

RELIABLE PARTNER **FOR COMPLETE POWER PLANT SOLUTIONS**



Power Projects



Boilers



Turbines



**Electrical
Projects**



Air Fin Cooler



**Oil & Gas
Equipment**



**Environmental
Engineering**

KEY MILESTONES



Established
1985 ➤ Promoted by
Mr. B.G. Raghupathy (BGR) as a joint venture
with GEA Energietechnik GmbH, Germany

1998 ➤ Power Projects Division established

2007 ➤ GEA Energy System (India) Ltd was renamed
as BGR ENERGY SYSTEMS LIMITED

2008 ➤ Received two large
Engineering, Procurement & Construction
(EPC) contracts of three 600 MW Units

1993 ➤ GEA Energietechnik divested its stake to
promoters

2000 ➤ First Balance of Plant (BoP) contract for a
95 MW Combined Cycle Power Plant (CCPP)

2008 ➤ BGRENERGY Listed in both
National Stock Exchange (NSE) &
Bombay Stock Exchange (BSE)

2010 ➤ Joint venture agreements with Hitachi Power
Europe for Super Critical Boilers & Hitachi,
Japan for Steam Turbines & Generators

GLOBAL BUSINESS PARTNERS



Joint Venture with

Hitachi Power Europe,
Germany – BGR Boilers
Private Limited

for the Design, Manufacture,
Installation & Commissioning of
Super Critical Boilers.

Join Venture with

Hitachi, Ltd., Japan –
BGR Turbines Company
Private Limited

for the Design, Manufacture,
Installation & Commissioning
Super Critical Steam Turbine and
Generators.

Joint Venture with

GEA Energietechnik
GmbH, Germany

for Engineering, Procurement and
Construction (EPC) of Dry (ACC)
Cooling, and Wet (NDCT/IDCT)
Cooling System

License & Technology
Transfer Agreement with

Nooter/Eriksen, USA

for Design, Manufacture, Installation & Commissioning
of Heat Recovery Steam Generator (HRSG)

Technology Collaboration
& License Agreement with

TM.E. S.p.A Termomeccanica
Ecologia, Italy

for Design, Manufacture Testing, Installation, Commissioning
and Servicing of Condensate Polishing Unit (CPU)

DOMAIN EXPERTISE PROJECT EXECUTION



Executing turnkey EPC & BoP contracts for Thermal Power Plants

'DESIGN AND BUILD' structure, where the entire Design & Engineering is done under one roof

Deep domain expertise in design, detailed engineering, manufacturing, installation, & commissioning; efficient & seamless interfacing of BoP systems with Boiler, Turbine & Generator

Expertise in civil and tall structures, mechanical, Electrical C&I works enables 'MADE TO FIT DESIGN' from proposal stage to delivery

DOMAIN EXPERTISE MANUFACTURING



Design, Manufacture, Installation & Commissioning of 660MW, 700MW, 800MW and 1000MW Super Critical Boilers.

Supply of Sub Critical steam generators up to 600 MW

Design, Manufacture, Installation & Commissioning of 660MW, 800MW and 1000MW Super Critical Steam Turbine and Generators.

Supply of Single pressure and Multiple pressure level natural circulation Heat Recovery steam generators

Design, Engineering & Manufacture of BoP Equipment and Civil Works

TURNKEY POWER PLANT EXECUTION EPC SCOPE



Power Island

- Steam Generator (Boiler)
- Steam Turbine & Generator
- Heat Recovery Steam Generator

Balance of Plant

- Civil, Electrical & Mechanical Systems
- Tall Structures – Chimneys & Cooling Towers
- Substation & Switchyard

- Plant Piping System
- Air Cooled Condenser
- Air Fin Cooler
- Deaerator
- Desalination Plant including RO System
- Condensate Polishing Plant
- Effluent Treatment Plant
- Demineralisation Plant
- Ash Handling System

- Coal Handling Plant
- Gas Conditioning & Metering Skid
- Welded Fin Tubes
- COLTCS & Debris Filter
- Fire Protection System
- AC & Ventilation System
- Surface Condenser & Feedwater Heater
- Rubber Cleaning Balls for Condenser



TALLEST COOLING TOWER IN THE WORLD

- Natural Draft Cooling Tower - constructed at Kalisindh, Rajasthan, India for RRVUNL
- 202 m high structure
- Maximum diameter of 149.35 meters using reinforced concrete in hyperbolic shell.
- Designed to withstand wind velocity of 170 KM per hour.



