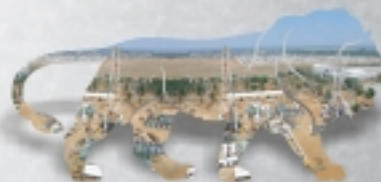




Making in India  
...Five Decades of  
Excellence



# Making in India

*...Five Decades of Excellence*

## Power

Power Generation plants including Thermal (up to 1000 MW), Nuclear, Hydro & Gas

BoP & Auxiliary systems, Pollution control eqpt (ESP, FGD)

## Industry

Electrical & Mechanical systems (Compressors, Pumps, Motors, etc.), Control & Automation systems for Fertilizer, Paper, Refining, Steel & Sugar industries

## Water

Water Management system for Power plants & Industry

## Transmission

HVAC/HVDC systems, GIS, AIS, Substation Automation, FACTS Solutions, Transmission products up to 1200 kV







## Oil & Gas

Oil Rigs & controls,  
Well Heads &  
Xmas Trees,  
Compressors

## Defence

SRGM,  
Turret Casting T72 Tank,  
IPMS, ACS

## Transportation

Transportation systems,  
Locomotives, Propulsion  
systems & Electrics

## Renewable energy

Solar PV Power plants/  
Space-grade PV Panels  
& Batteries



# Efforts towards higher efficiency...

BHEL has achieved a major milestone with the commissioning of two 800 MW supercritical boilers at Sri Damodaram Sanjeevaiah Thermal Power Plant (SDSTPP) at Krishnapatnam in Nellore District of Andhra Pradesh. Significantly, these are the highest rating (800 MW) indigenous boilers commissioned in the country. The commissioning of the two 800 MW boilers at Krishnapatnam is an important milestone for the country seeking to achieve self-reliance in the field of contemporary, state-of-the-art supercritical technology. It also demonstrates BHEL's capability in the area of supercritical technology. The key equipment for the project has been manufactured by BHEL at its Trichy, Hyderabad, Ranipet and Bengaluru plants. The 800 MW boiler designed by BHEL is a two pass, once-through supercritical type, utilizing a Tangential Firing System. It is designed for single reheat, variable pressure operation, and with balanced draft furnace conditions. Supercritical technology results in ~11% reduction in CO<sub>2</sub> emissions, less fuel consumption & lower life-cycle cost to customers.

BHEL has so far contracted 41 sets of supercritical boilers.



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## Notice

# Letter to Shareholders



## *Dear Shareholders,*

It is my proud privilege to present the 51<sup>st</sup> Annual Report of your Company for the financial year 2014-15. My message to you echoes the views of about 45,000 employees of BHEL family working to provide sustainable business solutions in the fields of energy, industry and infrastructure.

Amidst the arduous external economic and business environment, your company continued to face challenges in 2014-15 but, throughout the year, we demonstrated an exceptional resilience to these headwinds. From managing growth to managing slowdown, your company has steadily strengthened its inherent competitiveness as reflected from

“...From managing growth  
to managing slowdown,  
your company has steadily  
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competitiveness as reflected  
from sustained market  
leadership, continued focus on  
innovation and project execution  
performance...”

sustained market leadership, continued focus on innovation and project execution performance.

Recent policy initiatives taken by the Government such as allocation of coal blocks through e-auction, rationalization of fuel prices, expeditious clearance of projects and boost to Defence & Transportation sector etc. are likely to improve business environment and provide momentum to existing and upcoming projects.

