

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)

## Transmission

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

## 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





## Oil & Gas

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



## Defence

SRGM,  
Turret Casting T72 Tank,  
IPMS, ACS



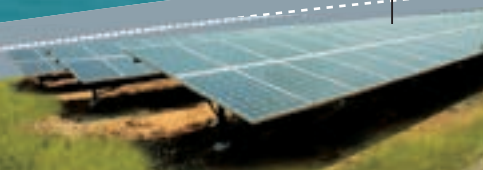
## Transportation

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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# 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 strengthened its inherent 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 Bhadradi 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. Maithi  
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



M. Khasgiwala  
 ED, TP, Jhansi



J. Sankaran  
 ED, HPVP, Visakhapatnam



S. Raj Sabapathy  
 ED, CBU, Bengaluru



A.M.V. Yugandhar  
 ED, HEP, Bhopal



Rajiv Garg  
 ED, CS&IT, Noida



R.K. Tiwari  
 ED, EDN, Bengaluru



N.R. Edkie  
 ED, CFFP, Haridwar



V.K. Chohan  
 ED, IO, New Delhi



Dr. Umakant Choudhury  
 ED, Corp. R&D, Hyderabad



D. Bandyopadhyay  
 ED, HR&CC, New Delhi



S. Biswas  
 ED, CEPD & ARP, New Delhi



K. Mysaiah  
 ED, BAP, Ranipet



Sandeep Narang  
 ED, PS-PEM, Noida



K. Purswani  
 ED, Corp. Quality, Noida



V.C. Krishnan  
 ED, ISG, Bengaluru



Sudhanshu Pathak  
 ED, Coordination, New Delhi



D. Guin  
 GM-I, ROD, New Delhi



S. Vaidyanathan  
 GM-I, Corp. Finance, New Delhi



Gururaj S. Rotti  
 GM-I, Renewables & Water Business, New Delhi



G.K. Hedao  
 GM-I, PS Marketing, New Delhi



A.K. Mukhopadhyay  
 GM-I, PS-SR, Chennai



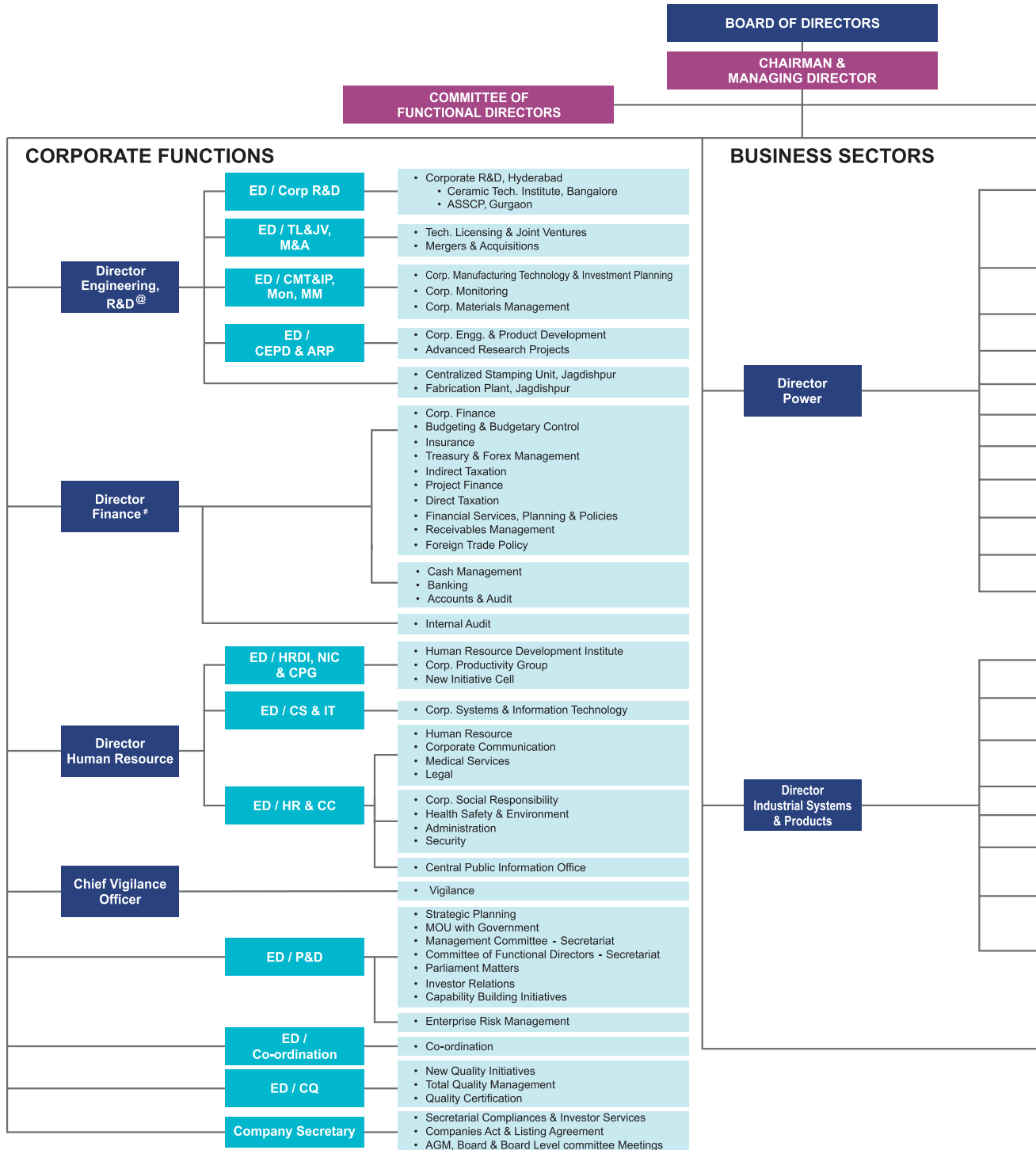
J. Govindaswamy  
 GM-I, PPPU, Thirumayam & PC, Chennai



K.S. Shivaprasad  
 GM, Corp. P&D, New Delhi;  
 Secretary, Management Committee

# Leadership at BHEL

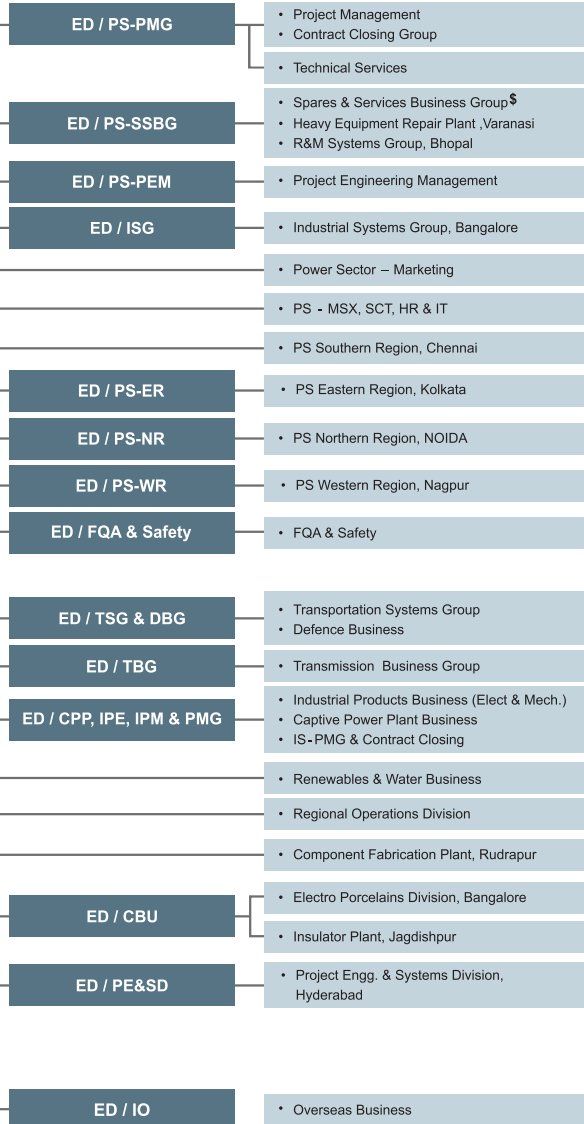
## Corporate Organisational Structure (As on 04.07.2015)



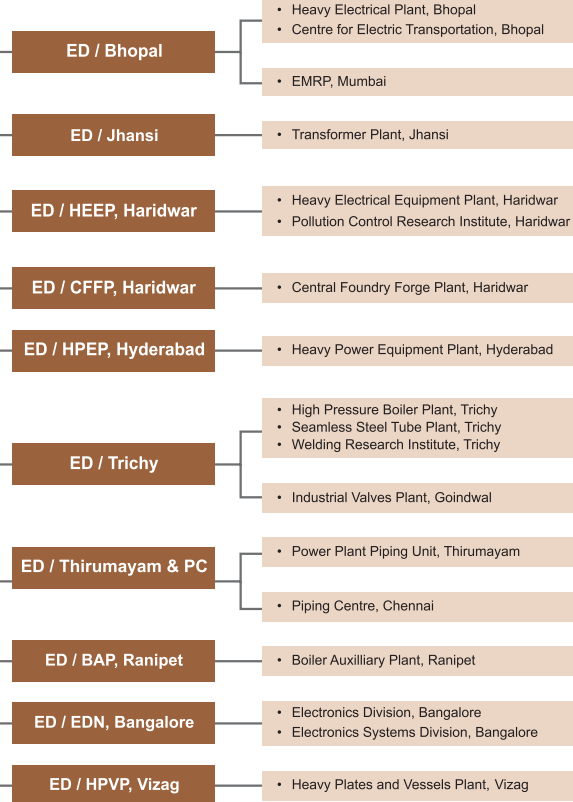
# Director(Power) holds additional charge of Director (Finance)

@ CMD holds additional charge of Director (Engineering, R&D)

MANAGEMENT COMMITTEE



OPERATIONS

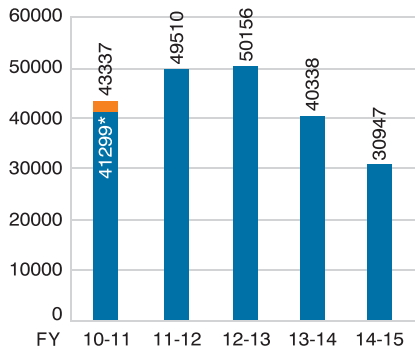


§ Matrix reporting to Director(IS&P) for Industry sector Business

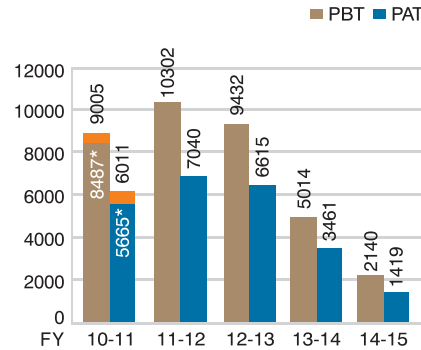
ED: Executive Director

## Year at a Glance

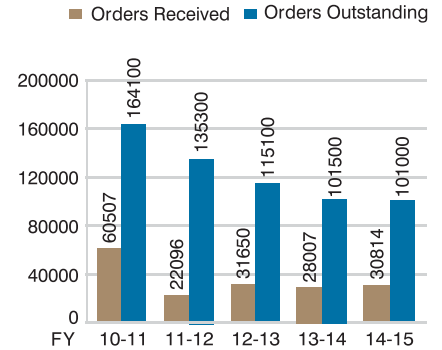
**Turnover**  
(₹ in Crore)



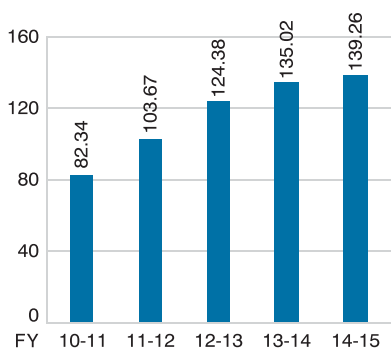
**Profit Before Tax / Profit After Tax**  
(₹ in Crore)



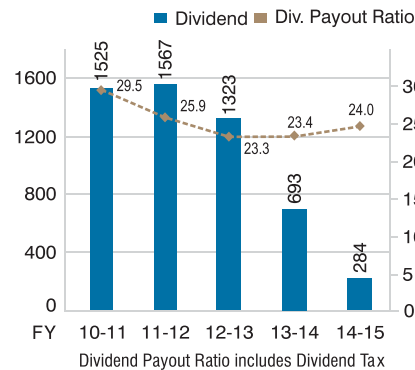
**Orders Received / Orders Outstanding**  
(₹ in Crore)



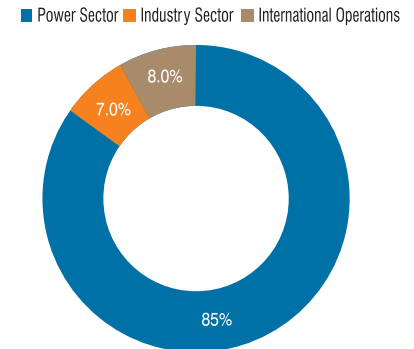
**Net Worth Per Share**  
(in ₹)



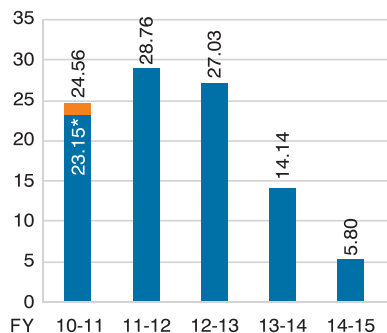
**Dividend (₹ in Crore) / Dividend Payout Ratio**



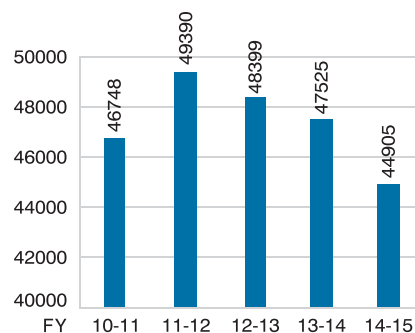
**Sector-wise Order Book Outstanding**  
(As at March 31, 2015)