LARGEST BOTTOM ASH HANDLING SYSTEM IN THE WORLD

- Installed in Mettur Stage-3, 1 x 600 MW Thermal Power Project
- Designed for the maximum demand for 77 tonnes/per hour (tph)
- The Crushed ash is pneumatically conveyed to ash silos nearly a kilometer away
- Huge saving in water to the extent of 2000 cubic meters/per day

PROJECTS PAN INDIA



KEY CUSTOMERS PAN INDIA



NTPC Limited



Tamil Nadu
TANGEDCO



Andhra Pradesh
APGENCO



Rajasthan
RRVUNL



Uttar Pradesh
MUVNL



Maharashtra
MAHAGENCO

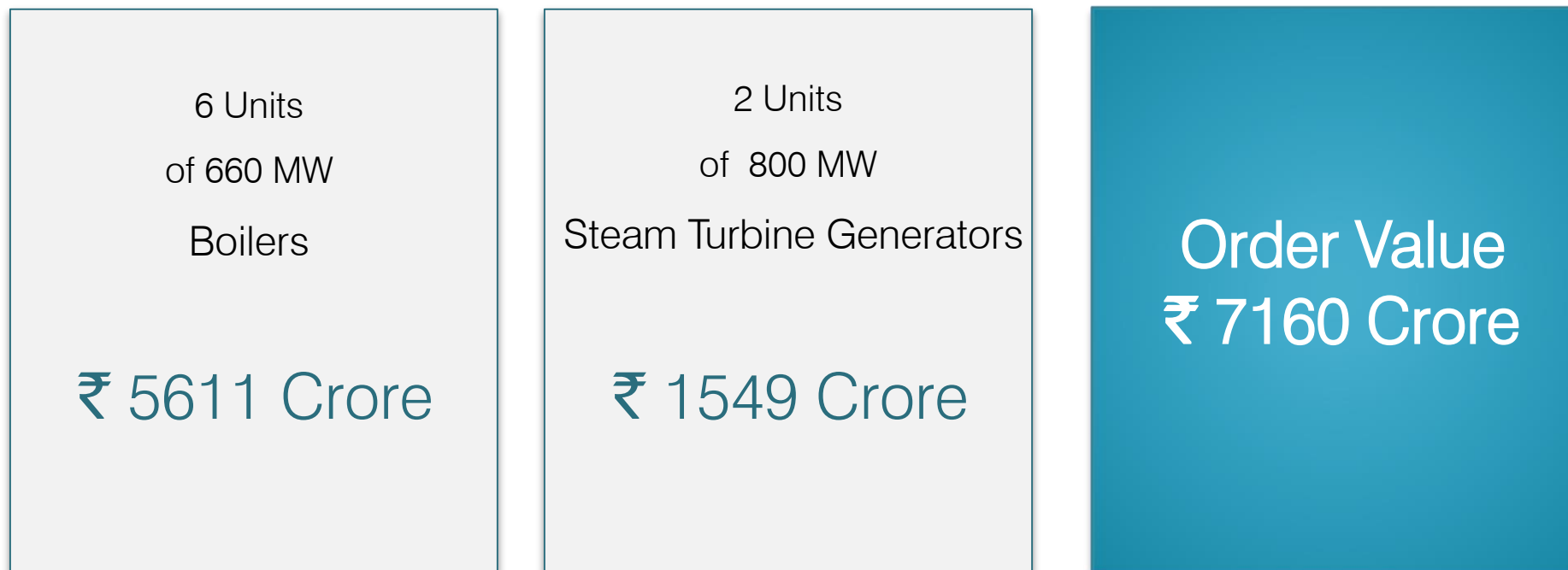


West Bengal
Damodar Valley Corporation



Chhattisgarh
CSPGCL

SUPER CRITICAL BTG BREAK THROUGH ORDERS



PROJECTS COMPLETED



PROJECTS	Capacity (MW)	Order Value (₹ in Crore)	Fuel	Scope
Aditya Cement CPP, Rajasthan	23	44	Coal	BOP
TNEB - CCPP, Valathur (Phase I), Tamil Nadu	95	59	Gas	BOP
Aban Power - CCPP, Karuppur, Tamil Nadu	120	269	Gas	EPC
RRVUNL - CCPP, Dholpur, Rajasthan	330	209	Gas	BOP
TNEB - CCPP, Valathur (Phase II), Tamil Nadu	92	355	Gas	EPC
Madras Aluminium Company Limited Mettur	25	76	Coal	EPC
APGENCO - Vijayawada TPS, Andhra Pradesh	1 x 500	578	Coal	BOP
APGENCO - Kakatiya TPS, Andhra Pradesh	1 x 500	694	Coal	BOP
MAHAGENCO - Khaperkheda TPS, Maharashtra	1 x 500	998	Coal	BOP
APGENCO - Kothagudem TPS, Andhra Pradesh	1 x 500	793	Coal	BOP
TNEB - Mettur TPS, Tamil Nadu	1 x 600	3100	Coal	EPC

PROJECTS IN PROGRESS



PROJECTS	Capacity (MW)	Order Value (₹ in Crore)	Fuel	Scope
RRVUNL - Kalisindh TPS, Rajasthan	2 x 600	4900	Coal	EPC
MAHAGENCO - Chandrapur STPS, Maharashtra	2 x 500	1792	Coal	BOP
CSPGCL - Marwa TPS, Chhattisgarh	2 x 500	1833	Coal	BOP
TPCIL - Krishnapatnam, Andhra Pradesh.	2 x 660	2166	Coal	BOP
TRN Energy Pvt. Ltd., Nawapara, Chhattisgarh	2 x 300	1924	Coal	EPC
NTPC Ltd. - Solapur TPP, Maharashtra	2 x 660	1855	Coal	SG
MUVNL Ltd. - Meja TPP, Uttar Pradesh	2 x 660	1855	Coal	SG
DVC Ltd. - Raghunathpur, West Bengal	2 x 660	1901	Coal	SG