I would like to share some highlights of 2014-15 and provide few thoughts on both the key focus areas of your Board and the future prospects of your company:

- BHEL has achieved a Turnover of ₹ 30,947 Crore and a Net profit of ₹ 1,419 Crore during 2014-15.
- Despite a sharp contraction in the market and fierce competitive environment, BHEL retained its leadership position with 72 percent market share in Indian Power sector for the second consecutive year. BHEL secured orders worth ₹ 30,814 Crore- an increase of 10% over last year including BHEL's second largest order worth ₹ 7,788 Crore for 2x660 MW TANGEDCO Ennore SEZ on EPC basis.
- During 2014-15, your company synchronized/commissioned 11,941 MW of power plant equipment, more than 10,000 MW – 3<sup>rd</sup> year in a row. With this, your company has joined the elite club of select global giants having an installed base of over 150 GW of power generating equipment.
- Continuing with its focus on R&D and innovation, your company invested ₹ 1,019 Crore on R&D, and recorded a turnover of ₹ 7,300 Crore from in-house developed products and services. BHEL also filed the highest-ever 453 patents and copyrights in a year, enhancing the company's intellectual capital to 3,010.
- Your company has formed a consortium with Mishra Dhatu Nigam Ltd. (Midhani) and Hindustan Shipyard Ltd. (HSL) for jointly bidding for indigenously building P-75 (i) submarines for the Indian Navy.
- 2014-15 marked a turnaround in Indian Hydropower sector with addition of 736 MW to Central utilities, highest in a decade. This entire 736 MW of Hydroelectric projects was successfully commissioned by BHEL.
- During the year, the company secured export orders from 23 countries worth ₹ 720 Crore. A major milestone was commissioning of four power plants in overseas markets in Rwanda, Sudan, Ethiopia and Oman.

## Positioning for Future

With the revival in business sentiments, stream of opportunities are expected in the traditional as well as new areas of business, which shall enable BHEL to regain the growth trajectory.

- Accelerating Project execution is one of the key focus areas of BHEL. Your company has already augmented its capacity for power plant equipment manufacturing to 20,000 MW p.a. BHEL signed an MoU with the newly formed Telangana state for 6,000 MW Power projects and received two major EPC orders from TSGENCO for 1x800 MW Kothagudem TPS & 4x270 MW Bhadradri TPS. This has been followed by a historic landmark of securing the single largest EPC order worth ₹ 17,950 Crore for 5 x 800 MW (4000 MW) Supercritical Thermal power project to be set up at Yadadri, in Nalgonda district of Telangana. The company is all set to create new benchmarks in execution. We are also favourably placed in a number of other new tenders.
- In its effort to continue its sustained leadership position in the Indian power sector, BHEL has enhanced its thrust on EPC business and expanded its portfolio by adding Flue-Gas Desulphurisation (FGD), Water Management systems, Air Cooled Condenser, and other Balance of Plant (BoP) systems. Increasing the level of indigenisation in supercritical technology and development of Advanced Ultra Supercritical Technology are the major strategies in the power sector.
- Focus on cost optimization through increased indigenisation of supercritical technologies, higher value additions, increased vendor base and design/layout optimization efforts aided the company in enhancing competitiveness.
- Company's focus on cash realization during the year has resulted in retaining cash surplus position. The rising trend of debtors has also been arrested.
- As part of Diversification strategy, the company

set a new record in its Solar Photovoltaic (PV) business in a single year by supplying 50 MWp of SPV modules. Your company also received the largest value single order for 64 sets of IGBT based Traction Converters from CLW. Also, with the capability to design and offer all variants of 765 kV class transformers and Shunt Reactor, BHEL is well positioned to capitalize on the premium 765 kV voltage segment.

- BHEL has always been at the forefront in the engineering sector of the country in R&D efforts. R&D expenditure of the company has been more than 2.5% of the turnover for more than 5 years now. Your company has indigenously designed and developed Fuel Flexible Boiler capable of blending & firing a wide range of imported & indigenous coals.
- BHEL offers sustainable solutions to its customers throughout the entire operational lifecycle of the power plants by offering engineering and technology inputs for reducing greenhouse gas emissions, water consumption, less auxiliary power consumption and less fuel requirement. BHEL manufactured & commissioned India's first 660 MW (SG & TG) and 800 MW (SG) sets with supercritical technology.
- BHEL values its employees as its greatest asset. People Development strategy of BHEL is focusing on developing each person's competencies in alignment with business plans through implementation of initiatives like e- learning modules for developing leadership competencies in association with Harvard Business School, performance linked pay, career planning and succession planning. Your company was selected as one of the 'Best Companies to Work For' by leading magazine 'Business Today'.