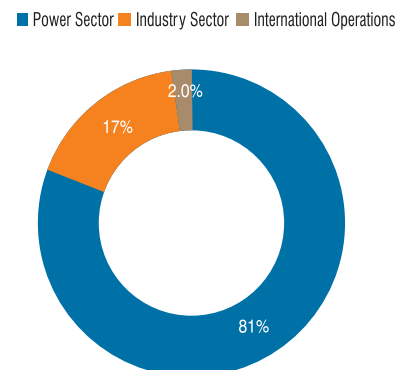
**Earnings Per Share**  
(in ₹)



**Manpower**  
(in Nos.)



**Sector-wise Order Book 2014-15**

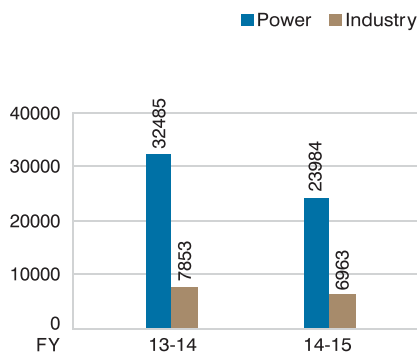


\*Excluding one-time impact of change in policy of warranty obligation for earlier years

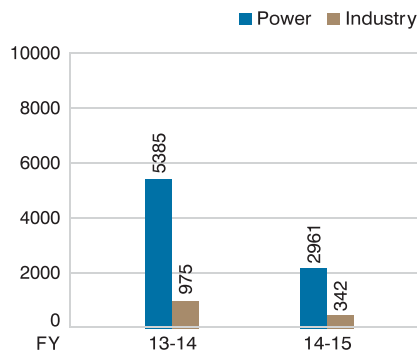
(₹ in Crore)

	2014-15	2013-14
Turnover	30947	40338
Profit before Tax	2140	5014
Profit after Tax	1419	3461
Retained Earnings	1078	2650
Total Assets	68467	72791
Net Worth	34085	33047
Long Term Borrowings	61	105
Debt:Equity	0.01	0.01
Per share (in ₹)		
Net Worth	139.26	135.02
Earnings	5.80	14.14
Employees (Nos.)	44905	47525

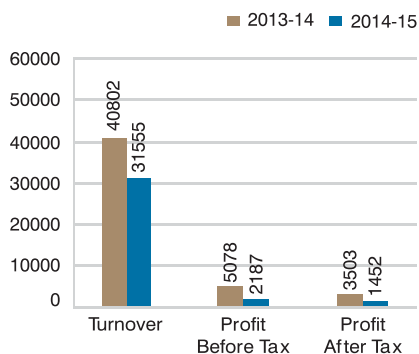
Segment-wise Revenue  
(₹ in Crore)



Segment-wise Results  
(₹ in Crore)



Consolidated Financial Performance  
(₹ in Crore)



**10000 MW<sup>+</sup>**

Power projects commissioned/  
synchronized p.a. 3 years in a row

**150 GW<sup>+</sup>**

Power Generating Equipment  
installed till date



Market Share

**72%** in Indian Power Sector

Innovation

**453**

Patents & copyrights filed



**44,905**

No. of Employees

**4.20**

Training Man-days  
per Employee



CSR & SD Expenditure

**2%**

(average of net profit during 2011-14)

**10,510**

vocational trainees &

**29,494** Act-apprentices trained



Orders in Hand

**₹1,01,000** Crore

Hydropower projects commissioned  
in India during 2014-15

**100% by BHEL**



# About BHEL

Forging ahead on the sturdy foundation of 50 illustrious years of engineering excellence and embracing the glorious next phase of its growth, BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing company of its kind in India 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 (Railways), Renewable Energy, Oil & Gas and Defence with over 180 products offerings to meet the needs of these sectors. BHEL has been the solid bedrock of India's Heavy Electrical Equipment industry since its evolution in 1964.



First 700 MW Nuclear Turbo Generator set under testing on test bed

## Power Sector

BHEL is one of the few companies in the world having the capability to manufacture the entire range of power plant equipment and has proven turnkey capabilities for executing power projects from concept to commissioning. The power generation sector comprises Thermal, gas, hydro and nuclear power plants.

### BHEL:

- Supplies steam turbines, generators, boilers and its auxiliaries up to 800 MW including sets of 660/700/800 MW based on supercritical technology
- Has facilities to make thermal sets up to 1000 MW unit size
- Supplies hydro turbines and generators of up to 250 MW
- Manufactures 220/235/540/550/700 MWe nuclear turbine generator sets
- Has proven expertise in plant performance improvement through Renovation, Modernization and Upgrading of variety of power plant equipment
- Has special knowhow of residual life assessment, health diagnostics and life extension of plants
- Supplied thermal sets have consistently exceeded national average efficiency parameters.



4x500 MW Simhadri STPS commissioned by BHEL





800 MW Turbo Generator rotor under assembly at HEEP, Haridwar

BHEL's growth has been synchronous with achieving self-sufficiency in indigenous manufacturing of heavy electrical equipment. BHEL constitutes a mammoth 20,000 MW per annum capacity for power plant equipment manufacturing in the country. A widespread network of 17 Manufacturing Divisions, 2 Repair Units, 4 Regional Offices, 8 Service Centres, 6 Overseas Offices, 6 Joint Ventures, 15 Regional Marketing Centres and current project execution at more than 150 project sites across India and abroad corroborates the humongous scale and size of its operations. Adding to its achievements, BHEL has joined the elite club of select global giants having an installed base of over 150 GW of power generating equipment globally. BHEL's 55% share in India's total installed capacity and 62% share in the country's total generation from thermal utility sets (coal based) as of March 31, 2015 stand testimony to its valuable contribution towards nation building. The company has been earning profits continuously since 1971-72 and paying dividends since 1976-77 which is a reflection of the company's commendable performance throughout.



Spiral Furnace wall panel for 660 MW Supercritical boilers manufactured at HPBP, Trichy

## Industry sector

BHEL is a leading manufacturer of a variety of Industrial Systems & Products and meets the growing demand for major industries like Metallurgical, Mining, Cement, Paper, Fertilizers, Refineries & Petro-Chemicals etc., besides Captive/ Industrial utilities. Major areas of operation include:

- **Captive Power projects:** Supplies steam turbine and gas turbine based captive power plants
- **Transmission:** Execution of EHV & UHV substations ranging from 132 kV to 765 kV & HVDC converter stations up to  $\pm 800$  kV & Power transformers, Shunt reactors, Vacuum and SF6 switchgear, Gas insulated switchgears, Ceramic insulators, etc.
- **Transportation:** Manufactures IGBT propulsion equipment (Traction Converter/Auxiliary Converter/VCU), 25 kV AC locos, EMU coaches and diesel electric locos up to 1400 HP.
- **Renewables:** EPC solutions for grid-interactive and standalone PV power plants of applications kW to MW rating, Space-grade Solar Panels and Space-grade Batteries
- **Water:** Turnkey Solutions for Water Treatment Systems including RO, Effluent Treatment Membrane based Sewage Treatment Plants & Zero Liquid Discharge, etc.
- **Industrial Products (Electrical & Mechanical):** Range of Industrial Products including Oil Rigs, Well Heads & Xmas Trees, Fabricated Equipment & Boiler Feed Pumps, Compressors & AC Machines
- **Defence:** Supplier of strategic equipment to Indian defence forces including Super Rapid Gun Mount, Integrated Platform Management System for Naval Ships, Thermo pressed components and strategic equipment, etc.

BHEL also has a widespread overseas footprint in 77 countries with cumulative overseas installed capacity of BHEL manufactured power plants nearing 10,000 MW including Belarus, Bhutan, Egypt, Indonesia, Iraq, Kazakhstan, Malaysia, New Zealand, Oman, Rwanda, Sudan, Tajikistan and UAE.



*Future Cooperation Agreement signing in Astana, Kazakhstan*

The high level of quality & reliability of BHEL 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 its own R&D centres. Most of its 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 has been adept at transforming itself in line with the market requirements throughout its illustrious journey. Right from its incorporation in a protected market to facing the pressures of a liberalized economy and the current slowdown in the economic environment, BHEL has evolved with transforming its strategies from product manufacturing to market orientation; business excellence through portfolio restructuring and the current role of sustaining growth through diversification. BHEL owes its dexterity to the strong culture of strategic planning initiated in 1970 and today, the company is pursuing its seventh Corporate Plan with focus on Capability Enhancement,



*6 MW, 6.6 kV Primary Coolant Pump Motor*

Project Execution, Cost Competitiveness & Quality, Diversification, Engineering & Technology, and People Development.

Diversification in Transportation, Transmission, Defence, Water & Renewables is the strategy adopted to maintain a balanced portfolio of offerings. This strategy of diversifying and capitalizing new business opportunities stems from the commitment to innovation led growth which is an indispensable part of BHEL's business model. R&D focus of the organization is quite diverse ranging from advance ultra supercritical thermal power plants to IGCC power plants and grid connected renewable energy systems.

BHEL's greatest strength is its highly skilled and committed workforce of about 45,000 employees who have been the cornerstones of BHEL's journey ensuring success. Further, the concept of sustainable development is inculcated in the DNA of BHEL which is evident from its mission statement- "*providing sustainable business solutions in the fields of energy, industry and infrastructure*". BHEL is also engaging with the society with its social initiatives aimed at Community Development, Health & Hygiene, Education, Environment Protection, Disaster Management, and Talent upgradation/Skill development.



Hon'ble Union Minister for HI&PE visits BHEL's Trichy Unit

The future is filled with both exciting opportunities & gruelling challenges. BHEL has embraced the new business opportunities by expanding its offerings and enhancing competitiveness seeking to realize its long term vision. Creating new business avenues and maximizing the utilization of available infrastructure will be the key to future growth and stakeholders' wealth enhancement. ●

## Soaking up the sun!



BAP Ranipet unit is the first unit of BHEL to install a 5 MWp grid interactive solar power plant

Boiler Auxiliaries Plant of BHEL at Ranipet has installed and commissioned a 5 MWp Solar PV Plant for captive purposes. With generation of around 25,000 Units per day, the plant is largely meeting the power requirements of the manufacturing plant and ensuring CO<sub>2</sub> mitigation by about 5600 MT CO<sub>2</sub>-e per year. The plant consists of a combination of PV panels of fixed type, Seasonal Tilt Type which can be tilted based on the inclination of sun's rays during various seasons and Single Axis Tracker Type which automatically tracks the movement of sun. All the above variations in the panel's type and SCADA, Module Cleaning system, inverters & SMU have been developed in-house by Electronics Division of BHEL at Bengaluru. The inverter has unique features like sleep mode, invoke mode and export mode so that any disturbances on the grid such as overload short-circuit, over-voltage etc. disables the firing circuit of the inverter and quietly withdraw it from the grid. Following the success of this initiative, other manufacturing units of BHEL are also in process of installing MW size Solar PV Plant in their premises.

## Vision

A global engineering enterprise providing solutions for a better tomorrow



## Mission

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



## Sustainable Performance

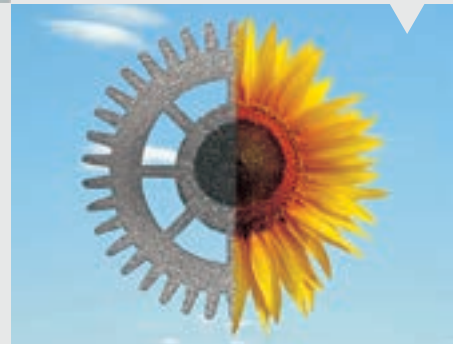
Profit Making Company since 1971-72

Consistent Dividend Paying Company since 1976-77

First listed its equity shares on stock exchanges in 1992

Market capitalization crossed ₹ 100,000 Crore in 2007

Crossed Turnover mark ₹ 50,000 Crore in 2012-13



## The Gentle Giant

An Indian Maharatna CPSE

One of the largest engineering & manufacturing companies in India serving core sectors of economy viz.

- Power
- Industry

Transmission/Transportation/Oil & Gas/Renewables/Water/Defence/Industrial Products-E&M

Major Integrated Power Plant Equipment Manufacturer in the world with 20,000 MW pa manufacturing capacity

17 Manufacturing Units, 1 Subsidiary, 6 Joint Ventures, 8 Service Centres & Infrastructure to deal with 150+ project sites

# World of BHEL

## Global Footprints

References in 77 countries

Offices in 6 countries

Contracted power plant equipment around 17,000 MW

Commissioned 4 power plants in four overseas markets for first time in a single year

## Did you know?

3 out of 5 houses in India are supplied power generated from BHEL sets

55% of India's nuclear power generating capacity (conventional island) installed by BHEL

All Indian satellites launched by ISRO are equipped with BHEL supplied solar panels since 2002 & batteries since 2005

BHEL is largest supplier to Indian Railways for rolling stock propulsion equipment

Only domestic supplier (outside IR) to Indian Railways for Locomotives

BHEL is energizing India's North-East with commissioning of highest rating (3X250 MW) coal-based power plant in Assam

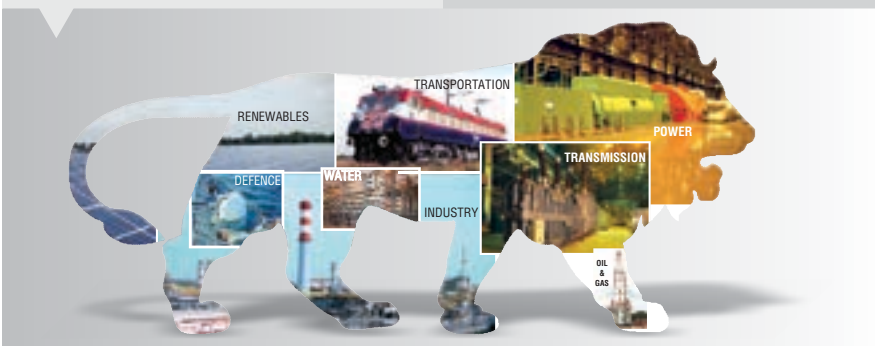
Indian Navy's INS Kolkata-D63 Missile Destroyer is equipped with BHEL's Super Rapid Gun Mount and Auxiliary Control systems

World's largest  $\pm 800$  kV, 6000 MW Multi-terminal HVDC NE-Agra Transmission project under execution by BHEL

All Power Stations awarded by Ministry of Power for early completion in 2013-14 were contracted on BHEL

