW each, where the order of National Green Tribunal (NGT) on the matter of environmental clearance for the project has been stayed by the Hon'ble Supreme Court of India; the matter is sub-judice and the units have since been declared commercial.

(c) Note No. 56 (iii)(b) with respect to appeal filed by the Holding Company with the Hon'ble High Court of Delhi in the matter of Arbitral award pronounced against the Holding Company and the related provision made/disclosure of contingent liability as mentioned in the said note.

(d) Note No. 41 which describe the assessment of the impact of Covid-19 pandemic by the management on the business and its associated financial risks.

Our opinion is not modified in respect of these matters.

Key Audit Matters

Key audit matters are those matters that, in our professional judgment, were of most significance in our audit of the Consolidated Financial Statements of the current period. These matters were addressed in the context of our audit of the Consolidated Financial Statements as a whole, and in forming our opinion thereon, and we do not provide a separate opinion on these matters. For each matter below, description of how our audit addressed the matter is provided in that context. Considering the requirement of

Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality, below Key Audit Matters have been reproduced from the Independent Auditors' report on the audit of Standalone Financial Statements of the Holding Company.

<table>
<tr><th>Sr. No.</th><th>Key Audit Matter</th><th>How our audit addressed the Key Audit Matter</th></tr>
<tr><td>1.</td><td>Recognition and Measurement of revenue from Sale of Energy
The company records revenue from sale of energy as per the principles enunciated under Ind AS 115, based on tariff approved by the Central Electricity Regulatory Commission (CERC) as modified by the orders of Appellate Authorities. Pending issue of provisional/final tariff order w.e.f. 01 April, 2019 sales has been provisionally recognised considering the applicable CERC Tariff Regulations 2019.
This is considered as key audit matter due to the nature and extent of estimates made as per the CERC Tariff Regulations, which leads to recognition and measurement of revenue from sale of energy being complex and judgemental.
(Refer Note No. 32 to the Consolidated Financial Statements, read with the Significant Accounting Policy No. C.16)</td><td>We have obtained an understanding of the CERC Tariff Regulations, orders, circulars, guidelines and the Company's internal circulars and procedures in respect of recognition and measurement of revenue from sale of energy comprising of capacity and energy charges and adopted the following audit procedures:
- Evaluated and tested the effectiveness of the Company's design of internal controls relating to recognition and measurement of revenue from sale of energy.
- Verified the accounting of revenue from sale of energy based on provisional tariff computed as per the principles of CERC Tariff Regulations 2019
Based on the above procedure performed, the recognition and measurement of revenue from sale of energy are considered to be adequate and reasonable.</td></tr>
<tr><td>2.</td><td>Impairment assessment of Property, Plant and Equipment (PPE)
The Company has a material operational asset base (PPE) relating to generation of electricity and is one of the components for determining the tariff as per the CERC Tariff Regulations, which may be vulnerable to impairment.
We considered this as a key audit matter as the carrying value of PPE requires impairment assessment based on the future expected cash flows associated with the power plants (Cash generating units).
(Refer Note No. 55 to the Consolidated Financial Statements, read with the Accounting Policy No. C.21)</td><td>We have obtained an understanding and tested the design and operating effectiveness of controls as established by the Company's management for impairment assessment of PPE.
We evaluated the Company's process of impairment assessment in assessing the appropriateness of the impairment model including the independent assessment of discount rate, economic growth rate, terminal value etc.
We evaluated and checked the calculations of the cash flow forecasts prepared by the Company taking into consideration the CERC (Terms and Conditions of Tariff) Regulations, 2019 (applicable for the tariff period of 5 years from 1 April 2019 to 31 March 2024) along with the aforementioned assumptions.
Based on the above procedures performed, we observed that the Company's impairment assessment of the PPE is adequate and reasonable.</td></tr>
<tr><td>3.</td><td>Deferred Tax Asset relating to MAT Credit Entitlement and corresponding Regulatory Deferral Liability
The company has recognised deferred tax asset relating to MAT credit entitlement. Utilisation of MAT credit will result in lower outflow of Income Tax in future years and accordingly Regulatory Deferral Liability attributable to the said MAT credit entitlement has also been recognised, payable to the beneficiaries in subsequent periods as per CERC Tariff Regulations. The recoverability of this deferred tax asset relating to MAT credit entitlement is dependent upon the generation of sufficient future taxable profits to utilise such entitlement within the stipulated period prescribed under the Income Tax Act,1961.</td><td>We have obtained an understanding for recognition of deferred tax asset relating to MAT credit entitlement and attributable liability of the same in Regulatory Deferral Account including the management's judgement.
We further assessed the related forecasts of future taxable profits and evaluated the reasonableness of the considerations/ assumptions underlying the preparation of these forecasts. We have also verified the regulatory deferral account balance corresponding to the said MAT credit payable to the beneficiaries in subsequent periods.
Based on the above procedures performed, the recognition and measurement of Deferred tax asset relating to MAT credit entitlement and attributable Regulatory Deferral Liability towards beneficiaries, are considered adequate and reasonable.</td></tr>
</table>

