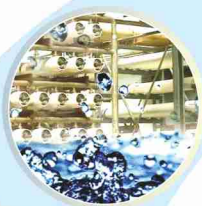


Sustaining Leadership...  
Engineering New Growth Avenues

# ANNUAL REPORT

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2012 - 13





## VISION

**A global engineering enterprise providing solutions for a better tomorrow**



## MISSION

**Providing sustainable business solutions in the fields of Energy, Industry & Infrastructure**

## VALUES

- GOVERNANCE** : We are stewards of our shareholders' investments and we take that responsibility very seriously. We are accountable and responsible for delivering superior results that make a difference in the lives of the people we touch.
- RESPECT** : We value the unique contribution of each individual. We believe in respect for human dignity and we respect the need to preserve the environment around us.
- EXCELLENCE** : We are committed to deliver and demonstrate excellence in whatever we do.
- LOYALTY** : We are loyal to our customers, to our company and to each other.
- INTEGRITY** : We work with highest ethical standards and demonstrate a behaviour that is honest, decent and fair. We are dedicated to the highest levels of personal and institutional integrity.
- COMMITMENT** : We set high performance standards for ourselves as individuals and our teams. We honour our commitments in a timely manner.
- INNOVATION** : We constantly support development of newer technologies, products, improved processes, better services and management practices.
- TEAM WORK** : We work together as a team to provide best solutions & services to our customers. Through quality relationships with all stakeholders we deliver value to our customers.

GR-ELICIT



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## Letter to Shareholders



### Dear Shareholders,

The past year has been a defining one for your company BHEL as we became a 'Maharatna' company, crossed ₹ 50,000 Crore turnover mark and achieved the highest ever addition of 10,340 MW to India's electricity generation capacity while navigating through one of the most difficult economic and business environment of our times. Despite a challenging environment for Indian industry, your company has not lost its focus on creating shareholders' value. The following outlines the milestones we have achieved during the year 2012-13:

- BHEL has achieved the highest ever turnover of ₹ 50,156 Crore during 2012-13 registering a growth of 1% despite adverse business conditions. With the Net Profit of ₹ 6,615 Crore, we were able to maintain the level of previous five years (2007-12) average profit margins of 14% on the back of strong focus on manufacturing efficiencies.
- Recognising the consistent performance over a longer period of time, your company has been bestowed with the coveted 'Maharatna' status by Govt. of India, resulting in further empowerment of the Board for greater business agility.
- A total of ₹ 31,650 Crore of orders were received by your company, which was an increase of 43% over 2011-12. It included 8 nos. of TG, 9 nos. of Boilers and 7 nos. of ESP packages for supercritical sets. Interestingly with market share of 67% in power sector, BHEL continues to maintain its leadership position in Indian market despite rising intensity of competition.
- Various initiatives taken by your company in recent past for accelerated project execution have started fetching results. We were able to synchronise/ commission all time high 10,340 MW of power plant equipment including 9,328 MW in utility segment. Your company successfully commissioned India's first indigenously manufactured subcritical set of 600 MW rating on EPC basis at North Chennai.
- With the objective of becoming an innovative developer of clean, efficient, reliable and affordable products, systems and technologies, we continue to relentlessly strengthen our technology and innovation capabilities. BHEL invested ₹ 1,252 Crore in R&D during the year. The highest ever 385 patents and copyrights were filed raising the intellectual capital of BHEL to 2,170.
- Your company has signed MoU with Indian Railways for setting up a green field coach factory for Mainline Electric Multiple Unit at Bhilwara, Rajasthan. This is a significant step in our diversification endeavours.

### Positioning for Future

We are at a critical juncture in our history as we endeavour to sustain growth momentum, increase shareholder wealth and fulfil our vision of becoming a global engineering enterprise. We are proud of the work your company has done to augment manufacturing capacity, enhance pace of project execution, strengthen engineering and technology capabilities, and people development.

- The Company has adopted its Strategic Plan 2012-17. The plan attempts to steer the company towards becoming a global engineering enterprise. Key drivers of our success are expanding our offerings in Power Sector by

building EPC capability, focus on Industry businesses, expansion of spares & services and adoption of collaborative approach.