Sudan's largest 500 MW Kosti Thermal Power Plant commissioned by BHEL

95% of hydroelectric generating capacity in Bhutan installed by BHEL





**Powering the industry**  
 500,000+ MVA transmission equipment supplied  
 30000+ AC machines supplied, largest Indian manufacturer  
 130+ MW- cumulative shipments of PV cells, modules and systems  
 360 Electric Locos Supplied to Indian Railways & other industries  
 375+ Compressors & 88+ Oil drilling Rigs Supplied  
 40+ Oil Rigs- Refurbishment & Upgradation completed  
 30+ SRGMs supplied till date



**Innovation**

R&D Expenditure >2.5% of Turnover-highest in Indian engineering field  
 14 Centres of Excellence  
 More than 1 patent/copyright filed per day  
 Total intellectual capital: 3010  
 In-house R&D Centres of 12 Manufacturing units/Divisions recognized by DSIR



**Valuing people**

Participative Management Culture through JCM, Plant Council, Shop Council since 1973  
 ~ 75% Engineers amongst Executives  
 ~ 1500 female employees inducted in the last ten years  
 Less than 1% attrition rate  
 4+ days of training accorded to an employee per year  
 1000 Executives undergoing leadership training by Harvard Manage Mentor, an affiliate of Harvard Business School



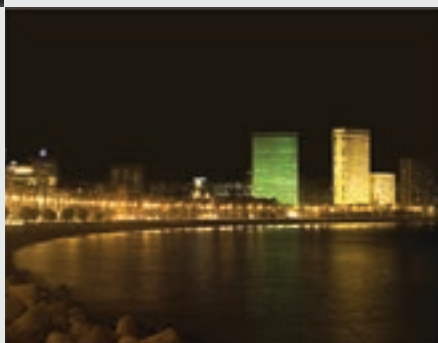
**Energizing India**

Built India's capability in power plant equipment manufacturing  
 157+ GW power generating equipment installed till date  
 100+ GW coal based utility installations in the country  
 Commissioned country's first indigenously manufactured 800 MW boiler at APPDCL Krishnapatnam-2  
 Commissioned country's first 660 MW indigenously manufactured supercritical set at NTPC Barh-5



**Social onus**

Committed to Principles of UN Global Compact  
 Signatory to Integrity Pact of Transparency International  
 Providing financial support for education of more than 20,000 school children  
 'Vanavil'- 5 acres eco-friendly park developed at BHEL Trichy having trees with botanical value  
 More than 75,000 eye donation pledges under "Vision to All-BHEL's Call"  
 Preserving Cultural heritage - Around 700 steel wheels supplied by BHEL for temple chariots in Tamil Nadu & Refurbishing Swatantrata Sangram Sangrahalaya in Red Fort, Delhi



**Heralding the change towards climate**

Supercritical technology resulting in ~11% reduction in CO<sub>2</sub> emissions, less fuel consumption & lower cost to customers  
 Developed Fuel Flexible Boiler for operational flexibility & uninterrupted generation of electricity  
 Developed more efficient UHV Transmission systems and products (765 kV AC, 800 kV DC & 1200 kV AC)  
 Commissioned India's first 'Phase Shifting Transformer' (PST) at TSPGCL Kothagudem improving transmission efficiency  
 Average efficiency of Solar Photovoltaic cell increased to 18.75%  
 5 MWp grid interactive solar power plant at BAP, Ranipet powering unit operations & CO<sub>2</sub> mitigation ~ 5600 MT CO<sub>2</sub>-e per year  
 Low lifecycle cost of equipment facilitating affordable and environmentally sustainable energy systems



# Recognition of Excellence

Continuing its tradition of winning prestigious national/international awards in diverse arenas, BHEL and its employees won several awards during the year 2014-15. Notable among these include:

## Business Excellence & Industry leadership:

- **'DSIJ Award 2014'** for the Most Efficient Maharatna PSU for the 6<sup>th</sup> year in succession



- **Recognition of excellence** for completing '50 years of Engineering Excellence' from **Dun & Bradstreet**



- **'44<sup>th</sup> EEPAC Award'** for the **'Star performer for 2013-14'** in the product group of project Exports
- **'Governance Now PSU Awards 2014'** under category of **"Asset Utilization & Strategic Turnaround"**

- **CBIP Award for 'Best Power Equipment Manufacturing Organisation'**

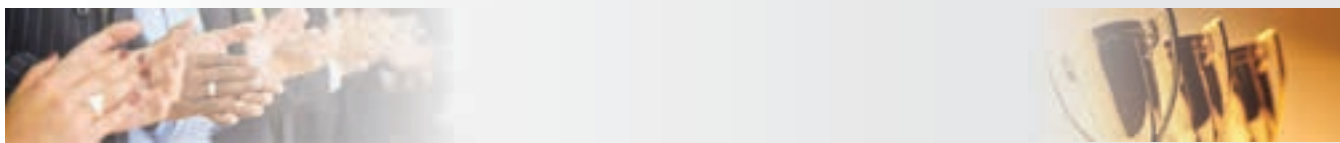


- **National e-Governance Gold Award for 2014-15** in the category - 'Innovative use of ICT by Central Government PSUs', for the project 'SAMPARK – Online Integrated Employee Centric services Portal', developed by **BHEL**, Bhopal



- **ICAI National Award for Excellence in Cost Management** for 9<sup>th</sup> consecutive year





- **Skoch Order-of-Merit** for 'Integrated Real Time Quality Management System at BHEL Bhopal' as a quality improvement initiative
- **6 'National Safety Award'** to BHEL's EPD, Bengaluru and Trichy units for outstanding achievements in terms of longest accident free period and lowest accident frequency rate at their works
- **'Dainik Bhaskar India Pride Award 2014-15'** for Excellence in Heavy Industries category for the 6<sup>th</sup> consecutive year
- **PSE Excellence Award 2014 for R&D & Technology Development** in the Maharatna & Navratna CPSEs Category by the Indian Chamber of Commerce (ICC)



### Innovation

- **World Intellectual Property Organisation (WIPO) Award for 'Innovative Enterprises'** for its strong involvement in use of the Patent system and its achievements in R&D



- **India Today 'Best Maharatna PSU Awards' for Global Presence & Innovation & R&D**



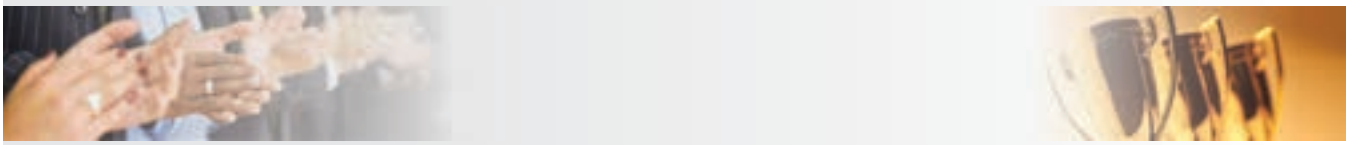
- **National Intellectual Property Award 2014** for being the 'Top Indian Public Limited Company in Patents'

### Corporate Social Responsibility

- **Conferred 'Skoch Foundation Order of Merit Awards'** for the best CSR project in the country- 'Vision to All - BHEL's Call' for eradication of corneal blindness through eye donation



- **'Pandit Madan Mohan Malaviya Bronze Award'** for Best CSR Practices in the field of Education by 'CSR Times'
- **'Silver Plate'** Award by HelpAge India



## Leadership

- **'Honour of Excellence'** award bestowed by **Hon'ble President of India** on **Sh. B. Prasada Rao, CMD, BHEL**. Hon'ble Chief Justice of Kolkata High Court, Mrs. Justice Manjula Chellur, gave away the award at the inaugural function of the Indian Institute of Engineering Science & Technology (IEST), Shibpur (West Bengal)



- **Sh. Atul Sobti**, Director (Power), BHEL, was awarded the **'India Pride Award 2014-15'** for Excellence as **'Head of Department'** among Central PSUs. The award was received by Sh. Atul Sobti Director (Power), BHEL, from Sh. Arun Jaitley, Hon'ble Union Minister of Finance, Corporate Affairs and Information & Broadcasting



- **Sh. P.K. Bajpai**, Director (Finance) was awarded with **'CFO 100 Roll of Honor 2015'** in Funds Management Category
- BHEL Employees were awarded with Prime Minister's **'Shram Awards'** which included **1 'Shram Bhushan'** and **11 'Vishwakarma Rashtriya Puraskars'**



- Ms. M Girija, an artisan in the welder trade from BHEL Trichy received the **'All India Second Prize for the Best Woman Employee'** in 'non-executive category award' from Mr. Anant Geete, Hon'ble Union Minister for HI & PE





## Preserving the ancient heritage of India



*Swatantrata Sangram Sanghralaya at Red Fort, Delhi*

‘Swatantrata’ a word unparalleled in the annals of Indian history still sends a shiver up the spine of every Indian. Be it the 1857 Indian uprising—the first war of Indian independence or the emergence of Gandhian era leading to Quit India Movement and then culminating in the historic unfurling of Indian flag on 15<sup>th</sup> August, 1947 at Red Fort, a symbol of independence and national pride has played an indispensable role in the life of every Indian. Portrayal of these important times through documents, photographs, lithographs, ammunitions and memorabilia was taken up by Archaeological Survey of India in this charismatic building by establishing a ‘Swatantrata Sangram Sanghralaya’.

BHEL, born out of a similar motto ‘Self-sufficiency in Heavy Electrical Engineering’ acknowledges its roots with the ‘Swatantrata Sangram’ by actively participating in keeping the flames of freedom and self-reliance alive by associating with the rediscovery and preservation of this ancient heritage.

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# Directors' Report



# Directors' Report

## To the Members,

The Directors are delighted to present the 51<sup>st</sup> Annual Report on the business and operations of the Company and the statement of accounts for the year ended March 31, 2015.

## Financial Performance

		Financial Year	
Figures (in ₹ Crore except per share data)		2014-15	2013-14
a)	<b>Turnover (Gross)</b>	<b>30947</b>	<b>40338</b>
b)	Revenue from operations (Net)	29542	38389
c)	Other Operational Income	641	720
d)	Operating expenses	28094	34595
e)	<b>Operating profit</b>	<b>2089</b>	<b>4514</b>
f)	Add : Other income	1220	1616
g)	<b>Profit before depreciation, finance cost &amp; tax expense</b>	<b>3309</b>	<b>6130</b>
h)	Less: Depreciation	1077	983
i)	Less: Finance costs	92	133
j)	<b>Profit before tax</b>	<b>2140</b>	<b>5014</b>
k)	Less: Tax expense	721	1553
l)	<b>Profit after Tax</b>	<b>1419</b>	<b>3461</b>
m)	Add: Balance brought forward from the previous year	1171	1102
n)	<b>Profit available for appropriation</b>	<b>2590</b>	<b>4563</b>
i)	Adjustment pursuant to Amalgamation	0	81
ii)	Depreciation Adjustment	41	0
iii)	Dividend (including interim dividend)	284	693
iv)	Corporate Dividend tax (incl. on interim dividend)	57	118
v)	Amount transferred to General Reserve	1000	2500

o)	<b>Balance in Statement of Profit &amp; Loss</b>	<b>1208</b>	<b>1171</b>
p)	Earnings per Share (₹)	5.80	14.14
q)	NAV per share (₹)	139.26	135.02

Despite various issues relating to power projects like fuel linkages, fund constraints, land acquisition etc., BHEL recorded turnover of ₹ 30947 Crore in the year 2014-15. Net worth of the company has gone up by 3.14 %.

Performance of BHEL for the year 2013-14 has been rated as 'Good' in terms of MoU signed with the Government of India. BHEL has been awarded the MoU Composite score of '3.131'.

## Details of changes in Market Capitalisation

Description	As at 31 <sup>st</sup> March		Increase/ Decrease in %
	2015	2014	
Market Capitalization (₹ in Crore)	<b>57604.27</b>	47985.20	20.05
Price - Earnings Ratio	<b>40.58</b>	13.86	192.78

Note: Data based on share prices quoted on NSE.

**Percentage increase over/ decrease in the market quotations of the shares of the company in comparison to the rate at which the company came out with the last public offer-** BHEL has not offered shares to the public at large in an IPO.

## Dividend

The Board has recommended a Final Dividend of 31 % (₹ 0.62 per share), ₹ 151.75 Crore, for the year 2014-15. An interim dividend of 27 % (₹ 0.54 per share), ₹ 132.17 Crore, on share capital of ₹ 489.52 Crore, has already been paid for the year 2014-15. Thus the total dividend (exclusive of dividend tax) for the year 2014-15 is ₹ 283.92 Crore (₹ 1.16 per share) as against ₹ 692.68 Crore (₹ 2.83 per share) paid in the previous year.

Provision of ₹ 30.89 Crore has been made for Corporate Dividend Tax on the Final dividend

proposed. Corporate Dividend Tax of ₹ 26.43 Crore has already been paid on the interim dividend.



CMD, BHEL presenting the Final Dividend cheque for FY 2014-15 to Hon'ble Union Minister for HI&PE

## Orders Received

Despite operating in a subdued but healthy competitive business environment, the company secured orders worth ₹ 30814 Crore during the year. Sector-wise orders booked are as follows:

(₹ in Crore)

	2014-15	2013-14
Power Sector	24873	20433
Industry Sector*	5221	5007
International Operations	720	2567
Total Orders Booked	30814	28007
Order Book outstanding at the end of the year	101000	101500

\*excludes inter sectoral orders

## Events Occurring after the Balance Sheet Date

There were no significant events occurring after the Balance sheet date.

## Directors' Responsibility Statement

Pursuant to Section 134(5) of the Companies Act, 2013, it is hereby confirmed that:

- (i) In the preparation of the annual accounts for the financial year ended March 31, 2015, the applicable accounting standards have been followed along with proper explanation relating

to material departures;

- (ii) the directors have 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 at the end of the financial year and of the profit and loss of the company for that period;
- (iii) The directors have taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of this Act for safeguarding the assets of the company and for preventing and detecting fraud and other irregularities;
- (iv) The directors have prepared the annual accounts on a going concern basis;
- (v) The directors have laid down internal financial controls to be followed by the company and that such internal financial controls are adequate and were operating effectively;
- (vi) The directors have devised proper systems to ensure compliance with the provisions of all applicable laws and that such systems are adequate and operating effectively;

## Management Discussion and Analysis

A report on Management Discussion and Analysis is placed at **Annexure – I**.

## Board of Directors

### Appointment

Shri Rajesh Kumar Singh, Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, has been appointed as Part-time Official Director w.e.f. 22.12.2014.