	We identified this as a key audit matter because of the importance of this matter to the intended users of the Financial Statements and its materiality; and requirement of judgement in forecasting future taxable profits for recognition of MAT credit entitlement considering the recoverability of such tax credits within allowed time frame as per the provisions of the Income Tax Act,1961. (Refer Note No. 18,25,49 & 65 to the Consolidated Financial Statements, read with the Accounting Policy No. C.5 and C.19)	
4.	**Contingent Liabilities** There are a number of litigations pending before various forums against the Company and the management's judgement is required for estimating the amount to be disclosed as contingent liability. We identified this as a key audit matter because the estimates on which these amounts are based involve a significant degree of management judgement in interpreting the cases and it may be subject to management bias. (Refer Note No. 69 to the Consolidated Financial Statements, read with the Accounting Policy No. C.14)	We have obtained an understanding of the Company's internal instructions and procedures in respect of estimation and disclosure of contingent liabilities and adopted the following audit procedures: - understood and tested the design and operating effectiveness of controls as established by the management for obtaining all relevant information for pending litigation cases; - discussed with the management regarding any material developments thereto and latest status of legal matters; - read various correspondences and related documents pertaining to litigation cases and relevant external legal opinions obtained by the management and performed substantive procedures on calculations supporting the disclosure of contingent liabilities; - examined management's judgements and assessments in respect of whether provisions are required; - considered the management assessments of those matters that are not disclosed as contingent liability since the probability of material outflow is considered to be remote; - reviewed the adequacy and completeness of disclosures; Based on the above procedures performed, the estimation and disclosures of contingent liabilities are considered to be adequate and reasonable.

Information Other than the Consolidated Financial Statements and Auditor's Report Thereon

The Holding Company's Board of Directors is responsible for the preparation of the other information. The other information comprises the information included in the Annual Report related to the Consolidated Financial Statements, but does not include the Consolidated Financial Statements and our auditor's report thereon. The other information is expected to be made available to us after the date of this auditor's report.

Our opinion on the Consolidated Financial Statements does not cover the other information and we do not express any form of assurance conclusion thereon.

In connection with our audit of the Consolidated Financial Statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the Consolidated Financial Statements or our knowledge obtained during the course of our audit or otherwise appears to be materially misstated.

When we read the other information, if we conclude that there is a material misstatement therein, we are required to communicate the matter to those charged with governance and take appropriate actions, if required.

Responsibilities of Management and Those Charged with Governance for the Consolidated Financial Statements

The Holding Company's Board of Directors is responsible for the preparation and presentation of these Consolidated Financial Statements in terms of the requirements of the Act, that give a true and fair view of the consolidated financial position, consolidated financial performance including other comprehensive income, consolidated Statement of Changes in Equity and consolidated cash flows of the Group including its joint ventures in accordance with the accounting principles generally accepted in India, including the Ind AS Accounting Standards specified under section 133 of the Act read with the Companies (Indian Accounting Standards)

Rules, 2015 as amended. The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group and its joint ventures and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring accuracy and completeness of the accounting records, relevant to the preparation and presentation of the Consolidated Financial Statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the Consolidated Financial Statements by the Directors of the Holding Company, as aforesaid.

In preparing the Consolidated Financial Statements, the respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for assessing the ability of the Group and of its joint ventures to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the Group or to cease operations, or has no realistic alternative but to do so.

The respective Board of Directors of the companies included in the Group and of its joint ventures are responsible for overseeing the financial reporting process of the Group and of its joint ventures.

Auditors' Responsibility for the audit of the Consolidated Financial Statements

Our objectives are to obtain reasonable assurance about whether the Consolidated Financial Statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these Consolidated Financial Statements.