NTPC Ltd. - Lara TPP, Chhattisgarh	2 x 800	1549	Coal	STG

- Commenced Operation in 2001
- Catering to the needs of Onshore and Offshore Customers

Products & Services

- 2/3 Phase Separator Systems/Skids
- Production and test separators
- Filter Separators & Dry gas filters
- Indirect Water bath heaters
- Gas Gathering Systems
- Gas Conditioning, Regulating & Metering Systems
- Gas Compressor Packages
- Gas Dehydration & Sweetening Systems
- Storage Tanks

Products & Services

- Pipeline Equipment's – Pig Launchers/Receivers
- Knockout Drums/Scrubbers

User Industries

- Oil & Gas fields
- Cross Country Pipelines & Refineries
- Petrochemical
- Power

Financials

- Income of ₹ 75 Crore in FY 11-12
- Order backlog of ₹ 16 Crore on 31st December, 2012

- Commenced Operation in 2002

Products & Services

- Turnkey contracts to set up Transmission and Distribution (T&D) network
- Gas Insulator Substation
- Switch Gears
- Optical Fibre Communication Network –OPGW, ADSS & OLTE
- Rural Electrification
- Electrical Balance of Plant for Thermal, Hydro & Nuclear Power Projects
- Exclusive partnership with Z T T provides turnkey solutions for OPGW communication networks

Products & Services

- Offers GIS Substations in association with leading manufacturers on case to case basis

User Industries

- Catering to the needs of Power Stations, Refineries & Petrochemical Operations

Financials

- Income of ₹ 90 Crore in FY 11-12
- Order Backlog as on 31stDecember, 2012 is ₹ 454 Crore

- Commenced Operation in 1995
- Market leader in India
- Certified by ASME with “U”, “U2” & “R” stamp
- Key markets -India, Middle East, Southeast Asia and North Africa

Products

Finned Tubes

- Extruded Fins
- Embedded Fins
- Knurled Fins
- Wrap on Fins

Header

- Cover plate Header
- Plug Header
- Pipe Header
- Welded Bonnet header
- Manifold

Services

Turnkey supply of Air Cooled Heat Exchangers for Oil & Gas processes and Power sector Industries