Shri T.N. Veeraraghavan has been appointed as an Additional Director w.e.f. 07.01.2015 to take charge of the office of Director (E,R&D).

Shri D. Bandyopadhyay has been appointed as an Additional Director w.e.f. 01.08.2015 to take charge of the office of Director (HR).

In accordance with Section 161 of the Companies Act, 2013 and Article 67(iv) of the Articles of Association of the Company, Shri Rajesh Kumar Singh and Shri D. Bandyopadhyay shall hold their directorships up to the 51<sup>st</sup> Annual General Meeting of the Company and is eligible for appointment as Director at the Meeting.

## Cessation

Shri Ambuj Sharma, Additional Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, consequent to DHI order No. 1(2)/1995-PEXI dated 17<sup>th</sup> December, 2014 has relinquished his position as Part-time Official Director on 21.12.2014.

Shri P.K. Bajpai, who was appointed as Director (Finance) w.e.f. 01.07.2011 ceased to be a Director of the Company on attaining the age of superannuation on 31.05.2015.

Shri T.N. Veeraraghavan, who was appointed as Director (E,R&D) w.e.f. 07.01.2015 ceased to be a Director of the Company on attaining the age of superannuation on 30.06.2015.

Shri R. Krishnan, who was appointed as Director(HR), w.e.f. 01.04.2012 ceased to be a Director of the Company on attaining the age of superannuation on 31.07.2015.

The Board of Directors place on record their deep appreciation of the valuable services rendered as well as advice and guidance provided by S/shri Ambuj Sharma, P.K. Bajpai, T.N. Veeraraghavan and R. Krishnan during their tenure.

Further, pursuant to Section 152 of the Companies Act, 2013 and Article 67(i) of the Articles of Association of the Company, Shri Atul Sobti and Shri S.K. Bahri will retire by rotation at the Annual General Meeting and being eligible, offers themselves for re-appointment.

In compliance with Clause 49(VIII)(E)(1) of the Listing Agreement, brief resumes of the Directors proposed for appointment and re-appointment along with requisite details are given in the Explanatory Statement/ Annexure to the Notice.

No Director has given resignation during the year.

## CEO/CFO Certificate

CEO/CFO certificate {as per Clause 49(IX) of Listing Agreement} is placed at **Annexure – II**.

## Sustainable Development

Sustainability is just a natural extension of the way BHEL sees itself and its responsibilities. For almost fifty years of its existence, the company has been leveraging technology and innovations for providing products, systems and services to its customers enabling them to use resources with better efficiency and productivity which is also reflected in its Mission Statement – **“Providing**

## **Sustainable Business solutions in the fields of Energy, Industry & Infrastructure”.**

BHEL has ingrained the triple bottom line approach for Sustainable Development in its business processes. It has been creating value for its stakeholders since inception. Its R&D efforts have always been directed towards development and diffusion of technologies which are having reduced environmental footprints. Its structured CSR programme is directed towards bringing prosperity to the society and is aligned to the efforts being made by Government of India towards inclusive growth.

BHEL has undertaken numerous CSR initiatives and more than 300 such CSR projects/activities implemented during 2014-15 covered majorly all Units/ Regions. In addition, company has undertaken many environmental sustainability initiatives which falls broadly in the areas of renewable energy generation, material and natural resource management, energy management, water & bio-diversity management and carbon management. The details of all such sustainability initiatives are provided in **Annexure-III**.

## Business Responsibility Report

In line with the requirement of clause 55 of the listing agreement, Business Responsibility Report describing the initiatives taken by the company from an environmental, social and governance perspective as per the suggested format is enclosed at **Annexure -IV**.

## R&D and Technological Achievements

Continuous product development is the cornerstone of strategy for meeting the challenges in today's environment. BHEL places strong emphasis on innovation and creative development, which are the important drivers of BHEL's R&D programmes for achieving growth. The R&D efforts of the company are not only aimed at improving the performance and efficiency of the existing products, but also developing new products using state-of-the-art technologies and processes.

BHEL has recorded significant achievements during the year. The R&D expenditure of the company for the current financial year is ₹ 1018.59 Crore which is 3.29% of the turnover. This also includes the expenditure incurred on R&D efforts gone into major modifications/ improvements in product/ designs against customer requirements which are

not covered in R&D projects. The company filed 453 patent and copyright applications filed during the year 2014-15, enhancing the company's intellectual capital to 3010.

It is imperative to focus on newer areas to meet the challenges of a changing business scenario while continuing development in traditional areas of business. To meet this objective, BHEL has taken several technology development initiatives covering various business verticals viz. Power, Transportation, Transmission, Solar, Water, Defence and other areas. Company will continue to pursue various projects undertaken in recent years with focus on low-carbon path technologies including faster assimilation of Supercritical Technology, development of Advanced Ultra Super Critical Technology, IGCC Technology commercialization, Carbon capture, Solar PV & Thermal, 765/1200 kV Transmission System, GIS up to 765 kV,  $\pm 800$  kV HVDC system, IGBT based Propulsion Systems for higher rating Locos, EMU, Metro coaches on mission mode. The company is also engaged in development of emerging technologies like Fuel Cells for distributed environment friendly power generation, development of new materials with addition of Nano-/micro-particles for improving characteristics, and superconducting application in Transformers, Generators, Motors, etc. Further details are given in **Annexure-V**.

### Official Language Implementation

Continuous efforts were made for propagation and effective implementation of Rajbhasha in the company. Inspection of 12 Units/Divisions was done to monitor and review the progress in this area. Committee of Parliament on Official



Hindi Diwas Samaroh organised at BHEL on 15<sup>th</sup> September, 2014

Language appreciated the efforts being made in this area during the inspection of Corporate Office on 16.01.15.

More than 900 non Hindi speaking employees were imparted training under Hindi teaching scheme of Govt. of India. Training for using latest version of Unicode Hindi on computer was also imparted to more than 5000 employees of all the Units/Divisions. 70 Hindi workshops were organized to motivate employees to work in Hindi covering more than 1800 employees. In addition, 1 Translation Training Programme was conducted with the help of Central Translation Bureau, Rajbhasha Vibhag, Ministry of Home Affairs.

Under Inter Unit Rajbhasha Shield Scheme, 13 Units were given award for excellent Rajbhasha Implementation. 03 executives were awarded for Hindi Book writing under Hindi Book Award Scheme. In addition, 350 employees who do their work in Hindi were also awarded with cash awards.

All the Units/Divisions of the company, including Corporate Office, celebrated Hindi Divas and Hindi Week/ Fortnight/Month during which various competitions, Seminars, Cultural Programme and Kavi Sammelan were held.

BHEL is playing an active role in Town Official Language Implementation Committees constituted in various cities. Many interesting competitions, Seminars and programmes are conducted under auspices of these committees. This year 15 Units/ Divisions of BHEL were awarded by the TOLICs for various achievements in this area.

A handbook "Rajbhasha Sahayika" has been prepared as helping material for doing work in Hindi. It is being distributed to employees in Hindi workshops and it has been uploaded on Corporate intranet also.

13 Hindi Magazines are being published all over the Company to motivate the employees for Hindi writing and these are getting awards from various institutes. "Arunima" from Corporate Office was awarded with Second Prize by TOLIC (PSU), Delhi for excellent House Journal.

All BHEL Rajbhasha Coordinators Meet was held on 9<sup>th</sup> & 10<sup>th</sup> October, 2014 at EPD, Bengaluru. 35 employees from various Units/Division of the Company attended the Meet.

## Vigilance

The Vigilance organization of BHEL is headed by a Chief Vigilance Officer (CVO) appointed by the Ministry. All major manufacturing Units / Power Sector Region of BHEL have vigilance set up, headed by senior vigilance executive reporting to the CVO.

Preventive vigilance remained the focus area of BHEL Vigilance, with special emphasis on systemic improvements. To strengthen the vigilance administration, Whistleblower Policy of the company was issued. Further, action was initiated for review of Works policy, Works Account Manual and HR Manual.

Public Awareness is an important cornerstone for good governance. An enlightened employee not only can contribute in achieving the organizational goal but also in system improvements. Training programmes / sessions were conducted to update employees about Company's policies, rules and procedures in various BHEL Units and Regions. In addition, interactive sessions were held with line executives representing different functional areas to sensitize them about the risk prone areas.



Vigilance Awareness Week observed in BHEL from 27<sup>th</sup> October to 1<sup>st</sup> November, 2014

With a view to create awareness about procurement and works policy, rules and procedures etc., to disseminate the instructions/ guidelines issued by CVC and Government of India from time to time and to share best practices and case studies, a quarterly e-Newsletter 'DISHA' is being published by Corporate Vigilance.

Corporate Vigilance teams inspected 9 Units. The issues observed during inspections were discussed

in interactive sessions with the respective Unit Managements. It was impressed upon officials to focus on the aspects of estimation and price reasonability while dealing with procurement to remain competitive in the market. The interactive sessions helped BHEL officials to appreciate the role of Vigilance in promoting a strong, viable and competitive organization.

The critical review of tender conditions was also undertaken with a view to increase competition and check cartel formation. Due to proactive action of Vigilance, savings to the tune of ₹ 37.03 Crore (approx.) have been achieved.

BHEL Vigilance prepared a detailed Corruption Mitigation Action Plan in respect of potential areas of corruption, which has been taken up for implementation by all Units.

Routine / Surprise Inspections were carried out by Unit / Corporate Vigilance to verify the compliance of rule and procedures. Instructions/Guidelines were issued concerning following issues for further improvement in the system:

- a) Deficiencies in Tendering Process of Transportation Contracts
- b) Clarification on clause 4.0 of Guidelines on Suspension on Business Dealings with Suppliers / Contractors
- c) Prequalification Criteria (PQ)
- d) Receipt and Opening of Tenders
- e) Deficiency in Quality Inspections
- f) Reasonableness of Rates

Some specific areas concerning Estate Management, Stores Management, Procurement were identified and Unit Managements were advised to initiate action in these areas:

- Recovery of outstanding dues on account of rent and allied charges from the allottees of quarters/ shops in Townships.
- Identification/ segregation of surplus / usable stores/ scrap material from the stores lying outside the workshops in the premises of units and not used/ disposed of for very long time.
- Installation of Bio-metric Attendance System linked with pay system.
- Procurement through open tender route

particularly for high value packages and review of PMDs to weed out inactive suppliers.

To improve record management, Guidelines for Retention / Weeding out of Old Records in Vigilance Department issued on 20.08.2014.

To enhance the skills of Vigilance Officers, a workshop for Vigilance Officers was organized from 27.08.2014 to 29.08.2014 at BHEL, Bhopal

BHEL is committed to bring transparency in day to day operations of the Company by leveraging technology. The information regarding procurement related matters like status of purchase orders and Contracts, Vendor registration along with their current status is hosted on the Company website. In addition, e-tendering route is being promoted for procurement and e-payment system has been implemented to reduce vendor interface. Further, steps have been taken to promote e-procurement in the Company. The percentage of e-procurement increased from 25% to 37% and around 26% of tenders (value wise) were decided through Reverse Auction during 2014-15.

Vigilance examined 144 complaints and investigated 30 complaints during the year.

## Safety & Security

Though BHEL has an established and mature Safety Management System accredited to OHSAS 18001: 2007, BHEL's management has further enhanced its focus on building a strong safety culture. To reinforce the organisation setup for safety and to improve our safety practices safety performances and other safety related issues are now reviewed in MCM on quarterly basis.

The result of efforts to improve safety are gradually becoming visible as there has been a marked improvement in safety statistics in recent past. It is reflected in data related to fatalities and man-days lost for the calendar year 2013 and 2014. At project sites, there was approximately 45% reduction in incidences of fatalities and 50 % reduction in the man-days lost due to various types of accidents during calendar year 2014 in comparison to calendar year 2013.

Dedicated Safety and Occupational Health Centres are being run in the factory premises taking care of safety and health issues at the work place. Some of

the initiatives taken in our units to build and maintain safety and health culture at work place during the year are:

- Sponsoring BHEL officials for 1 year advanced Diploma course in Industrial Safety conducted by Central / Regional Labour institute at Mumbai, Kanpur, Kolkata, Chennai and Faridabad
- Periodic health and safety awareness campaigns
- Regular health and safety related training programmes
- Display of posters and safety instructions
- Safety pledge & Tool box meetings
- Regular Plant Safety Inspections
- Encouraging use of Personal Protective Equipment
- Mock Drills in identified hazardous areas at specified frequency
- Publication of in-house magazines and hand books on various safety topics
- Work Permit system for carrying out critical activities
- Conducting periodic safety drills, Internal audits & 3<sup>rd</sup> party audits
- Job Safety Analysis for identified activities
- Monthly departmental Safety Committee meetings and plant safety committee meetings
- Scheduling preventive maintenance of machine/ equipment
- Periodic maintenance & testing of material handling equipment (including cranes, hoists, lifting tackles, forklifts, pallets); all pressure vessels/ air receivers, power presses
- Making available Material Safety Data Sheet (MSDS) for all the hazardous chemicals and safe work procedures are followed
- Developing operation control procedures (OCPs) and providing it to the concerned for effective implementation

Further, Annual Safety Heads Meet was conducted at Corporate Office on 16<sup>th</sup> & 17<sup>th</sup> Sep, 2014 for sharing of experience amongst the people directly involved in ensuring safety at their respective workplaces.

The Company's security mechanism is sufficient to provide security to each Plant/Unit. Security of most of the plants of the company is being managed by the CISF except for in some smaller plants where the company has its own security. Also, in some plants, Corporate Office and Regional Offices, the security is being looked after by the private agencies sponsored by Directorate General Resettlement, Govt. of India or Ex-Servicemen Corporations.

Adequate measures have been taken for security of computers. Department of Electronics, Govt. of India (SRAC) has also carried out audit/review of our software security mechanism and their suggestions have been implemented.

Security audit of major plants is being done by the Intelligence Bureau periodically and the additional requirements, wherever pointed out by them, are immediately complied with by the concerned units. Review of security is done internally also from time to time. Monthly report on theft/ pilferage and fire incident compiled by Corporate Security Department along with quarterly reports on various security related issues as per the decisions taken in the meetings of HR & Security Heads.

Adequate measures have been taken by installation of CCTV's and SOP in many plants and offices to mitigate any security threats.

The Management, security staff and employees of company are sensitized to the security needs of the company.