As part of an audit in accordance with SAs, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances. Under section 143(3)(i) of the Act, we are also responsible for expressing our opinion on whether the holding company, its subsidiaries and joint ventures incorporated in India have adequate internal financial controls system in place and the operating effectiveness of such controls.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of Holding Company's management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the ability of the Group and its joint ventures to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the Consolidated Financial Statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group and its joint ventures to cease to continue as a going concern.

- Evaluate the overall presentation, structure and content of the Consolidated Financial Statements, including the disclosures, and whether the Consolidated Financial Statements represent the underlying transactions and events in a manner that achieves fair presentation.

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group and joint ventures to express an opinion on the Consolidated Financial Statements. We are responsible for the direction, supervision and performance of the audit of the financial statements of such entities included in the Consolidated Financial Statements of which we are the independent auditors. For the other entities included in the Consolidated Financial Statements, which have been audited by other auditors, such other auditors remain responsible for the direction, supervision and performance of the audits carried out by them. We remain solely responsible for our audit opinion.

We communicate with those charged with governance of the Holding Company and such other entities included in the Consolidated Financial Statements of which we are the independent auditors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the Consolidated Financial Statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Other Matters

a) We did not audit the financial statements/ financial information of Nine subsidiaries included in the Consolidated Financial Statement, whose financial statements reflects total Assets of Rs. 69,670.12 crore and Net Assets Rs. 25,911.04 crore as at 31 March 2020; total Revenues of Rs. 14,228.69 crore and Net Cash Inflows amounting to Rs. 269.79 crore for the year ended on that date, as considered in the Consolidated Financial Statements. The Consolidated Financial Statement also includes the Group's share of net profit using the equity method, of Rs. 384.08 crores for the year ended 31 March 2020, as considered in the consolidated financial results, in respect of seven joint ventures, whose financial statements have not been audited by us. These financial statements have been audited by their respective independent auditors whose reports have been furnished to us by the management upto 24 June, 2020 and our opinion on the Statement, in so far as it relates to the aforesaid subsidiaries and joint ventures is based solely on the reports of the other auditors and the procedures performed by us are as stated Auditor's Responsibility section above after considering the requirement of Standard on Auditing (SA 600) on 'Using the work of Another Auditor' including materiality.

b) The Consolidated Financial Statements also include the Group's share of net profit using equity method of Rs. 21.28 crore for the year ended 31 March 2020 as considered in the Consolidated Financial Statements in respect of ten joint ventures whose financial statements/ financial information are unaudited.

   These financial statements/ financial information have been furnished to us by the Holding Company's Management and our opinion on the Consolidated Financial Statements, in so far as it relates to the Group's share of net profit and disclosures included in respect of these joint ventures, and our report in terms of sub-section (3) of Section 143 of the Act, in so far as it relates to the aforesaid joint ventures, is based solely on such unaudited financial statements/ financial information. Two of the joint ventures as above are located outside India in respect of which the Holding Company's management has provided us the financial statements prepared in accordance with accounting principles generally accepted in India. In our opinion and according to the information and explanations given to us by the Holding Company's Management, the Group's share of net profit and disclosures included in respect of these joint ventures in these Consolidated Financial Statements are not material to the Group.

c) We audited the adjustments, as fully described in Note No. 58 to the Consolidated Financial Statements on account of business combination, which have been made to the comparative Consolidated Financial Statements presented for the year prior to year ended 31 March 2020. In our opinion, such adjustments are appropriate and have been properly applied.

Our opinion on the Consolidated Financial Statements, and our report on Other Legal and Regulatory Requirements below, is not modified in respect of the matters as stated in para (a), (b) & (c) above, with respect to our reliance on the work done and the reports of the other auditors, the financial statements/financial information certified by the Holding Company's Management and the adjustments made to the comparative Consolidated Financial Statements.