User Industries

Oil & Gas processes and Power

Financials

- Income of ₹ 178 Crore in FY 11-12
- Order backlog of. ₹ 118 Crore as on 31st December, 2012

- Commenced Operation in 1996
- Market Leader in Deaerators

Products & Services

- Deaerators
- Effluent Treatment & Recycling Plants leading to zero discharge
- Water Treatment Plants (Pre-Treatment & DM Plant)
- RO based Desalination Plants
- CPP –Condensate Polishing Plants

Highlights

- Supplied on turnkey basis the largest ever Deaerator in India for NPC (Tarapur) with capacity of 3,013 TPH
- Commissioned-Deaerators for SIPAT Supercritical 3 x 660 MW Power Plant, NTPC
- Under execution -Six large-size Deaerators for Marfiqin Saudi Arabia, Hyundai Heavy Industries, Korea

User Industries

- Power Projects

Financials

- Income of ₹ 61 Crore in FY 11-12
- Order backlog of ₹ 78 Crore on 31st December, 2012

QUALITY CERTIFICATIONS AND ACCREDITATIONS



ASME 'U' Stamp for two
Manufacturing Units



Approved by
INDIAN BOILER REGULATIONS (IBR)



ASME 'S' certification for one
Manufacturing Unit

ISO:9001 Certification for
three Manufacturing Units



14 Prestigious Awards for
Export Performance

BOARD OF DIRECTORS



	Name	Occupation	Exp.	Designation
1	Mr. B.G. Raghupathy	Industrialist	39	Chairman & Managing Director
2	Mr. V.R. Mahadevan	Company Executive	30	Director (Technologies & HR)
3	Mr. A. Swaminathan	Company Executive	34	Director (Sales & Marketing)
4	Mr. K. Chandrashekhar	Company Executive	36	Director (Projects)
5	Mrs. Swarnamugi Karthik	Company Executive	11	Director (Corporate Strategy)
6	Mr. Heinrich Böhmer	Business	45	Independent Director
7	Mr. M. Gopalakrishna	Retd. IAS	52	Independent Director
8	Mr. S.A. Bohra	Ex. Sr. Exec. Director, Nuclear Power Corporation	47	Independent Director
9	Mr. M. S. Sundara Rajan	Ex. CMD Indian Bank	39	Independent Director
10	Mr. S.R. Tagat	Practicing Chartered Accountant	32	Independent Director
11	Mr. Gnana Rajasekaran	Retd. IAS	26	Independent Director
12	Mrs. Sasikala Raghupathy	Business	27	Director

HUMAN RESOURCES

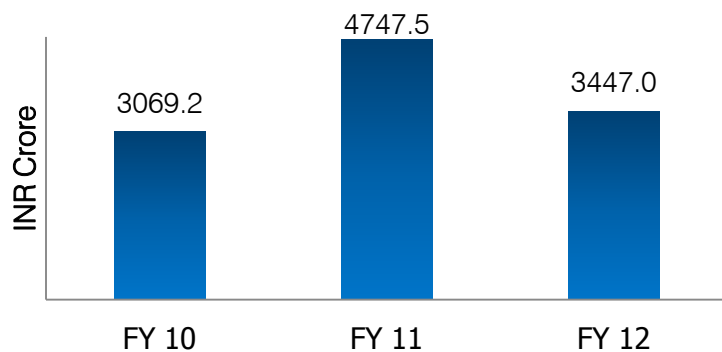


Total Employees	2395
Engineers	2032
Design & Engineering	851
Project Management & Quality Control	315
Planning, Procurement and Production	803
Marketing	63
Professional Staff	238
Finance and Accounts	108
Human resource, Legal, Secretarial and Systems	130
Others	125