## Corporate Governance

As per the requirements of Clause 49 of the Listing Agreement a detailed report on Corporate Governance (including Board/Committee meeting details) together with the following is given at **Annexure – VI**:

- (i) Auditors certificate on Corporate Governance (CG) under clause 49 of Listing Agreement & DPE guidelines on Corporate Governance.
- (ii) Secretarial Audit Report u/s 204(1) of the Companies Act, 2013 and Management reply thereon.
- (iii) Extracts of Annual Return pursuant to section 92(3) of the Companies Act, 2013 read with rule 12(1) of the Companies (Management and Administration) Rules, 2014.

Declaration under section 149(6) of the Companies Act, 2013 pertaining to criteria of Independence has been given by the Independent Directors to the Board of Directors.

## Other Disclosures

Information in accordance with the provisions of Section 134(3)(m) of the Companies Act, 2013 read with Companies (Accounts) Rules, 2014 regarding conservation of energy, technology absorption and foreign exchange earnings and outgo is given at **Annexure-VII**.

As per provisions of section 197 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 details of the remuneration of directors etc. in the Directors' Report. However as per Notification No. GSR 463(E) dated 5<sup>th</sup> 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. BHEL being a Government Company, therefore, such particulars have not been included as part of Directors' Report.

Statement pursuant to Section 129 of the Companies Act, 2013 (AOC-1) relating to Subsidiary Companies & Joint ventures and Form AOC-2 pursuant to section 134(3)(h) of the Companies Act read with Rule 8(2) of the Companies (Accounts) Rules, 2014 are given at **Annexure-VIII**.

## Links to Company Websites

1. Familiarisation Programme of Independent Directors, Weblink :  
[http://www.bhel.com/investor\\_relations/pdf/familiriazation\\_progmr\\_for\\_IDs.pdf](http://www.bhel.com/investor_relations/pdf/familiriazation_progmr_for_IDs.pdf)
2. Policy Determining Material Subsidiaries and Policy Dealing with Related Party Transactions, Weblink :  
[http://www.bhel.com/pdf/Policy\\_with\\_regard\\_to\\_Related\\_Party\\_Transactions.pdf](http://www.bhel.com/pdf/Policy_with_regard_to_Related_Party_Transactions.pdf)

## Auditors

The Auditors of your Company are appointed by the Comptroller and Auditor General of India. The names of auditors appointed for the year 2014-15 are printed separately in the Annual Report.



The details of cost auditors appointed for the year 2014-15 and Cost Audit details are printed separately in the Annual Report.

The Auditors' Report and Comments of the Comptroller and Auditor General of India are given at **Annexure – IX**.

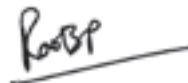
### Acknowledgements

The Board places on record its sincere appreciation towards the Company's valued customers in India and abroad and esteemed shareholders for the support and confidence reposed by them in the management of the company and look forward to the continuance of this mutually supportive relationship in future.

The Board also gratefully acknowledges the support and guidance received from various Ministries of the Government of India, particularly the Department of Heavy Industry, in Company's operations and developmental plans. The Directors express their grateful thanks also to the Comptroller and Auditor General of India, Chairman and Members of Audit Board, Statutory Auditors, Branch

Auditors, Secretarial Auditors and Cost Auditors. The Company also wishes to place on record its appreciation for the continued co-operation received from all the Technology Collaborators and Suppliers and support provided by the Financial Institutions and bankers. Last, but not the least, the Board wishes to place on record its deep gratitude to all BHELites whose enthusiasm, team efforts, devotion and sense of belongingness has made this great company proud.

For and on behalf of the Board of Directors of  
BHARAT HEAVY ELECTRICALS LTD.



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

Place : New Delhi  
Dated : 06.08.2015

# Annexure-I

## Management Discussion and Analysis

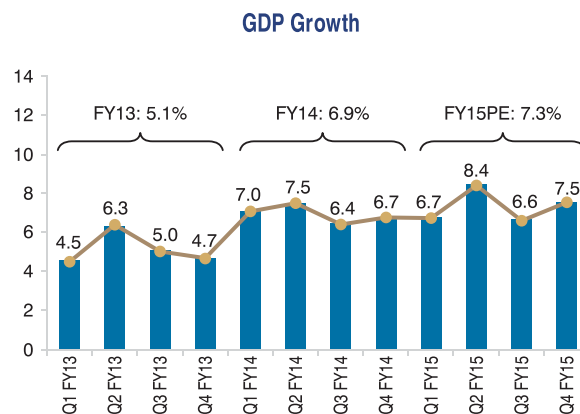
### 1.1 Economic & Business Overview

The year 2014-15 witnessed improvement in macro parameters coupled with improved business and consumer confidence. Post revision of base year, GDP growth over the last three years points towards steady recovery. The combined effort on part of RBI and GoI has ensured inflation to come down to the envisaged trajectory. As a result the market is seeing interest rate cuts, a much awaited relief for industry.

On the exchange rate front, much of the relief has come from stability of Indian currency against USD. It augurs well for export oriented firms and offering a suitable destination for foreign manufacturers to set their shops here.

Industrial activity indicators, IIP and PMI, are pointing towards strong production activity. Collectively it

can be said that economy is in much better shape and would expand further on the back of ongoing structural changes and clearing of stranded infrastructure projects.



Source: MOSPI, GOI

# Power Sector

## 1.2 Profile and Performance of Business Segments

### 1.2.1 Power Sector

#### Opportunities

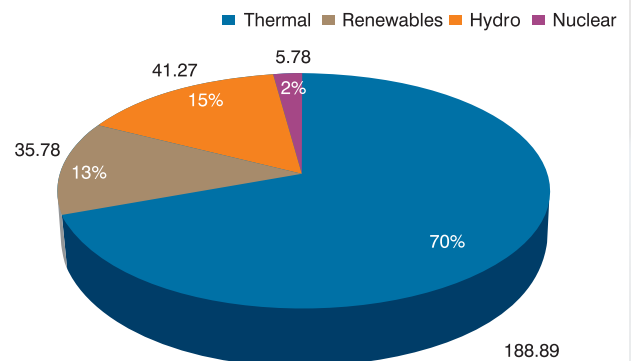
India is the world's second fastest-growing major economy, with growth rates averaging 7.5% over the past 10 years and has the potential to become the world's third largest economy (nominal basis) by 2020. In the next two decades, current size of economy of USD five trillion (PPP) is expected to grow four to five times as per various studies and estimates. Also, India is the second most populous country in the world, with over 1.26 billion people, more than a sixth of the world's population. All the factors indicate potential for high growth of power demand in the country.

Human Development Index (HDI), which is a composite statistic of life expectancy, education and per capita income indicators, is directly correlated to the per capita electricity consumption. For a country like India, even a small increase in electricity use is associated with large increases in HDI. This further reinforces the importance of Power for Indian economy as well Human Development in the country.

In order to meet the growing need of electricity demand for consumers as well as for Industries, Government of India has taken various initiatives to augment capacity addition in the country. India's installed capacity base has swelled from a mere 1.3 GW in 1947 to over 271.7 GW by March 2015.

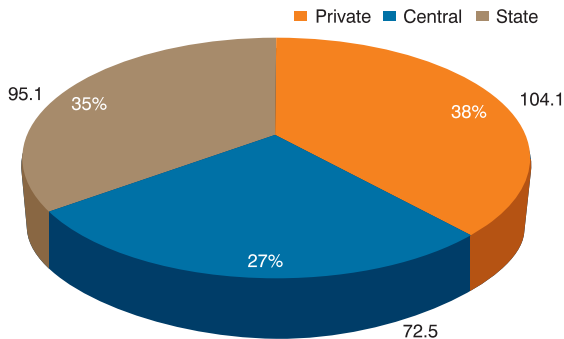
With capacity addition of 61,014 MW during the first three years of the 12<sup>th</sup> Plan (2012-15), the country has exceeded the achievement of 54,964 MW during the 11<sup>th</sup> Plan (2007-12) through conventional

Installed Generation Capacity (GW) - Fuelwise



As on 31<sup>st</sup> March, 2015, Source : Ministry of Power

## Installed Generation Capacity (GW) - Utilitywise

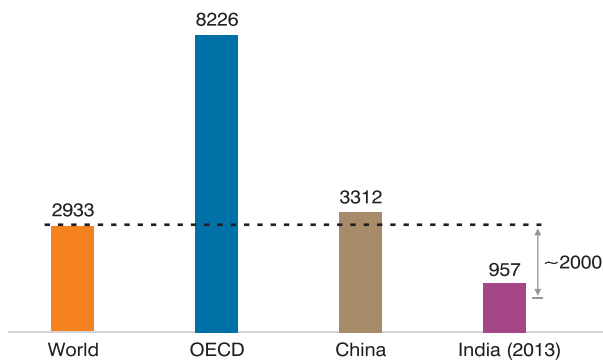


As on 31<sup>st</sup> March, 2015  
Source: Ministry of Power

sources, which itself was more than double that of 21,240 MW during 10<sup>th</sup> Plan (2002-07). Despite the growth, there is still further scope of accelerating the growth of capacity addition as India continues to experience shortages in energy with total deficit of 3.6% and peak deficit of 4.7% during 2014-15.

Reforms for a more efficient and competitive power sector are under way in India. While there has been some progress in this regard, shortage of power and lack of access, which is reflected in low per capita electricity consumption in India vis-à-vis other major economies, continue to be major constraints on India's economic growth.

## Electricity Consumption per Capita per year (kWh), 2014



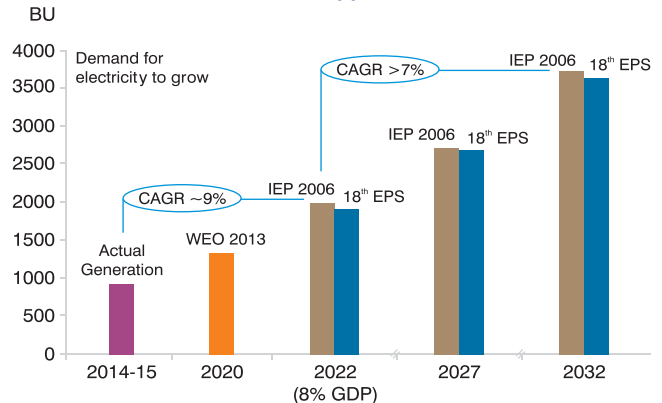
Per capita electricity consumption in India will have to be tripled to match the world average level.

Considering the recent state of power generation status and in order to deliver a sustained economic growth rate of 8.0% up to 2035, various agencies such as CEA, IEA, Planning Commission and others, have estimated that India needs to increase its primary energy supply between three to four times of the current levels by 2035 translating into a CAGR of approx 7% in electricity generation. This

represents a need for the substantial augmentation of power generation capacity from current levels.

The recent 'Make in India' initiative of Government of India is likely to further enhance the demand for power in the country.

## Indian Power Sector: Opportunities Unlimited

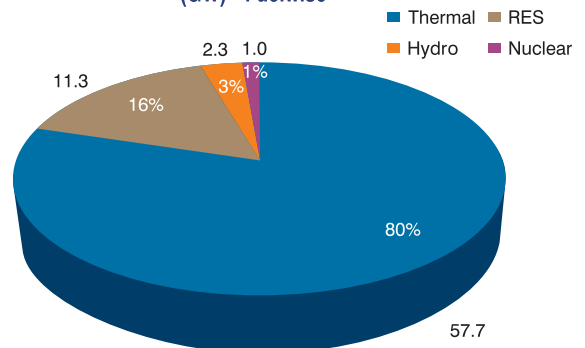


WEO: World Energy Outlook, IEP: Integrated Energy Policy, EPS: Electric Power Survey, CEA

A capacity addition of 88.5 GW has been envisaged for the 12<sup>th</sup> Plan (2012-17). This comprises an estimated 72.3 GW of thermal power, 10.9 GW of hydro power and 5.3 GW of nuclear power. In addition, a grid interactive renewable capacity addition of about 30 GW has been envisaged. This comprises wind, small hydro, biomass and solar energy.

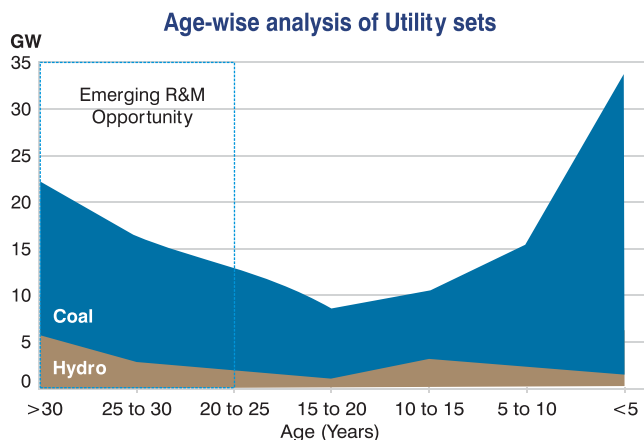
During the first 3 years of 12<sup>th</sup> Plan (2012-15), capacity addition of 61 GW has already taken place, which is 111% of the five year period of 11<sup>th</sup> Plan (2007-12) achievement. In addition, 11.3 GW of grid interactive renewable capacity was also added during 2012-15.

## Installed Generation Capacity during 2012-15 (GW) - Fuelwise



Apart from new capacity additions, huge opportunity exists in Renovation & Modernization (R&M) business as almost 24% of India's coal

based power plants are over 25 years old, thus necessitating increasing requirement of regular equipment maintenance, lifetime extension and performance upgrades.



**Current Business Environment**

The power sector is currently at a crucial juncture of its evolution, with many private producers and domestic manufacturers also playing a significant role in various capacities, and greater reliance on markets, subject to regulation. The policy makers in India have aimed for ensuring energy security for the nation as well as for providing adequate energy of desired quality in various forms in a sustainable manner and at competitive prices.

Developers of Power Plants have been facing numerous constraints like coal/gas allocation, environment clearance, land acquisition, financing and funds tie-ups, etc. for last about 4 years. This has resulted in only very few new projects coming up.

Recently, Government has taken steps to propel growth in power sector. These include allocation of coal blocks to central and state govt. companies, auction of Coal Blocks for private developers, setting a target of 1 Billion Tonnes of Coal output by 2020 and the declaration of intent in the Union Budget to set up 5 UMPPs in near future, etc. This, alongwith steps like the Government decision for domestic sourcing for UMPPs and extension of CEA's advisory to Central/ State Utilities for condition of Phased Manufacturing Programme (PMP) have had a positive impact on the prospects for the sector, particularly for domestic manufacturers.