- Power sector will continue to remain major contributor in our top line with transportation and transmission emerging as next big business verticals. Strategies are in place to strengthen our presence in Nuclear, Renewable and Water segments.
- Efforts are being made to make supply chain agile and accelerate project execution through sustained focus on vendor base expansion, scaling up procurement through technology initiatives, advanced manufacturing action, global sourcing etc.
- We are working towards developing lower rating sets with supercritical parameters providing alternatives to the Utilities to take advantage of this eco-friendly and fuel efficient technology.
- To expand our nuclear energy portfolio, efforts to increase scope by offering products beyond conventional island in Nuclear business are under way.
- BHEL's collaborative initiatives to address the growing demand potential in Railway Transportation including Metro & Suburban Railways include initiative with Indian Railways for setting up a greenfield Mainline Electrical Multiple Unit (MEMU) Coach Factory in Rajasthan.
- Considering the National Action Plan on Climate Change targeting 15% of electricity generation from renewables by 2020, BHEL is looking towards expanding its capacity to manufacture photo voltaic modules & cells.
- We have constituted R&M Systems Group (RMSG) to address emerging opportunities in Renovation and Modernisation of Power Plants.
- In a bid to address the aspirations of the company to become a preeminent supplier of Industrial Boiler, Nuclear Steam Generator & supplier of equipment for process Industries, merger of BHPV Vizag with BHEL is under way. Further, in a bid to make headway in new product areas like Alternators for Traction applications etc. facilities of BHEL-EML Kasargod, a joint venture of BHEL and Kerala Govt., are being leveraged.
- 'Engineering and Technology' is our strength. To uphold our reputation for excellence in our core capability, we will continue to upgrade existing products to contemporary levels and develop new products through continuous in-house efforts as well as through acquisition of new technologies.

### Conclusion

Looking ahead, the Board and Management of your company will continue to execute various strategies to develop existing assets, optimize business portfolio through diversification, strengthen financial performance and drive operational efficiencies throughout the organization. I am confident that our strategic endeavours would generate sustainable growth, stronger cash flows, and better returns on capital and greatly improve shareholder wealth.


I would like to thank my fellow Directors and members of the Management Committee for their wisdom and support. I would also like to extend a special thanks to each and every shareholder of BHEL, whose trust and confidence have been the motivating force in all our endeavours. I thank all our customers and business associates in India and abroad for their unstinted loyalty and steadfast patronage of our products and services. Various Ministries of GoI, particularly the Department of Heavy Industry, have been providing valuable guidance and support in our efforts. Finally, a word of thanks to more than 48,000 employees of BHEL who are making these successes happen. I am extremely proud of their outstanding performance over this period and have full confidence in their ability to deliver even greater success going forward.

With all the ingredients of success, dedicated people, engineering and technological excellence and right business strategies in place, your company is well positioned to meet the demands of a growing industry and deliver the type of consistent results for which this company is known for.

I look forward to your unwavering support while continuing the growth momentum in coming years too.