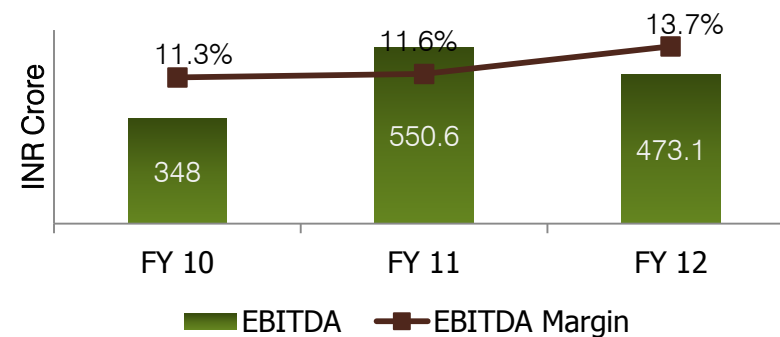
₹ Crore

	FY 2009-10	%	FY2010-11	%	FY 2011-12	%
TURNOVER	3069		4747		3447	
EBIDTA	348	11.34	550	11.60	473	13.73
PBT	304	9.93	482	10.15	326	9.49
PAT	201	6.55	324	6.83	224	6.49

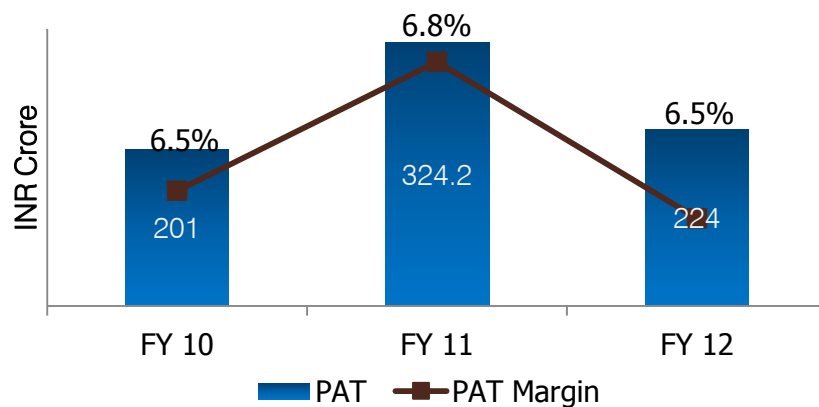
Total Revenues



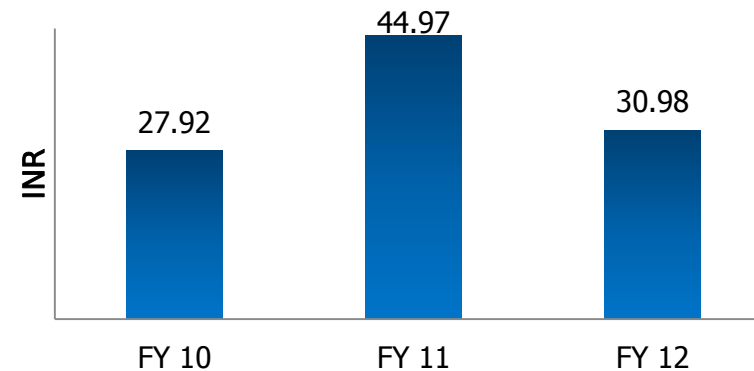
EBITDA and EBITDA margin



PAT and PAT margin



Earnings per share

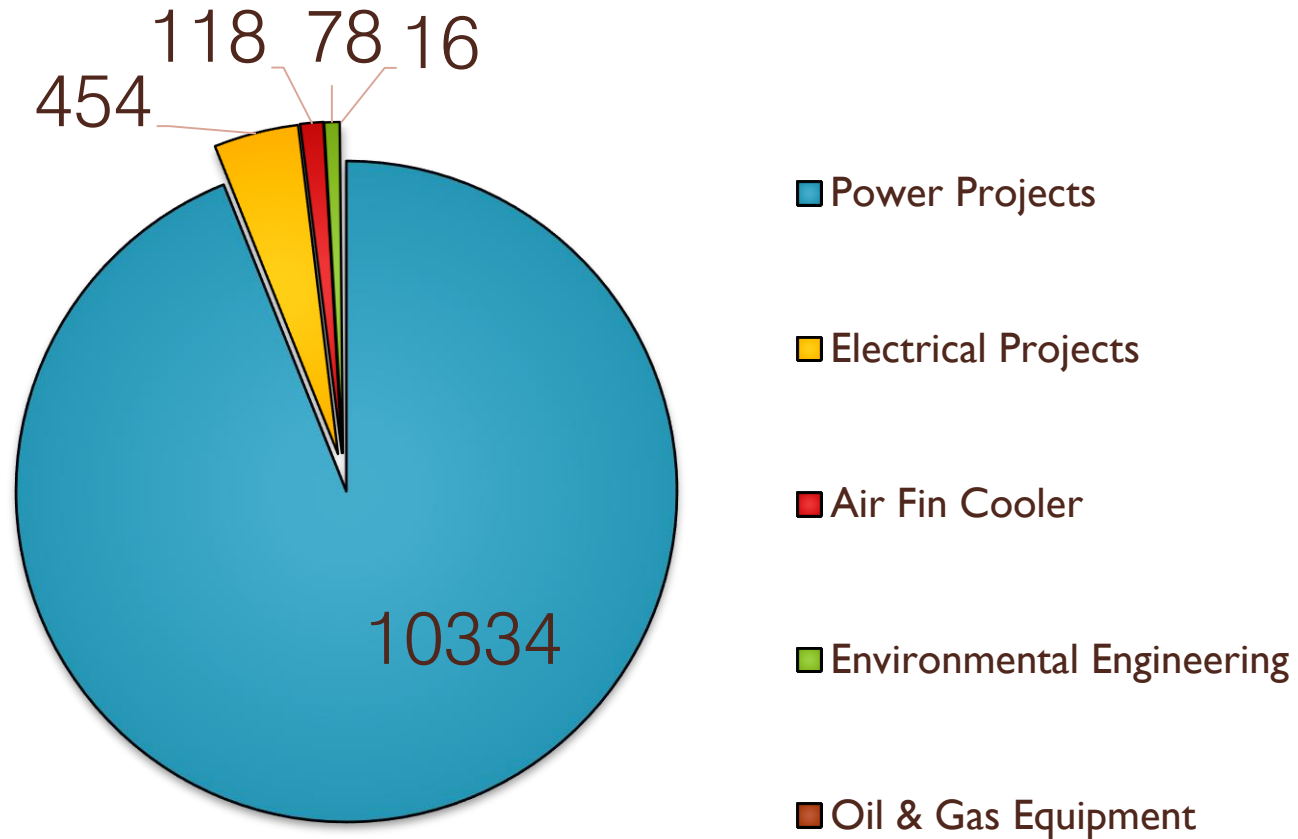


FINANCIALS QUARTERLY RESULTS FY 2012-13



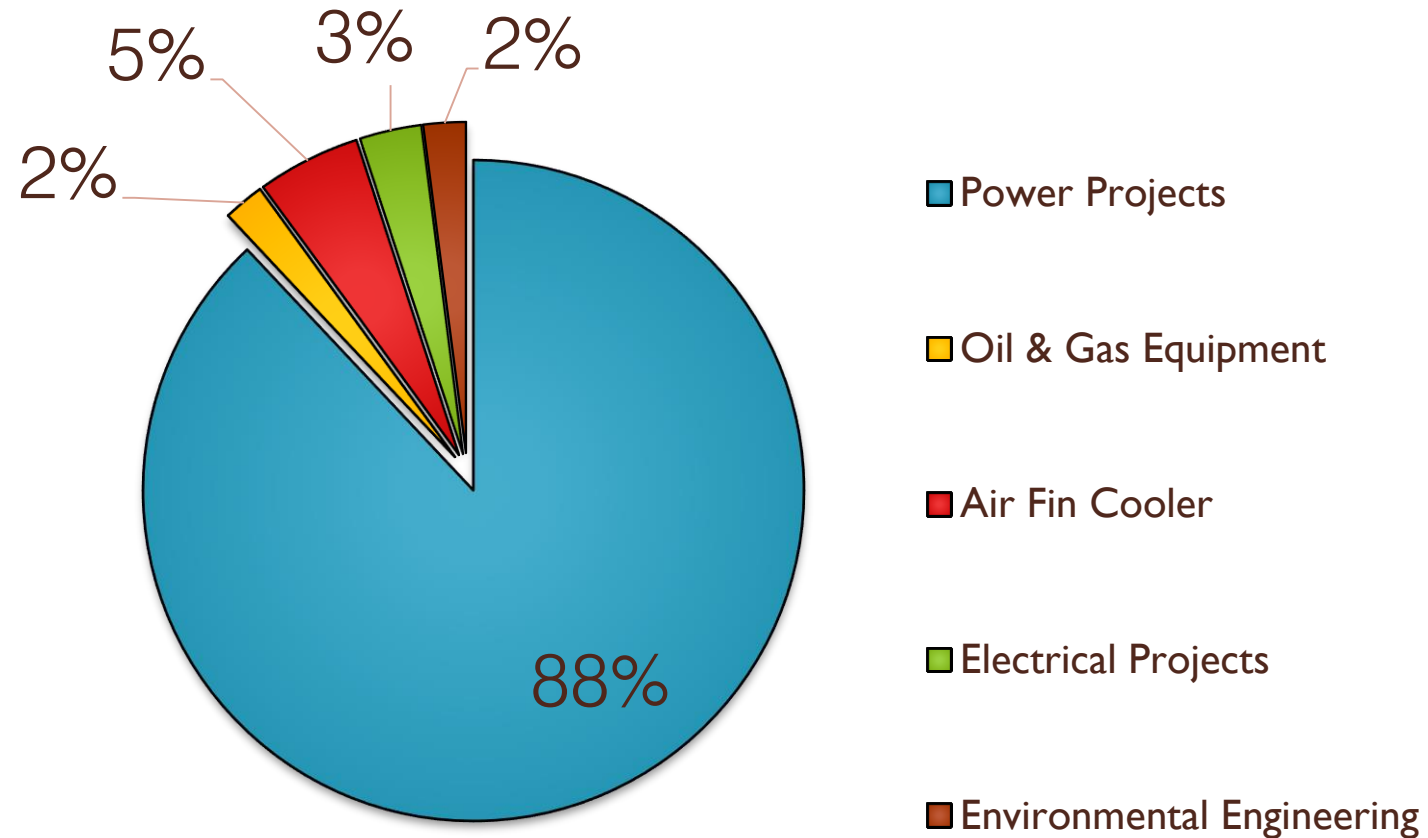
₹ Crore

	Turnover	EBIDTA	PAT	EPS (₹)
June, 2012	610.8	88.1	33.7	4.66
Sept, 2012	626.5	95.3	34.7	4.82
Dec, 2012	804.9	110.6	41.4	5.74



Total Order Backlog – Over ₹ 11000 Crore

FINANCIALS REVENUE FY 2011-12



Total Revenue – Over ₹ 3447 Crore