India has a huge hydro power potential of 148 GW, out of which only 42 GW has been realized till date. Steps have been taken to attract investments into

the hydro sector and increase the falling share of hydroelectricity in the country's installed capacity mix. Government is planning Hydropower Purchase Obligation (HPO), which will obligate the power distribution companies to purchase power from hydro power plants. This has led to signs of revival in hydro power segment. However, the Supreme Court verdict staying 23 Hydro Projects in Uttarakhand has acted as a dampener, thereby delaying the imminent revival in the sector. The Nuclear business is primarily driven by government policies, public perceptions and global dynamics.

**Offerings**

BHEL offers end-to-end Systems, Products and Engineering, Erection & Commissioning services for thermal power plants encompassing steam turbines, generators, boilers and matching auxiliaries up to 1000 MW ratings and has supplied sets of 660/700/800 MW based on supercritical technology. BHEL has proven capabilities for executing thermal power projects on Engineering, Procurement & Construction (EPC) basis and is executing numerous prestigious projects on EPC basis including Supercritical sets of 660/700/800 MW ratings. To make use of lignite reserves available in India, BHEL also supplies Circulating Fluidized Bed Combustion (CFBC) Boilers for thermal plants. BHEL is one of the few companies worldwide, involved in the development of Integrated Gasification Combined Cycle (IGCC) technology which would usher in clean coal technology.

The company manufactures 220/235/500/540/700 MWe nuclear turbine-generator sets and is geared up to take higher rating nuclear sets. Custom-made conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators, and pump turbines with matching motor generators up to 300 MW are also engineered and manufactured by BHEL.

BHEL offers gas turbines and matching generators ranging up to 299 MW (ISO) rating, tailored to meet specific needs, for both open and combined cycle operation.

The company has proven expertise in Plant Performance Improvement through renovation, modernization and uprating of a variety of power plant equipment, besides specialized know-how of residual life assessment, health diagnostics and life extension of plants. Retrofit packages for ESP to

meet the latest environmental norms, retrofit package for Control & Instrumentation for replacing obsolete technology with state-of-the-art technologies are also being offered by BHEL.

In order to overcome the current uncertainty of coal supply, BHEL has in-house developed 'Fuel Flexible Boiler', which is capable of firing entire range from 100% Indian to 100% imported mix of coal. The design has been developed by BHEL with its vast experience of over five decades of working with various coals. This will provide security against variation in design coal and the coal actually available during operation, thereby offering operational flexibility to customers to ensure un-interrupted generation of electricity.

## Achievements during the Year

### Order Booking

Power Sector secured orders worth ₹ 24,873 Crore with market share of 72%, against previous five years average of 64%, despite shrinking market and intense competition, reinforcing the leadership of BHEL in Indian Power Sector. It includes orders for 4 nos. of Turbines & Generators (TG) and 4 nos of Steam Generators (SG) for supercritical sets, making cumulative supercritical technology orders basket to 31 TG and 36 SG by the end of 2014-15, thus reinforcing BHEL's leadership in this segment. Share of EPC orders has also improved during the year, with EPC business in the utility segment contributing to 89%. Major highlights of the orders received during 2014-15 include:-

- Order for country's first ever EPC contract for 800 MW rating Supercritical Power Project secured from GSECL for 1 x 800 MW Wanakbori for ₹ 3,536 Crore



BHEL wins India's first ever EPC contract for 800 MW Supercritical Power Project at Wanakbori from GSECL

- BHEL's Second largest order worth ₹ 7,688 Crore for 2x660 MW TANGEDCO Ennore SEZ on EPC basis
- 1x800 MW TSGENCO Kothagudem, Telangana state's first supercritical order, secured on EPC basis for ₹ 3,810 Crore
- Order for Country's first 9FB Advanced Class Gas Turbine received from KPCL for Yelahanka CCPP on EPC basis for ₹ 1,202 Crore. This is the first gas-based order for domestic market, after a gap of almost last 3 years

## Major Orders booked

Significant utility orders received in the Power sector:

### THERMAL

#### Supercritical Ratings (2,920 MW)

- 1x800 MW GSECL / Wanakbori (EPC)
- 2x660 MW TANGEDCO/ Ennore SEZ (EPC)
- 1x800 MW TSGENCO / Kothagudam (EPC)

#### Sub-critical Ratings (1,450 MW)

- 4x270 MW TSGENCO / Manuguru (EPC)
- 1x370 MW KPCL/ Yelahanka CCPP (EPC)

### HYDRO (564 MW)

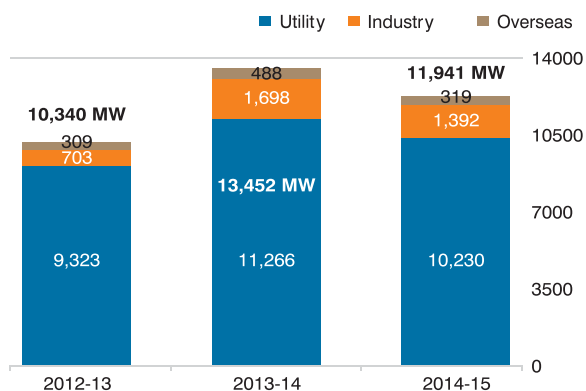
- 4x111 MW THDCIL / Vishnugad Pipalkoti HEP (E&M Pkg)
- 3x40 MW NTPC / Rammam Stg III HEP (E&M Pkg)

Spares & Service Group booked orders aggregating to ₹ 2,375 Crore for spares & service.

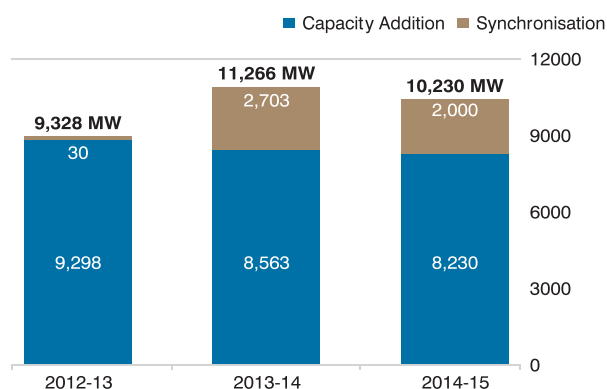
## Projects Commissioned

BHEL has continued to cross 10,000 MW mark of commissioning / synchronisation for the third consecutive year. Capacity addition by BHEL during the first 3 years of the XII Plan has exceeded the 5 year achievement of the XI Plan. In 2014-15, BHEL maintained a healthy pace of project execution. Power projects totaling 11,941 MW were commissioned/synchronized during the year, inclusive of 10,230 MW Utility sets, 1,392 MW captive sets/ industrial sets in the country and 319 MW in overseas markets. BHEL commissioned utility projects aggregating to 8,230 MW, which is up by 19% against the commissioning target of 6,914 MW set by Ministry of Power.

Commissioning/Synchronization (MW)



Utility (Capacity Addition/Synchronization)



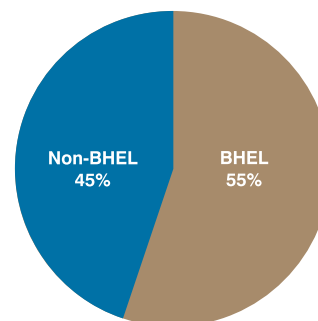
Summary of BHEL Sets Commissined During the year 2014-15

Segment	Description	Set	MW
Utility Segment	Utility Segment (Cumulative)	29	10229.71
	Capacity Addition	25	8229.71
	Coal	16	7015
	Hydro	6	736.01
	Gas	3	478.7
	Synchronisation	4	2000
	Coal	4	2000
Overseas	Overseas (International Operations)	6	319
Industry Sector	Industry Sector (Cumulative)	26	1392.55
	Execution by Power Sector	18	1130.75
	Execution by MUs	8	261.8
	<b>Grand Total</b>	<b>61</b>	<b>11941.26</b>

During the year, 25 nos. of Utility sets were commissioned expanding footprint of BHEL to 398 coal based sets (including 88 sets of 490/500/525/600/660 MW rating), 395 nos. hydro utility sets and 100 gas-based sets installed in India showcasing experience and execution capabilities. Capacity addition in Hydro Utility segment aggregating to 736 MW / 6 sets was highest in last decade by BHEL.

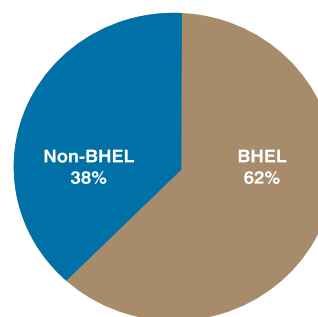
With this, installed capacity of BHEL supplied Utility sets in India went up to 1,32,293 MW and company maintained its lion's share of 55% in the country's total installed capacity of 2,41,427 MW comprising of Coal, Gas, Diesel, Hydro and Nuclear Sets (excluding Renewables and Up-rating/ De-rating). However, 62% of the total generation from Thermal Utility Sets (coal based) was contributed by BHEL supplied sets, testifying superior performance of BHEL sets.

Installed Capacity - Utility\*  
2,41,427 MW (31.03.15)



\*Coal, Gas & CCP, Diesel, Nuclear & Hydro

Generation - Utility\*\*  
836 BU (2014-15)



\*\* Coal & Lignite

Note: Excludes Renewables and Up-rating / De-rating

First Time Achievement

- Indigenously manufactured supercritical set

of 660 MW rating commissioned by BHEL at Barh-5 successfully establishing its product under this rating



Indigenously manufactured supercritical set of 660 MW rating commissioned by BHEL at Barh 5

- First 800 MW set of BHEL commissioned at Krishnapatnam-1 (BHEL scope: SG package only)
  - Further, commissioning of highest rating indigenously manufactured boiler in the country achieved at Krishnapatnam-2 (800 MW)
  - Country's largest 1000 MW nuclear set commissioned at Kundankulam-1 (BHEL scope: E&C of TG)
  - First of its kind in the country; HP1203 vertical bowl Mills with a capacity to supply coal at two elevations, erected and commissioned at Krishnapatnam (2x800 MW) (BHEL Scope: SG only)
- BHEL joins elite club of select international companies, having installed more than 150 GW of power generating equipment cumulatively. Current installation by BHEL stands at a staggering 1,57,568 MW
  - BHEL commissioned 736 MW in hydro segment - highest annual commissioning in the last 10 years. Incidentally, all hydro sets in the country which achieved capacity addition this year, were commissioned by BHEL (Parbati III - NHPC, Rampur - SJVNL and Koldam - NTPC)
  - Capacity addition by BHEL during the first 3 years of 12<sup>th</sup> plan (till 31<sup>st</sup> March 2015) stands at 26,091 MW (63% of its total 12<sup>th</sup> plan target of 41,661 MW) which is more than the total commissioning of 25,385 MW achieved in entire 11<sup>th</sup> Plan period (2007-12) by BHEL
  - BHEL crossed 100 GW of domestic coal based utility installations in 2014-15. Current installation by BHEL stands at 1,02,000 MW towards country's coal based installed capacity

### Utility Sets Commissioned during the year

A total of 25 Sets totaling 8,230 MW were commissioned in domestic market during the year by BHEL.

S.No.	Project Name	MW
<b>Utility Sets (Domestic) - 25 Sets, 8229.71 MW</b>		
<b>Coal Based Sets - 16 Sets, 7015 MW</b>		
1	JITPL Derang-1	600
2	Chhabra-4	250
3	Malwa (Shree Singaji TPS)-2	600
4	JPL Raigarh-3	600
5	Neyveli-2	250
6	JITPL Derang-2	600
7	Amravati-3	270
8	Barh STPP Stage-II Unit-5	660
9	Amravati-4	270
10	Tuticorin-1	500
11	Amravati-5	270
12	D B Super TPP (Janjgir Champa)-2	600
13	JPL Raigarh-4	600
14	Sikka-3	250
15	Chandrapur-8	500
16	Muzaffarpur-3 (Kanti-3)	195



2 Units of 200 MW each of Koldam HEP commissioned by BHEL during the year

### Setting Benchmarks in Commissioning

- More than 10,000 MW Commissioned/ Synchronized – for 3<sup>rd</sup> year in succession



<b>Gas based sets - 3 sets, 478.7 MW</b>		
1	Ramgarh ST-III STG (Gas)	50
2	OTPC Tripura-2 (Gas)	363.3
3	Monarchak GT	65.4
<b>Hydro based sets - 6 sets, 736.01 MW</b>		
1	Parbati Stage-III U-4	130
2	Rampur-4	68.67
3	Rampur-5	68.67
4	Rampur-6	68.67
5	Koldam-2	200
6	Koldam-1	200

**Utility Sets Synchronised and awaiting Commissioning**

In addition, a total of 4 Sets totaling to 2,000 MW were synchronised in domestic market.

S.No.	Project Name	MW
<b>Utility Sets (Synchronised awaiting commissioning): 04 sets, 2,000 MW</b>		
1	Anpara D-6*	500
2	Marwa - 2	500
3	Sagardighi - 3	500
4	Bokaro - A	500

\* Commissioned on 06.06.2015

**Overseas Sets Commissioned by BHEL during the year:**

A total of 6 Sets totaling to 319 MW of Overseas Sets were commissioned

S.No.	Project Name	MW
<b>Overseas - Utility (6 Sets/319 MW)</b>		
1	PDO, Oman	126
2	Tendaho Ethiopia-1	20
3	Rwanda HEP 1	14
4	Rwanda HEP 2	14
5	Kosti, Sudan STG 3	125
6	Tendaho Ethiopia - 2	20

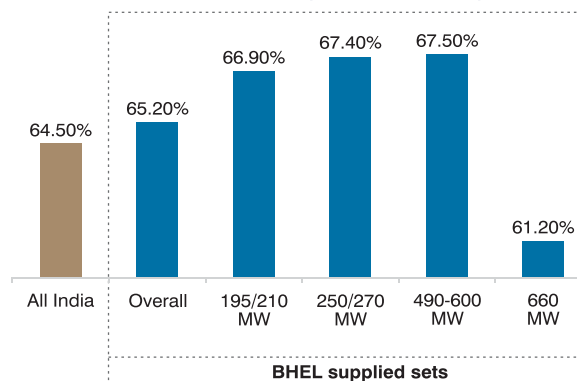
**Performance of Equipment**

Power Plants with BHEL supplied equipment continue to exhibit benchmark performance in respect of Plant Load Factor (PLF), Operating Availability (OA) and Outages.