## Marching on the journey ahead

The overall business scenario is improving. Green shoots in the economy and the recent 'Make in India' initiative by the Government of India have potential to take Indian Industry into a new phase of growth. Your company will continue to build on its strengths through focus on Capability Enhancement, Project Execution, Cost Competitiveness & Quality, Diversification, Engineering & Technology, and People Development as envisaged in BHEL's 6-Point Agenda.

“Energy & Infrastructure, being the fulcrum of economic development, would continue to depict a rising trend.... This represents a huge opportunity to be leveraged by your company”

I am grateful to you, our stakeholders – all business partners including customers for reposing their faith in us, employees for their resolve and unstinted devotion, our Members on the Board for their wisdom and continuous support, members of the Management Committee for efficiently steering the company's resources and you, our shareholders for evincing trust & faith in BHEL & its Management. Various Ministries of GoI, particularly the Department of Heavy Industry have been providing valuable guidance and support in our efforts.

Energy & Infrastructure, being the fulcrum of economic development, would continue to depict a rising trend till demand-supply deficit is addressed in its entirety. Energy security and climate change issues are determining the future course of development. This represents a huge opportunity to be leveraged by your company with its wide range of quality products & services. Therefore the Board of your company is confident of realising its vision of becoming a global engineering enterprise providing solutions for a better tomorrow, honouring our Golden Legacy.

Success is the sum of many small efforts. I look forward to your unfaltering support in our earnest efforts to overcome the challenges and fulfil our quest to take the company to greater heights.

*With best wishes,*



**(B. Prasada Rao)**

Chairman & Managing Director

New Delhi  
August 08, 2015



# Leadership at BHEL

Board of Directors  
(As on 24.07.2015)



*Sitting from right to left*

Ms. Harinder Hira, Part-time Non-official Director

Shri B. Prasada Rao, Chairman & Managing Director

Shri S.K. Bahri, Additional Secretary & Financial Adviser, DIPP

*Standing from right to left*

Shri Atul Sobti, Director (Power)

Shri R. Krishnan, Director (HR)

Shri A.N. Roy, Part-time Non-official Director

Shri Rajesh Kumar Singh, Joint Secretary, DHI

Shri W.V.K. Krishna Shankar, Director (Industrial Systems & Products)

Shri I.P. Singh, Company Secretary

# Leadership at BHEL

## Management Committee (As on 24.07.2015)



B. Prasada Rao  
CMD



R. Krishnan  
Director, Human Resources



W.V.K. Krishna Shankar  
Director, Industrial Systems & Products



Atul Sobti  
Director, Power



A.V. Krishnan  
ED, Tiruchirappalli Complex



A.K. Dave  
ED, CMT&IP, MON & MM, New Delhi



C.K. Shrikhande  
ED, PS-NR, Noida



S. Gopinath  
ED, OSD, Tiruchirappalli, Complex



N. Ravi Chander  
ED, HPEP, Hyderabad



Anuj Bhatnagar  
ED, FQA & Safety, Noida



Prakash Chand  
ED, HEEP, Haridwar



Akhil Joshi  
ED, TL&JV, M&A, New Delhi



Rajeev Srivastava  
ED, PS-SSBG, Noida



S.C. Jain  
ED, PS-PMG & PS-TS, New Delhi



K.K. Seth  
ED, HRDI, NIC & CPG, Noida



Ramesh Koul  
ED, TBG, Noida



B.S. Vishwanatha  
ED, TSG & DBG, New Delhi



Devendra Raina  
ED, CPP, IPE, IPM & PMG, New Delhi



S.N. Maiti  
ED, PS-WR, Nagpur



M.K. Sharma  
ED, PE&SD, Hyderabad



L.K. Rawal  
ED, P&D, New Delhi



Amitabh Mathur  
ED, PS-ER, Kolkata