Report on Other Legal and Regulatory Requirements

1. As required by Section 143(3) of the Act, based on our audit and on the consideration of report of the other auditors on separate financial statements and the other financial information of subsidiaries and joint ventures as noted in the 'Other Matters' paragraph, we report, to the extent applicable, that:

   a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid Consolidated Financial Statements.

   b) In our opinion, proper books of account as required by law relating to preparation of the aforesaid Consolidated Financial Statements have been kept so far as it appears from our examination of those books and the reports of the other auditors.

   c) The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Statement of Changes in Equity and the Consolidated Statement of Cash Flows dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the Consolidated Financial Statements.

d) In our opinion, the aforesaid Consolidated Financial Statements comply with the Indian Accounting Standards specified under Section 133 of the Act read with the Companies (Indian Accounting Standards) Rules, 2015 as amended.

e) Being a Government Company, pursuant to the Notification No. GSR 463(E) dated 5th June 2015 issued by Ministry of Corporate Affairs, Government of India, provisions of sub-section (2) of Section 164 of the Act, are not applicable to the Holding company and its subsidiaries and four Joint Ventures. Further, on the basis of the reports of the auditors of three joint ventures incorporated in India, none of the directors of the joint ventures incorporated in India is disqualified as on 31 March 2020 from being appointed as a director in terms of Section 164 (2) of the Act, wherever applicable.

f) With respect to the adequacy of the Internal Financial Controls with reference to consolidated financial statements of the Holding Company, its subsidiaries and joint ventures incorporated in India and the operating effectiveness of such controls, refer to our separate report in Annexure 1.

g) As per Notification No. GSR 463(E) dated 5 June 2015 issued by the Ministry of Corporate Affairs, Government of India, Section 197 of the Act is not applicable to the Government Companies. Accordingly, reporting in accordance with requirement of provisions of section 197(16) of the Act is not applicable to the Holding company and its subsidiaries and four Joint Ventures. Further, on the basis of the reports of the auditors of three joint ventures incorporated in India, the managerial remuneration paid/provided by such joint ventures to its directors during the year was in accordance with the provisions of section 197 read with Schedule V of the Act, wherever applicable.

h) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditor's) Rules, 2014, as amended in our opinion and to the best of our information and according to the explanations given to us and based on the consideration of the report of the other auditors on separate financial statements and also the other financial information of the subsidiaries and joint ventures, as mentioned in the 'Other Matters' paragraph:

   i. The Consolidated Financial Statements disclose the impact of pending litigations on the consolidated financial position of the Group. Refer Note No. 69 to the Consolidated Financial Statements;

   ii. Provision has been made in the Consolidated Financial Statements, as required under the applicable law or Indian Accounting Standards, for material foreseeable losses, on long-term contracts including derivative contracts;

   iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Holding Company, its subsidiaries and joint ventures incorporated in India.

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382
UDIN:20091382AAAAIS6347
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754
UDIN:20093754AAAABY4064
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
UDIN:20025854AAAABL7076
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
UDIN: 20079236AAAACD8345
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
UDIN:20057318AAAAAZ8053
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
UDIN:20073488AAAAAO2805
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
UDIN: 20072534AAAAGR2318
Place: Hazaribagh

Dated : 27 June 2020
Digitally signed by signatory

Annexure 1

ANNEXURE TO THE INDEPENDENT AUDITORS' REPORT

Referred to in paragraph 1 (f) under 'Report on Other Legal and Regulatory Requirements' section of our report of even date to the members of NTPC LIMITED on the Consolidated Financial Statements for the year ended 31 March 2020

Report on the Internal Financial Controls with reference to Consolidated Financial Statements under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")

In conjunction with our audit of the Consolidated Financial Statements of the Group as of and for the year ended 31 March 2020, we have audited the internal financial controls with reference to Consolidated Financial Statements of NTPC Limited (hereinafter referred to as "the Holding Company") and its subsidiaries (the Holding Company and its subsidiaries together referred to as "the Group"), and joint ventures, which are companies incorporated in India, as of that date.

Management's Responsibility for Internal Financial Controls

The respective Board of Directors of the Holding Company, its subsidiaries, and joint ventures, which are companies incorporated in India, are responsible for establishing and maintaining internal financial controls based on the internal controls over financial reporting criteria established by the Holding Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Act.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls with reference to Consolidated Financial Statements based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls over Financial Reporting (the "Guidance Note") and the Standards on Auditing, both, issued by ICAI and deemed to be prescribed under section 143(10) of the Act, to the extent applicable to an audit of internal financial controls with reference to Consolidated Financial Statements. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls with reference to Consolidated Financial Statements was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial control with reference to Consolidated Financial Statements and their operating effectiveness. Our audit of internal financial controls with reference to Consolidated Financial Statements included obtaining an understanding of internal financial controls with reference to Consolidated Financial Statements, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the Consolidated Financial Statements, whether due to fraud or error.