- 178 BHEL supplied coal-based sets achieved PLF of over 70%. Out of these, 27 sets registered PLF of over 90% and 76 sets achieved PLF between 80% - 90%
- 181 BHEL coal based sets achieved OA higher than 90%

- 192 BHEL supplied coal-based sets clocked uninterrupted operation of more than 90 days during the year, out of which, 27 sets continuously operated for more than 200 days and 67 sets operated twice continuously for more than 90 days
- BHEL supplied Nuclear sets registered an OA of 92.3% and PLF of 83.7% in 2014-15
- 12 nuclear sets clocked uninterrupted operation for more than 90 days

**Plant load factor (Coal-based sets)**



Thermal Power Plants with BHEL supplied equipment recording -

**PLF more than 90%:**

Kakatiya, Raigarh, Talcher- NTPC, Dahanu, Budge Budge

**PLF 80-90%:**

Ramagundam, Sabarmati, Korba (NTPC), Amarkantak Ext-210, Bakreshwar, Neyveli MC-II, Simhadri, Korba East, Sipat, Mettur, CESC, Tuticorin, Singrauli, Unchahar, Kota, Korba (W), Vijaywada-500, Vijaywada, Tanda, Mejia-250, Rihand STG II



Budge Budge TPS equipped with BHEL sets recorded PLF of over 90%

## Customer Focus

- Capacity Addition of 100% of NTPC (4 sets/ 1,255 MW) and SJVNL (3 sets/206 MW) Projects during the year, was by BHEL.
- BHEL's share towards NTPC's total installed capacity is 72% (32,178/44,398 MW)
- All 6 Units of Rampur HEP (6x68.67 MW) of SJVNL were commissioned within a span of 9 months (March'14 to Dec'14)
- 3 Units of Amravati (5x270 MW) of M/s Rattan India Power Ltd. were commissioned within 42 days.
- Trial operation of three sets completed within a span of 5 months at JPL Raigarh (4x600 MW) - Units 1, 2 and 3.

## Renovation & Modernisation

Renovation, Modernization & Uprating of following units led achievement of their full load after operating for more than 25 years of installation – a testimony to BHEL's product & service excellence.

### R&M Projects completed in FY 14-15:

Project	MW	Category	State	Remarks
PSPCL Bhatinda U#4	110	Thermal	Punjab	Uprated to 120 MW
KBUNL Muzaffarpur U#2	110	Thermal	Bihar	Running at full load
UPJVNL Rihand U#4	50	Hydro	Uttar Pradesh	Running at full load

## In-situ Repairs

BHEL demonstrated its ability to carry out major repairs in-situ, thus was able to save time & cost of such repairs. Some of the repairs are:

- Trim balancing of Rotor system at Santaldih-5 & 6 of WBPDCCL
- Replacement of LP inlet compensator bellow at Farakka STPS-5 of NTPC
- Refining/machining of HP/IP Rotor Fins at Budge Budge-3 of CESC
- Replacement of IP nozzle segment at Kolaghat-5 of WBPDCCL
- Rectification of furnace width of Boiler at Bokaro-4 of BSPGCL

- Rectification of facial run out of 'Exciter side end Shield' of Generator by machining at Kolaghat-5 of WBPDCCL
- Modification/alteration of mill components by all cut machine at Muzaffarpur-2 Kanti of KBUNL

## Acknowledgement & Recognition of Excellence

Our valued customers have appreciated efforts by BHEL towards achieving the work completion target ahead of schedule in challenging conditions, equipment performance and improvements in existing systems in the area of Erection/Commissioning as well as SAS activities, in the form of appreciation letters.

Some of the appreciation letters received in various categories are-

### Commissioning

- NPCIL: For all out support towards TG Erection & Maintenance works of Kudankulam Unit-1 Nuclear Power Project- The first 1000 MWe machine, commissioned in the country (BHEL Scope: TG E&M)
- RPCL: For successfully achieving the Boiler Hydro test at Yermarus Unit 1 (800 MW)
- KWPCL: For successful completion of trial run of 600 MW set at Avantha Power, Raigarh.

### Overhauling

- NTPC: For excellent performance during Turbine revival works of Unit-2 at Farakka STPS (MW)
- BPSCL: For performance during overhauling of Boiler of Unit-4 at Bokaro (75 MW)
- RINL: For successful repair of TG Rotor at RINL (67.5 MW)
- MSPGCL: For post operational Chemical cleaning of Boiler at Bhusawal-4 (500 MW)
- Govt of NCT, Delhi: For efforts towards overhauling 'Gas Turbine Generator' Unit-1 (104.6 MW) of PPCL, Indraprastha in a short span of 7 days

### Spares & Service Group

- NSPCL Durgapur and TSGENCO Kothagudem Units 7&8 for supply of APH Basket
- OPGCL, IB Valley for Upgradation and Retrofitting of ESP
- Tata, Trombay Unit-8 (250 MW) for Restoration of damaged unit

**Others**

- WBPDC Sagardighi for good safety culture maintained throughout the year 2014

**National Awards for Meritorious Performance in Power Sector 2013-14**

In June 2015, a number of power stations equipped with BHEL supplied sets, received meritorious award under 'National Awards for Meritorious Performance in Power Sector (2013-14)' by Ministry of Power, Govt. of India for meritorious performance under different categories.

- 6 of 6 (100%) Power Plants awarded for early completion, were executed by BHEL.

Award Category	Plants that received the awards for Early Completion (2013-14)
<b>Gold</b>	<ul style="list-style-type: none"> <li>• Jindal Power's O.P. Jindal Super Thermal Power Project, Unit - 2</li> <li>• SJVNL's Rampur Hydro Electric Project, Unit - 5</li> <li>• NHPC's Nimoo Bazgo Hydro Electric Project, Unit - 3</li> </ul>
<b>Silver</b>	<ul style="list-style-type: none"> <li>• Jindal Power's O.P. Jindal Super Thermal Power Project, Unit - 1</li> <li>• SJVNL's Rampur Hydro Electric Project, Unit - 2</li> </ul>
<b>Bronze</b>	<ul style="list-style-type: none"> <li>• DB Power's Badadarha Thermal Power Project, Unit - 1</li> </ul>



Rampur Hydro Electric Project awarded National Gold Award for Early Completion (2013-14)

- 10 out of 16 (63%) of the power stations awarded for their performance have units equipped with BHEL supplied power equipment.



NTPC's Dadri CCPP equipped with BHEL sets awarded National Silver Award for Meritorious Performance (2013-14)

Award Category	Stations that received the awards for their performance during 2013-14
<b>Gold</b>	<ul style="list-style-type: none"> <li>• NPCIL's Kakrapar Atomic Power Station</li> </ul>
<b>Silver</b>	<ul style="list-style-type: none"> <li>• NTPC's Dadri Combined Cycle Gas Turbine Station (*)</li> <li>• NPCIL's Rajasthan Atomic Power Station (*)</li> </ul>
<b>Bronze</b>	<ul style="list-style-type: none"> <li>• NTPC's Ramagundam Super Thermal Power Station(*)</li> <li>• NTPC's Korba Super Thermal Power Station</li> <li>• CESC's Budge Budge Thermal Power Station (*)</li> <li>• NPCIL's Kaiga Generating Station (*)</li> </ul>
<b>Certificate of Merit</b>	<ul style="list-style-type: none"> <li>• NTPC's Vindhayachal Super Thermal Power Station (*)</li> <li>• Tata Power's Trombay Thermal Power Station</li> <li>• PSPCL's Guru Hargobind Thermal Plant, Lehra Mohabbat I &amp; II</li> </ul>

(\*) BHEL+ NON BHEL sets

**Preparing for Growth**

BHEL has successfully maintained its leadership in Indian Power Sector even in difficult times. The company has continuously re-calibrated its strategies for sustaining growth. Basic premise for the strategy revolves around increasing contribution, portfolio expansion, and enhance competitiveness for creating more value propositions for customers.

BHEL has always aimed at maximizing value proposition to the customers. The company

has augmented its manufacturing capacity to 20,000 MW per annum in order to cater to the Nation's requirements of accelerated capacity addition. BHEL has indigenous capabilities for various types/ ratings of power equipment, thus ensuring self reliance in power plant equipment manufacturing for the country. With the capability to manufacture Turbine-Generator, Boilers and critical auxiliaries up to the range of 1000 MW, BHEL is fully geared up for in-house manufacturing of majority of power equipment ensuring one stop optimal solution for complete power plant.

BHEL's rich and diverse experiences in Indian conditions have enabled the company to provide practical and optimal solutions to its customers. As a supplier of Boilers with world class performance over the years, BHEL symbolizes expertise in designing equipment suited for wide range of Fuel especially with High Ash Indian Coal, layout considerations for operations and maintenance, and efficient part load operations, etc.

In order to overcome the current uncertainty of coal supply, BHEL has in-house developed 'Fuel Flexible Boiler', which is capable of firing entire range from 100% Indian to 100% imported mix of coal.

BHEL has taken various initiatives to address the various challenges of the future. The existing systems & practices are being critically reviewed for improving effectiveness of operations. A number of Apex level documents/procedures are being revised/streamlined to align with current needs and business environment. Many design improvements/ layout optimisation and improved parameters are being attempted.

Timely delivery, maintaining quality, reduced rejections/reworks, effective resource management & material utilization, enhancing EPC capabilities and creative approach towards challenges are the way forward for achieving success in project execution. Leveraging its expertise and experience in BTG segment, BHEL has strengthened its capabilities in BOP segment such as Transformers, Switchyard, Coal Handling, Ash Handling, Water Treatment, Civil Works etc. to offer to the market a comprehensive single stop solution. Further, BHEL is enlarging its scope of offer with inclusion of new products viz. Flue-Gas Desulfurization (FGD), Water Management System, Air Cooled Condenser & other BoP systems



4000 TPH Stacker Reclaimer being fed by conveyor at NTECL, Vallur TPP

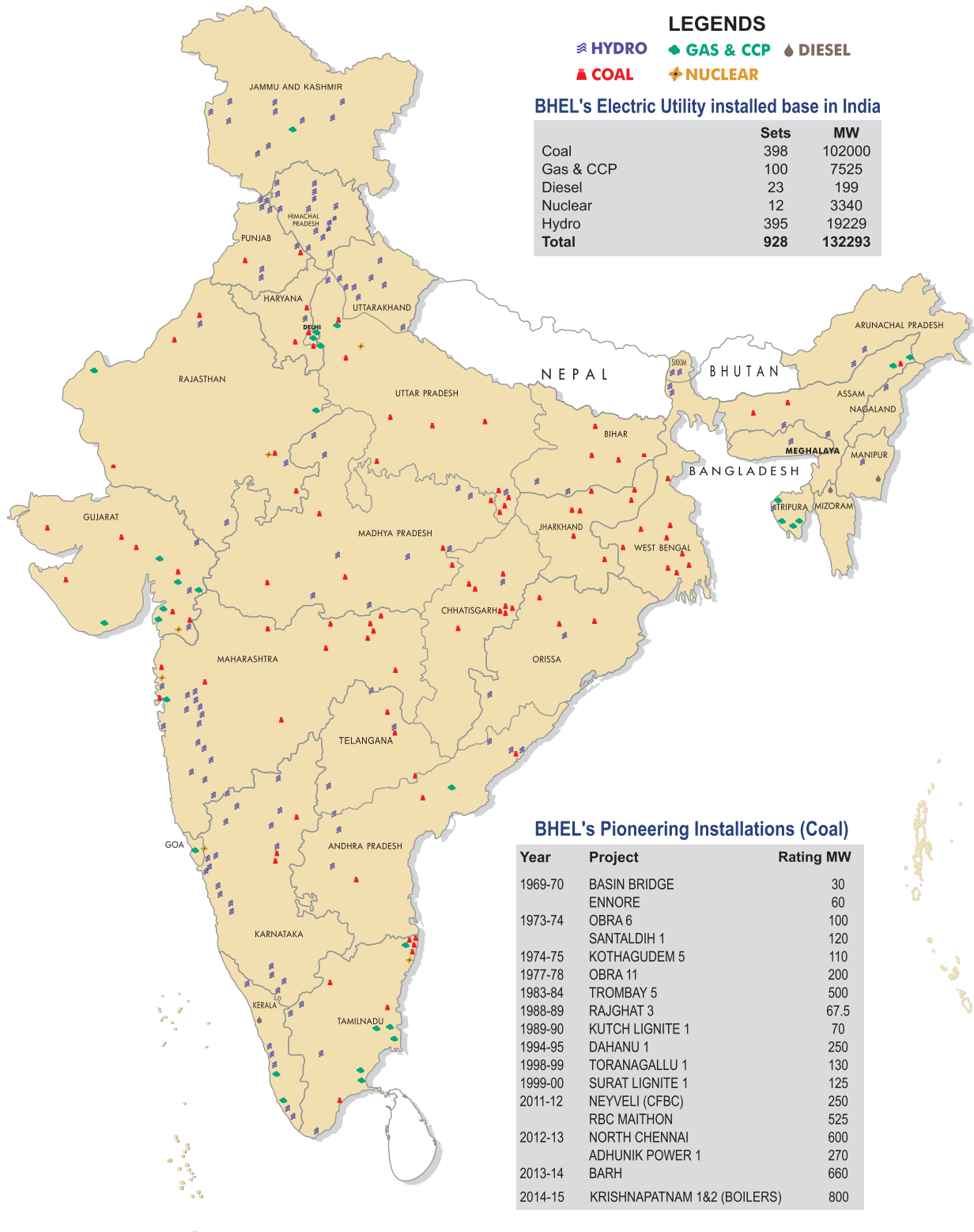
in its power sector portfolio. Exploration of new business models with partnerships for Power Plant Developers for upcoming UMPPs and debt financing for new projects in partnership with Financial Institutions are also underway.

To further upgrade its technology, company is striving for development of Advanced Ultra Supercritical Technology, which is a pioneer project undertaken jointly by BHEL, NTPC, IGCAR and others. Company will also be introducing state-of-the-art CFBC technology suitable for wide range of fuels viz. pet-coke, Lignite & washery-rejects etc.