With best wishes,

New Delhi  
August 14, 2013

  
(B. Prasada Rao)  
Chairman & Managing Director

## Board of Directors

As on 01.08.2013



**Shri B. Prasada Rao**  
Chairman & Managing Director



**Ms. Kusumjit Sidhu**  
Additional Secretary &  
Financial Adviser



**Shri Ambuj Sharma**  
Joint Secretary



**Shri Trimbakdas S. Zanwar**  
Director



**Shri S. Ravi**  
Director



**Shri Atul Saraya**  
Director (Power)



**Shri P.K. Bajpai**  
Director (Finance)



**Shri R. Krishnan**  
Director (HR)



**Shri W.V.K. Krishna Shankar**  
Director (IS&P)



**Shri I.P. Singh**  
Company Secretary

## Management Committee

As on 18.07.2013

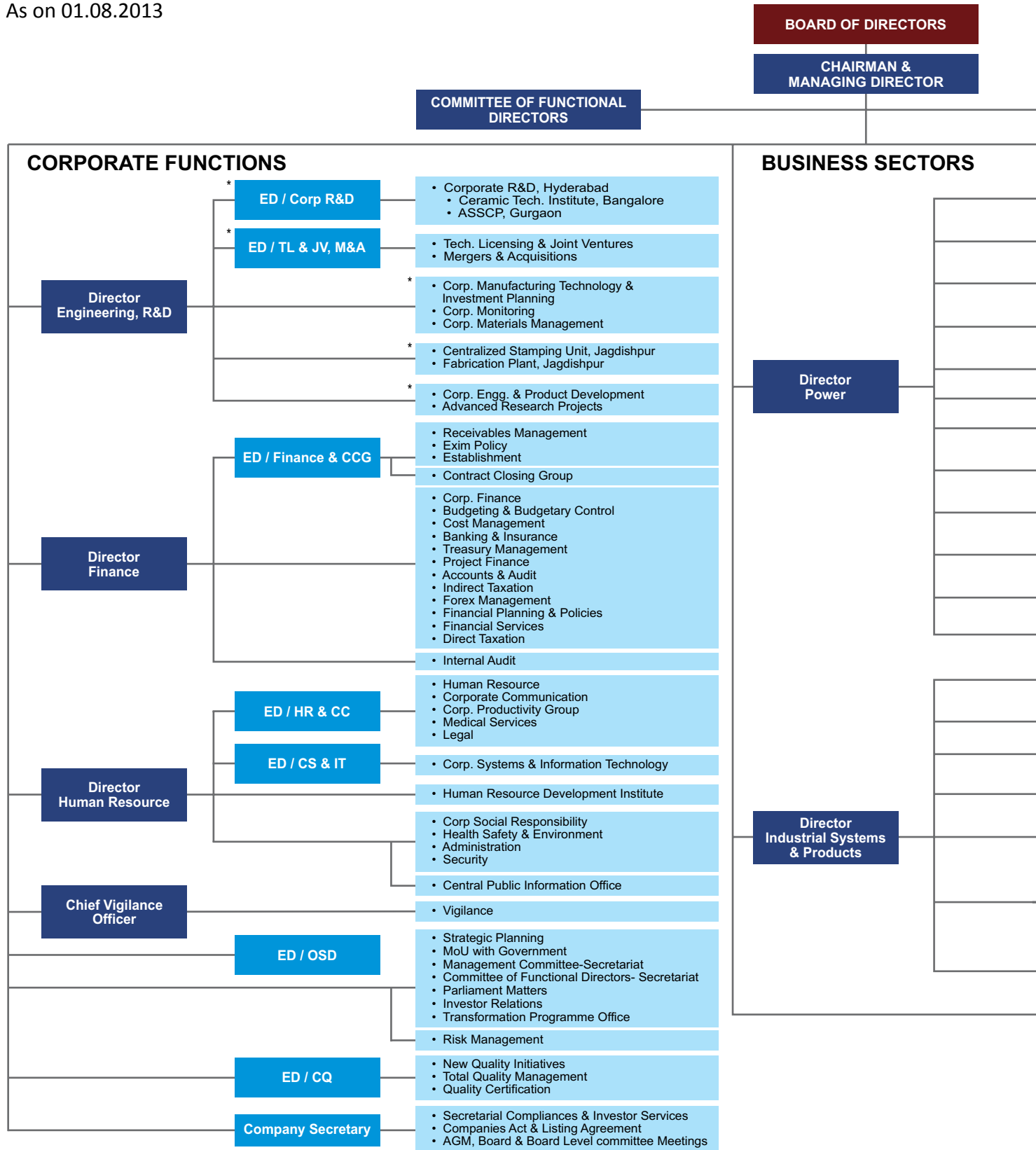


- Standing (Left to Right)** : Akhil Joshi, K.S. Shivaprasad, Rajeev Srivastava, S.V.S. Narayana, Dr. S. Sekar, Arun Singhal, Prakash Chand, Anuj Bhatnagar, N. Ravichander, Rakesh Mathur, S.R. Prasad, A.S. Nagaraja, V.K. Midha, Arvind Gupta, A.K. Ghosh, Rajiv Puri, S. Gopinath
- Sitting R-2 (Left to Right)** : K.C. Ramamurthy, S.C. Mittal, Dr. Sukul Lomash, Anil Ahuja, N.K. Bansal, Atul Sobti, K.S. Mathur, C.K. Srikkhande, A.K. Dave, Umesh Mathur, A. Dasgupta, Subodh Gupta, T.N. Veeraraghavan, B. Shankar, Jainender Kumar
- Sitting R-1 (Left to Right)** : P.K. Uppal, A.V. Krishnan, P.K. Bajpai, Atul Saraya, B.Prasada Rao, M.K. Dube, R. Krishnan, M. Rajiv Kumar, W.V.K. Krishna Shankar