STRATEGY FOR FY 2013-14



Focus on large value BoP & EPC opportunities

SL. NO.	PROJECT	LOCATION	CUSTOMER	FUEL	SCOPE	COAL BLOCK STATUS
1	OPGCL - IB Valley TPS	Orissa	OPGCL	Coal	BOP	OPGC allotted Manhopaur coal block. Block under development
2	New Neyveli Power Station	Tamil Nadu	NLC	Lignite	BOP	Fuel from Lignite mine - II. Replacement project for existing TS-1 units.
3	NPCIL Kudankulam Unit 3 & 4	Tamil Nadu	NPCIL	Nuclear	BOP	Nuclear Financial clearance accorded.
4	Bhusawal TPP	Maharashtra	MAHAGENCO	Coal	BOP	Coal Block under development, Machakata block, Mahaguj
5	Nashik	Maharashtra	MAHAGENCO	Coal	BOP	TOR Granted. Coal allotted by Mahaguj from Mahanandi coalfields.
6	NTPC Lara CHP & IDCT	Chhattisgarh	NTPC	Coal	Package	Talipalli coal block in Chhattisgarh allotted to the project. Coal block under development
7	DVC Raghunathpur II CHP & IDCT	West Bengal	NTPC	Coal	Package	Captive mines
8	Chandrapur	Maharashtra	MAHAGENCO	CFBC	EPC	MAHAGENCO to develop 12 MTPA Coal Washery Project. Reject will be used as fuel.

Selectively bid for BTG prospects

Enter Middle East Power(Gas) projects with strategic tie up

KEY DIFFERENTIATORS



- Complete Power Plant Solutions – Design, Engineering, Manufacturing, Installation and commissioning for EPC, BoP and LSTK contracts for power projects
- Proven and committed leadership team
- In-house Design and Engineering capability – Control over time & cost
- Banking Support - 22 PSU and Private Banks with Gross Credit line of ₹ 11702 Crore
- Very low term borrowing
- Disciplined working capital management