We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors of the subsidiaries and joint ventures, incorporated in India, in terms of their reports referred to in the 'Other Matters' paragraph below, is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls system with reference to Consolidated Financial Statements.

Meaning of Internal Financial Controls with reference to Consolidated Financial Statements

A company's internal financial control with reference to Consolidated Financial Statements is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of Consolidated Financial Statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control with reference to Consolidated Financial Statements includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of Consolidated Financial Statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the Consolidated Financial Statements.

Inherent Limitations of Internal Financial Controls with reference to Consolidated Financial Statements

Because of the inherent limitations of internal financial controls with reference to Consolidated Financial Statements, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls with reference to Consolidated Financial Statements to future periods are subject to the risk that the internal financial control with reference to Consolidated Financial Statements may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion and to the best of our information and according to the explanations given to us, the Holding Company, its subsidiaries and joint ventures, which are companies incorporated in India, have, in all material respects, an adequate internal financial controls with reference to Consolidated Financial Statements in place and such internal financial controls with reference to Consolidated Financial Statements were operating effectively as at 31 March 2020, based on the internal controls over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by ICAI.

Other Matters

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Holding Company, in so far as it relates to nine subsidiaries and seven joint ventures incorporated in India, is based on the corresponding reports of the auditors of such companies incorporated in India.

Our aforesaid report under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements in so far as it relates to eight joint ventures incorporated in India, whose financial statements / financial information are unaudited and our opinion on the adequacy and operating effectiveness of the internal financial controls with reference to Consolidated Financial Statements of the Group is not affected as the Group's share of net profit/loss (including Other Comprehensive Income) and disclosures included in respect of these joint ventures in these Consolidated Financial Statements are not material to the Group.

Our report is not modified in respect of the above matters.

For S.K. Mehta & Co.
Chartered Accountants
Firm Reg. No.000478N

(Rohit Mehta)
Partner
M No. 091382
UDIN:20091382AAAAIS6347
Place: New Delhi

For S.N. Dhawan & Co LLP
Chartered Accountants
Firm Reg. No. 000050N/N500045

(Sanjay Arora)
Partner
M No.093754
UDIN:20093754AAAABY4064
Place: New Delhi

For Varma & Varma
Chartered Accountants
Firm Reg. No. 004532S

(P.R.Prasanna Varma)
Partner
M No.025854
UDIN:20025854AAAABL7076
Place: Chennai

For Parakh & Co.
Chartered Accountants
Firm Reg. No. 001475C

(Thalendra Sharma)
Partner
M No.079236
UDIN: 20079236AAAACD8345
Place: Jaipur

For C.K. Prusty & Associates
Chartered Accountants
Firm Reg. No. 323220E

(C.K.Prusty)
Partner
M No. 057318
UDIN:20057318AAAAAZ8053
Place: Bhubaneshwar

For B.C. Jain & Co.
Chartered Accountants
Firm Reg. No. 001099C

(Ranjeet Singh)
Partner
M.No.073488
UDIN:20073488AAAAAO2805
Place: Kanpur

For V.K. Jindal & Co
Chartered Accountants
Firm Reg. No. 001468C

(Suresh Agarwal)
Partner
M.No.072534
UDIN: 20072534AAAAGR2318
Place: Hazaribagh

Dated : 27 June 2020

Digitally signed by signatory

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143 (6) (b) READ WITH SECTION 129 (4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS OF NTPC LIMITED FOR THE YEAR ENDED 31 MARCH 2020

The preparation of consolidated financial statements of NTPC Limited for the year ended 31 March 2020 in accordance with the financial reporting framework prescribed under the-Companies Act, 2013 (Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under section 139 (5) read with section 129 (4) of the Act are responsible for expressing opinion on the financial statements under section 143 read with section 129 (4) of the Act based on independent audit in accordance with the standards on auditing prescribed under section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 27.06.2020.