B. Prasada Rao	<ul style="list-style-type: none"> <li>- Chairman &amp; Managing Director</li> <li>- Additional Charge of: <ul style="list-style-type: none"> <li>- Engineering, Research &amp; Development</li> <li>- Corporate Engineering &amp; Product Development</li> <li>- Corporate Research &amp; Development</li> <li>- Advance Research Projects</li> <li>- Corporate Manufacturing Technology &amp; Investment Planning</li> <li>- Corporate Monitoring</li> <li>- Corporate Materials Management</li> <li>- Technology Licensing &amp; Joint Ventures and M&amp;A</li> <li>- Centralised Stamping Unit and Fabrication Plant</li> </ul> </li> </ul>	B. Shankar	<ul style="list-style-type: none"> <li>- Human Resource &amp; Corporate Communication</li> </ul>
Atul Saraya	<ul style="list-style-type: none"> <li>- Power Sector Business (Marketing, Project Engineering, E&amp;C, Project Management, Technical Services, Spares &amp; Services)</li> </ul>	T.N. Veeraraghavan	<ul style="list-style-type: none"> <li>- Boiler Auxiliaries Plant</li> </ul>
M.K. Dube	<ul style="list-style-type: none"> <li>- Industrial Systems &amp; Products Business (Captive Power Plants, Transmission, Transportation, Defence, Mechanicals, Electricals, Renewables, Project Management)</li> <li>- Ceramic Business</li> <li>- Component Fabrication Plant</li> <li>- Project Engineering &amp; Systems Division</li> <li>- Regional Operations Division</li> </ul>	W.V.K. Krishna Shankar	<ul style="list-style-type: none"> <li>- Industry Sector</li> </ul>
P.K. Bajpai	<ul style="list-style-type: none"> <li>- Corporate Finance</li> <li>- Budgeting &amp; Control</li> <li>- Cost Management</li> <li>- Treasury Management</li> <li>- Accounts &amp; Audit</li> <li>- Taxation</li> <li>- Forex Management</li> <li>- Internal Audit</li> <li>- Financial Services</li> </ul>	A. Dasgupta	<ul style="list-style-type: none"> <li>- Corporate Systems and Information Technology</li> </ul>
R. Krishnan	<ul style="list-style-type: none"> <li>- Human Resource</li> <li>- Corporate Communication</li> <li>- Corporate Systems and Information Technology</li> <li>- CSR, Health, Safety &amp; Environment</li> </ul>	Umesh Mathur	<ul style="list-style-type: none"> <li>- Transmission Business</li> </ul>
A.V. Krishnan	<ul style="list-style-type: none"> <li>- High Pressure Boiler Plant</li> <li>- Seamless Steel Tube Plant</li> <li>- Industrial Valves Plant</li> <li>- Welding Research Institute</li> </ul>	A.K. Dave	<ul style="list-style-type: none"> <li>- Transformer Plant</li> </ul>
M. Rajiv Kumar	<ul style="list-style-type: none"> <li>- Power Sector-Eastern Region</li> </ul>	C.K. Srikhande	<ul style="list-style-type: none"> <li>- Power Sector-Northern Region</li> </ul>
P.K. Uppal	<ul style="list-style-type: none"> <li>- International Operations</li> </ul>	K.S. Mathur	<ul style="list-style-type: none"> <li>- Power Sector-Management Services</li> </ul>
Subodh Gupta	<ul style="list-style-type: none"> <li>- Captive Power Plant Business</li> <li>- Defence Business</li> <li>- Industry Sector-Project Management</li> </ul>	Atul Sobti	<ul style="list-style-type: none"> <li>- Industrial Systems Group</li> </ul>
Jainender Kumar	<ul style="list-style-type: none"> <li>- Power Sector-Project Management</li> </ul>	N.K. Bansal	<ul style="list-style-type: none"> <li>- Power Sector-Technical Services</li> </ul>
		Anil Ahuja	<ul style="list-style-type: none"> <li>- Industrials Products Business (Elect. &amp; Mech.)</li> <li>- Transportation Business</li> </ul>
		Dr. Sukul Lomash	<ul style="list-style-type: none"> <li>- Officer on Special Duty-Corp. Office</li> </ul>
		S.C. Mittal	<ul style="list-style-type: none"> <li>- Finance-Receivables Management</li> <li>- Contract Closing</li> </ul>
		K.C. Ramamurthy	<ul style="list-style-type: none"> <li>- Electronics Division</li> <li>- Electronics Systems Division</li> </ul>
		S. Gopinath	<ul style="list-style-type: none"> <li>- Piping Centre</li> <li>- Power Plant Piping Unit, Thirumayam</li> </ul>
		Rajiv Puri	<ul style="list-style-type: none"> <li>- Project Engineering Management</li> </ul>
		A.K. Ghosh	<ul style="list-style-type: none"> <li>- Power Sector-Southern Region</li> </ul>
		Arvind Gupta	<ul style="list-style-type: none"> <li>- Project Engineering &amp; Systems Division</li> </ul>
		V.K. Midha	<ul style="list-style-type: none"> <li>- Renewables &amp; Water Business</li> </ul>
		A.S. Nagaraja	<ul style="list-style-type: none"> <li>- Ceramic Business</li> </ul>
		S.R. Prasad	<ul style="list-style-type: none"> <li>- Heavy Electrical plant</li> <li>- Electrical Machines Repair Plant</li> </ul>
		Rakesh Mathur	<ul style="list-style-type: none"> <li>- Power Sector-Marketing</li> </ul>
		N. Ravichander	<ul style="list-style-type: none"> <li>- Heavy Power Equipment Plant</li> </ul>
		Anuj Bhatnagar	<ul style="list-style-type: none"> <li>- Corporate Quality</li> </ul>
		Prakash Chand	<ul style="list-style-type: none"> <li>- Heavy Electrical Equipment Plant</li> <li>- Pollution Control Research Institute</li> </ul>
		Akhil Joshi	<ul style="list-style-type: none"> <li>- Technology Licensing &amp; Joint Ventures</li> <li>- Mergers &amp; Acquisitions</li> </ul>
		Arun Singhal	<ul style="list-style-type: none"> <li>- Power Sector-Western Region</li> </ul>
		Dr. S. Sekar	<ul style="list-style-type: none"> <li>- Corporate Research &amp; Development</li> </ul>
		S.V.S. Narayana	<ul style="list-style-type: none"> <li>- Central Foundry Forge Plant</li> </ul>
		Rajeev Srivastava	<ul style="list-style-type: none"> <li>- Spares and Services Business</li> <li>- Heavy Equipment Repair Plant</li> <li>- Renovation &amp; Modernisation</li> </ul>
		K.S. Shivaprasad	<ul style="list-style-type: none"> <li>- Secretary, Management Committee</li> </ul>

# Corporate Organisational Structure

As on 01.08.2013





## MANAGEMENT COMMITTEE

## OPERATIONS

ED / PS-Marketing	• Power Sector – Marketing
ED / Hydro & Nuclear	• PS– Marketing, Hydro & Nuclear
ED / PS-Project Management	• Project Management
ED / PS-SSBG	• Spares & Services Business Group <sup>\$</sup> • Heavy Equipment Repair Plant, Varanasi • R&M Systems Group, Bhopal
ED / PS-PEM	• Project Engineering Management
	• Technical Services
ED / PS-ER	• PS Eastern Region, Kolkata
ED / PS-NR	• PS Northern Region, NOIDA
ED / PS-WR	• PS Western Region, Nagpur
ED / PS-SR	• PS Southern Region, Chennai
ED / MSX, SCT, IT	• Management Services • PS HQ- Quality, Safety & MM
	• PS-Human Resources
ED / CPP, Defence, PMG	• Captive Power Plant Business • Defence Business • Project Management Group
	• Renewables & Water Business
ED / TBG	• Transmission Business Group
ED / TBD, IPM & IPE	• Transportation Business • Transportation Systems Group • Industrial Products Business (Elect & Mech.)
ED / ROD & CFP	• Regional Operations Division • Component Fabrication Plant, Rudrapur
ED / CBU	• Electro Porcelains Division, Bangalore • Insulator Plant, Jagdishpur
ED / PE&SD	• Project Engg. & Systems Division, Hyderabad
ED / International Operations	• Overseas Business