I, On behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit of the consolidated financial statements of NTPC Limited for the year ended 31 March 2020 under section 143(6) (a) read with section 129(4) of the Act. We conducted a supplementary audit of the financial statements of NTPC Limited, NTPC Vidyut Vyapar Nigam Limited, Kanti Bijlee Utpadan Nigam Limited, Bhartiya Rail Bijlee Company Limited, Patratu Vidyut Utpadan Nigam Ltd, Nabinagar Power Generating Company Limited, THDC India Limited, NTPC-SAIL Power Company Limited, NTPC Tamilnadu Energy Company Limited, Konkan LNG Limited, Aravali Power Company Private Limited and Meja Urja Nigam Private Limited, but did not conduct supplementary audit of the financial statements of subsidiaries, associate companies and jointly controlled entities listed in Annexure for the year ended on that date. Further, section 139 (5) and 143 (6) (a) of the Act are not applicable to Utility Powertech Limited, NTPC- GE Power Services Private Limited and KSK Dibbin Hydro Power Private Limited being private entities and Bangladesh India Friendship Power Company Private Limited and Trincomalee Power Company Limited being incorporated in Foreign countries under the respective laws, for appointment of their Statutory Auditor and for conduct of supplementary audit. Accordingly, Comptroller and Auditor General of India has neither-appointed the Statutory Auditors nor conducted the supplementary audit of these companies. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my supplementary audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report under section 143 (6) (b) of the Act.

For and on behalf of the
Comptroller & Auditor General of India

(D.K. Sekar)
Director General of Audit (Energy),
Delhi

Place : New Delhi
Date : 21 August 2020

ANNEXURE

List of Subsidiaries, Associate Companies and Jointly Controlled Entities of NTPC Limited whose financial statements were not audited by the Comptroller and Auditor General of India

A. Subsidiaries incorporated in India:

1. NTPC Electric Supply Company Limited
2. NTPC Mining Limited
3. North Eastern Electric Power Corporation Limited

B. Joint Ventures incorporated in India:

1. Ratnagiri Gas & Power Private Limited
2. NTPC BHEL Power Projects Private Limited
3 Transformers and Electricals Kerala Limited
4. National High Power Test Laboratory Private Limited
5. Energy Efficiency Services Limited
6. Anushakti Vidhyut Nigam Limited
7. Hindustan Urvarak & Rasayan Limited
8. CIL NTPC Urja Private Limited

NOTES

Joint Ventures (19)

POWER GENERATION

- Aravali Power Company Pvt. Ltd (50%)
- NTPC Tamil Nadu Energy Company Ltd. (50%)
- NTPC SAIL Power Company Ltd. (50%)
- Ratnagiri Gas and Power Pvt. Ltd. (25.51%)
- Anushakti Vidyut Nigam Ltd. (25.51%)
- Bangladesh India Friendship Power Company Pvt. Ltd. (50%)
- Trincomalee Power Company Ltd. (50%)
- Meja Urja Nigam Pvt. Ltd. (50%)

POWER SERVICES

- Utility Powertech Ltd. (50%)
- NTPC GE Power Services Pvt. Ltd. (50%)
- NTPC High Power Test Laboratory Pvt. Ltd. (20%)
- Energy Efficiency Services Ltd. (47.15%)

EQUIPMENT MANUFACTURING

- NTPC BHEL Power Projects Pvt. Ltd. (50%)*
- Transformers and Electricals Kerala Ltd. (44.60%)*
- BF-NTPC Energy Systems Ltd. (49%)*

COAL ACQUISITION

- CIL NTPC Urja Pvt. Ltd. (50%)
- International Coal Ventures Pvt. Ltd. (0.11%)*

FERTILIZERS

- Hindustan Urvarak & Rasayan Limited (29.67%)

LNG BUSINESS

- Konkan LNG Ltd. (14.82%)

Subsidiaries (9)*

POWER GENERATION

- Kanti Bijlee Utpadan Nigam Ltd (100%)
- Nabinagar Power Generating Company Ltd. (100%)
- North Eastern Electric Power Corporation Ltd. (100%)
- Patratu Vidyut Utpadan Nigam Ltd. (74%)
- THDC India Ltd. (74.496%)
- Bhartiya Rail Bijlee Company Ltd. (74%)

SERVICES

- NTPC Electric Supply Company Ltd. (100%)

COAL MINING

- NTPC Mining Ltd. (100%)

POWER TRADING

- NTPC BHEL Power Projects Pvt. Ltd. (100%)

*Company has resolved to withdraw from NTPC-BHEL, International Coat Ventures Pvt. Ltd., BF-NTPC Energy Systems Ltd. and TELK
*As on 31.03.2020

CMD and Directors of NTPC Limited

NTPC Limited

(A Govt. of India Enterprise)

(CIN : L40101DL1975GOI007966)

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