ED / Bhopal	• Heavy Electrical Plant, Bhopal • Centre for Electric Transportation, Bhopal
	• EMRP, Mumbai
ED / Jhansi	• Transformer Plant, Jhansi
ED / HEEP, Haridwar	• Heavy Electrical Equipment Plant, Haridwar • Pollution Control Research Institute, Haridwar
ED / CFFP, Haridwar	• Central Foundry Forge Plant, Haridwar
ED / HPEP, Hyderabad	• Heavy Power Equipment Plant, Hyderabad
ED / Trichy	• High Pressure Boiler Plant, Trichy • Seamless Steel Tube Plant, Trichy • Welding Research Institute, Trichy
	• Industrial Valves Plant, Goindwal
ED / Thirumayam & PC	• Piping Centre, Chennai • Power Plant Piping Unit, Thirumayam
ED / BAP, Ranipet	• Boiler Auxilliary Plant, Ranipet
ED / EDN, Bangalore	• Electronics Division, Bangalore • Electronics Systems Division, Bangalore
ED / ISG, Bangalore	• Industrial Systems Group, Bangalore

<sup>\$</sup> Matrix reporting to Director(IS&P) for Industry sector Business

\* Presently report to CMD

## Corporate Profile

Established in 1964, BHEL is India's largest engineering and manufacturing company of its kind engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Oil & Gas and Defence. The company has been earning profits continuously since 1971-72 and paying dividends since 1976-77. In recognition of its consistent high performance, BHEL has been conferred with 'Maharatna' status by Government of India on 1<sup>st</sup> February, 2013. It is now one among the seven Maharatna PSEs. Hon'ble Prime Minister of India has dedicated the Power Plant Piping Unit, Thirumayam Tamil Nadu, 16<sup>th</sup> Manufacturing Unit of BHEL, to the Nation on 2<sup>nd</sup> August 2013. With widespread network of 16 manufacturing units, two repair units, four regional offices, eight service centres, eight overseas offices, 15 regional centres, seven joint ventures and infrastructure to execute more than 150 project sites across India & abroad BHEL provides products, systems and services to customers efficiently and at competitive prices. The company has enhanced its capability to deliver 20,000 MW p.a. of power equipment to address growing demand for power generation equipment. The foundation stone for the new Greenfield Power Equipment Fabrication Plant of BHEL at Bhandara, Maharashtra was laid by the Hon'ble Chief Minister of Maharashtra on 14<sup>th</sup> May, 2013. The company places strong emphasis on innovation and creative development of new technologies. Our research and development (R&D) efforts enable us to have a strong customer orientation responding to the changes in the market.

The high level of quality & reliability of our products is due to adherence to international standards by acquiring and adapting some of the best technologies from leading companies in the world including General Electric Company, Alstom SA, Siemens AG and Mitsubishi Heavy Industries Ltd., together with technologies developed in our own R&D centres.

Most of our manufacturing units and other entities have been accredited to Quality Management Systems (ISO 9001:2008), Environmental Management

Systems (ISO 14001:2004) and Occupational Health & Safety Management Systems (OHSAS 18001:2007). BHEL, where Quality has taken deep roots as per internationally recognized quality systems, has once again made significant achievements by securing (a) Two 'CII-ITC Sustainability Awards 2012' for Strong Commitment towards sustainability and (b) 'Commendation for Significant Achievements in TQM by two units of BHEL.

Continuing its tradition of winning prestigious national/ international awards, the organization and its employees won several awards during the year which included 'SCOPE Meritorious Award for Human Resource Management'; Indian Chamber of Commerce 'PSE Excellence Award' in the R&D, Technology & Innovation category; '3 Star Gold Awards' for Quality Circles by 3 BHEL units. The significant awards conferred in the Individual category to the CMD include 'NITIE Distinguished Alumnus Award 2012'; 'BT-STAR Best PSU Man of the Year Award 2012'; Enertia 'Power Man of the Year Award', to name a few. BHEL was declared the Best PSU in the Electrical & Electronics category by Dun & Bradstreet. Customer satisfaction survey has also been conducted for Power Sector for the first time, in the month of January 2013.

### Power Generation

BHEL is the largest manufacturer of Power generation equipment in India, supplying wide range of products & systems for thermal, nuclear, gas and hydro-based utility and captive power plants. The company has the capability to execute power projects on turnkey/EPC



660 MW Turbine LP Rotor for Bara Project, under assembly at HEPP, Haridwar