In hydro power sector, BHEL has augmented its capabilities to manufacture up to 300 MW hydro sets. Developing efficient runner profiles and reducing hydro turbine weight have been instrumental in BHEL's recent successes in the field. To harness emerging opportunities for R&M in hydro power plants, necessary organization changes have been put in place. Further to harness emerging opportunities in nuclear power, company is working towards increasing its offerings in nuclear plant with focus on indigenization and entry into core-nuclear area. ●

## BHEL Make Electric Utility Installations

Coal, Gas, Nuclear, Diesel and Hydro Projects  
Commissioned as on 31.03.2015



This graphical representation does not purport to be the political map of India

# Industry Sector

## 1.2.2 Industry Sector

BHEL is a leading manufacturer of a variety of Industrial Systems & Products. Industry business of the company aims at meeting the growing demand for a number of industries like Metallurgical, Mining, Cement, Paper, Fertilizers, Refineries & Petrochemicals, etc. besides Captive/ Industrial Utilities. Products and Systems supplied by BHEL include Captive Power Plants, Solar PV plants, Centrifugal Compressors, Oil Rigs, Drive Turbines, Industrial Boilers & Auxiliaries, Waste Heat Recovery Boilers, Gas Turbines, Pumps, Heat Exchangers, Valves, Heavy Castings and Forgings, Electrostatics Precipitators, ID/FD Fans, Seamless Steel Tubes, Air Separation Units, Cryogenic Systems, Locomotives, Traction Machines, Electrical Machines, Transformers, Switchgears, Water Treatment Plants, Strategic Equipment for Defence, etc.

During the year, BHEL's Industry Sector secured orders (including inter sectoral orders) worth ₹ 6,201 Crore registering a growth of 13% over the year 2013-14 for variety of products.

1,373 MW of captive power projects and 20 MW of solar PV projects were synchronized during the year.

### 1.2.2.1 Transportation

#### Business Environment & Opportunities

Government of India through its Rail Budget for 2015-16, has envisaged an investment plan of ₹ 8,56,020 Crores during the years 2015-19 to transform and modernise Railway infrastructure and passenger amenities. Major investments have been planned for rolling stock acquisitions, safety, track expansion & electrification and high speed travel. To mobilise resources, Railways has put renewed focus on execution of projects through public private partnership for setting up new production units for Diesel Electric Locomotives at Marhowrah and Electric Locomotives at Madhepura. Due to growing urbanization, Mass Rapid Transit System (MRTS) for intra-city commutation is emerging as a key focus area for various state governments.

'Make in India' initiative along with allowance of 100% FDI in Railway projects is expected to open new stream of opportunities for Indian companies in association with Global Technology Partners and OEMs.



### Offerings

BHEL provides electrical propulsion system and its controls to Indian Railways. Today, BHEL supplied & installed IGBT propulsion equipment (Traction Converter/ Auxiliary Converter/VCU) account for more than 40% of IGBT based electric locomotives in operation by Indian Railways. BHEL has also developed IGBT propulsion equipment for Air Conditioned AC EMUs for Mumbai sub-urban region. In diesel segment, BHEL has established itself as a supplier of alternators and traction motors for 3-phase DE locomotives. Development of IGBT propulsion for DEMU and DE locos has also been taken-up. Our key offerings include:



First Rake of AC EMU manufactured at Jhansi Plant

- **Rolling Stock**
  - Electric locomotives up to 5000 HP
  - Diesel-Electric shunting locomotives for industry and power plants
  - Special purpose Vehicles like OHE recording-cum-test car & dynamic track stabilizers
- **Traction Machines**
  - Traction motors - Both AC & DC motors for Locos & Electrical Multiple Units
  - Traction alternators – for Locos & Electrical Multiple Units
- **Traction Drive System & Controls**
  - GTO/IGBT based Traction Power Converter Systems for AC Locos & Electrical Multiple Units
  - Control gear equipment for AC Locomotives, EMUs, DEMU, DETC

- **Traction Transformer**

- Transformers - single phase & three phase for Electric Locos & EMUs

### Achievements during the Year

#### Order Receipts

- Largest value order received from Chittaranjan Locomotive Works (CLW) for 64 sets of IGBT based Traction Converters (₹ 150 Crores).
- Largest quantity order received from Railways for 99 sets 5400 kVA Traction Transformers & 300 nos. AC Traction Motors type IM4507 for 4500 HP DE locos.

#### Other achievements:

- Manufactured, tested and supplied 3-Phase IGBT based AC EMU propulsion equipment for India's first air conditioned AC EMU announced by Indian Railways. Main Transformer Type 1578 kVA with Air Conditioning winding of 300 kVA and 3-Phase Traction Motor Type IM3601 AZ of 285 kW rating have been developed for this project.
- Received regular supplier status for Traction Alternator type TA9901 for 4500 HP DE locos
- BHEL has developed & type tested 2x500 kVA Hotel Load Converter for 6000 HP loco. The prototype unit has been supplied to CLW for installation in the locomotive.

Designed & manufactured 7775 kVA Transformer with Hotel Load winding for 6000 HP/WAP-7 & WAP-5 Electric Loco. This transformer has been developed at BHEL Jhansi and would replace 7475 kVA transformer in future.



Manufactured, tested & supplied 3-Phase IGBT based AC EMU propulsion equipment for India's first air conditioned AC EMU

## Preparing for Growth

**Collaborative and Indigenous development** - Joint development of IGBT drives for 6000 HP AC locos and AC EMUs has been carried out in association with M/s Strukton, Netherlands to meet requirements of Indian Railways. Joint development is complemented with indigenous development of traction motors, alternators and traction transformers. As a result, development of 3-phase DE locos/ AC EMUs has been completed and has been successfully put in service. Further, indigenous development of IGBT based propulsion equipment for DE locomotives and DEMU is being carried out.

**Capacity Planning** - To cater to the upcoming demand of locomotives emerging from Dedicated Freight Corridors, manufacturing facilities for 4,500 HP & 6,000 HP Diesel Electric locomotives at Marhowrah and 12,000 HP electric locomotives at Madhepura are being planned under Public Private Partnership mode. BHEL is joining hands with global OEMs in these projects.

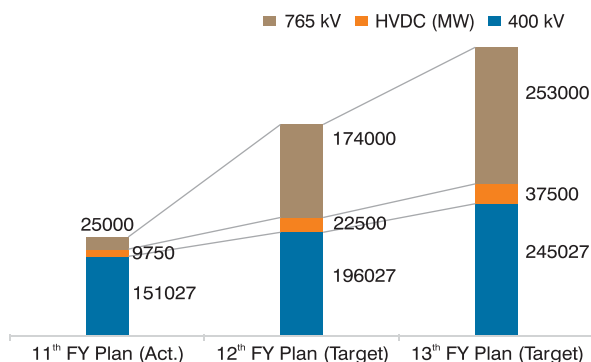
BHEL is also readying itself for manufacture and supply of IGBT based WAG-9 locomotives from Jhansi works in view of expected requirement from Indian Railways.

### 1.2.2.2 Transmission

#### Business Environment & Opportunities

During 12<sup>th</sup> five year plan, an addition of 2,70,000 MVA substation capacity and 12,750 MW HVDC capacity has been planned with an investment of around ₹ 1.8 Lac Crore. Out of this 87,201 MVA substation capacity and 9,000 MW HVDC capacity is to be achieved during the balance period of 12<sup>th</sup> plan.

**Transmission Sector Opportunities  
(AC-Substation Transformation Capacity + HVDC)**



Source : CEA

In a drive to strengthen transmission network in the country, plans for various large size projects and schemes are in place like 11 Nos. High capacity Power Transmission Corridor (HCPTC), 9 new UHCTC projects are proposed up to the year 2030 for catering to 199 GW Renewable Energy power generation, Desert Plan 2050 for evacuating 270 GW RE Power from Four desert areas, etc.

## Offerings

BHEL has significant presence in the field of power transmission in India with a wide range of transmission systems and products in its portfolio. The products manufactured by BHEL include Power Transformers, Instrument Transformers, Dry Type Transformers, Shunt Reactors, Vacuum and SF6 Switchgear, Gas Insulated Switchgear, Ceramic and Composite Insulators, etc. Other critical equipment such as Capacitor Banks, Control & Protection equipment and Thyristor Valves are also in its manufacturing range.

BHEL has indigenously developed and commercialized Gas Insulated Switchgear (GIS) up to 400 kV and Transformers and Shunt Reactors up to 765 kV. The company has also developed & supplied 1200 kV CVT and 1200 kV transformers for the first 1200 kV test station in the country. BHEL has additionally developed & tested 420 kN disc insulators for 1200 kV transmission lines and now has a range of disc insulators for EHV and UHV AC/DC applications up to 1200 kV AC and +/- 800 kV DC, solid core insulators up to 400 kV and hollow porcelain insulators up to 765 kV AC.

BHEL has indigenously developed & executed schemes using FACTS devices like Fixed Series Compensation for 400 kV lines and Controlled Shunt Reactor (CSR) for dynamic reactive power management of long 400 kV transmission lines. For controlling power flow in 400 kV networks, BHEL has indigenously developed Phase Shifting Transformer. With its strong engineering base, the company offers complete EPC solutions for EHV & UHV Substations/Switchyard (AIS & GIS type ranging from 132 kV to 765 kV); HVDC multi-terminal converter stations up to +/-800 kV; and Flexible AC Transmission Systems (FACTS) solutions to its customers.



## Achievements during the Year

### Order Receipts

- Secured order from POWERGRID for 765/400 kV substation at Agra on turnkey basis against competitive bidding. The scope of works include construction of 765/400 kV green field substation at Agra. This order will further strengthen BHEL's presence in the EPC segment of 765 kV UHV substations
- Secured order from PGCIL for supply of 9 nos. 400 kV 125 MVAR shunt reactors along with extension of 7 nos. 400 kV substation bays at various locations under the Eastern Region grid
- Booked orders for Power Transformers totalling more than 14500 MVA which comprises of following major orders:
  - Order from UPRVUNL Anpara for 4x200 MVA and 1x250 MVA, 400 kV Generator Transformers
  - Order from TANGEDCO for 2x250 MVA 220 kV Generator Transformers
  - Order from RRVPNL for 22x160 MVA, 220 kV Auto Transformers
  - Orders from OPTCL for 6x160 MVA 220 kV Auto Transformers, 6x40 MVA, 220 kV Power Transformers and 14x40 MVA, 132 kV Power Transformers
  - Order from WBSETCL for 9x160 MVA and 22x50 MVA, 132 kV Power Transformers
  - Order from GETCO for 7x100 MVA, 220 kV Power Transformers and 1x315 MVA, 400 kV Auto Transformers
  - Order from PSTCL for 3x160 MVA and 3x100 MVA, 220 kV Power Transformers
- Order from PGCIL for 400 kV Shunt Reactors

### Other Achievements

- Appreciation received from PGCIL for execution of 765/400kV Raichur substation six months ahead of contractual schedule
- During the year BHEL successfully type tested and supplied various ratings of 765 kV transformers & reactors, which include:
  - 275 MVA single phase Generator

Transformers for 660 MW unit of Lalitpur Power Project

- 105 MVA single phase Inter-Connecting Transformers for evacuation of power from Lalitpur Power Project
- 80 MVA single phase Reactor for POWERGRID substation at Wardha
- BHEL is executing world's largest  $\pm 800$  kV, 6,000 MW Multi-terminal HVDC NE-Agra project. The construction of Valve Hall building at Agra, which is the largest size built so far in India, is complete. The DC Hall, a Pre-Engineered building having clear span of 77m and height of 40m is also erected. This is yet another engineering landmark by BHEL in the field of HVDC Engineering



DC Hall, a pre-engineered building at HVDC Agra terminal, is an engineering landmark by BHEL in the field of HVDC Engineering

- BHEL has successfully developed, manufactured and commissioned India's first 'Phase Shifting Transformer' (PST) at



India's first 'Phase Shifting Transformer' at Kothagudem developed & manufactured by BHEL

Kothagudem TPS, Telangana. PST improves transmission efficiency, and is an outstanding smart grid solution

- BHEL has indigenously developed and successfully type tested 400 kV GIS



400 kV GIS indigenously developed and successfully type tested by BHEL

- BHEL has successfully tested 26 kA IPBDs for NTPC 800 MW Kudgi Project at CPRI (Highest rated current carrying capacity)

## Preparing for Growth

- **UHVAC & UHVDC Systems:** BHEL has augmented its manufacturing facilities for manufacturing UHVDC equipment (i.e. Converter Transformer, Thyristor Valves, Filter Capacitors etc.) and has supplied major UHV equipment like 765 kV Transformer, 765 kV Reactor. BHEL is focussing on future market requirements in UHVAC and UHVDC segments

- **Gas Insulated Switchgear (GIS):**

BHEL has successfully completed the development of 400 kV GIS and has secured the first commercial order for 400 kV GIS which is under execution. BHEL is now ready to address forthcoming GIS requirements

- **FACTS Solutions:**

BHEL has developed, supplied & commissioned Phase Shifting Transformer at APGENCO's Kothagudem TPS. BHEL has also developed and supplied 400 kV Control Shunt Reactor, Fixed series compensation schemes for transmission utilities & STATCOMs for Industry applications and is ready to address forthcoming requirements for power quality improvement solutions

## 1.2.2.3 Renewable Energy

### Business Environment & Opportunities

The JNNSM target, has been raised five-fold to 1,00,000 MW by 2022. This envisages capacity addition of 60 GW through large scale deployment of grid connected Utility Scale projects and 40 GW through Rooftop Projects.

The cumulative PV installations in the country have grown from 38 MW in 2010 to over 3,700 MW by end of FY15. Power generated from solar energy is gradually moving towards grid parity as a result of softening of input costs and competition. Policy initiatives such as mandatory Renewable Purchase Obligation (RPO) and grant of priority sector lending status by RBI will drive demand and investment in the sector.

### Offerings

- BHEL offers EPC solutions from concept to commissioning for grid connected and standalone PV applications ranging from kW to MW size plants which include supply of PV modules and Balance of System (BOS), Civil, E&C and O&M. Additionally, BHEL manufactures space grade solar panel and space grade batteries in association with ISRO. All Indian satellites launched by ISRO are equipped with BHEL manufactured solar panels since 2002 and batteries since 2005
- BHEL is also geared up for offering Power Block on EPC basis for Concentrated Solar Thermal Power projects

### Achievements during the year

#### Order Receipt

- Highest ever rating order for 20 MWp Solar PV Plant from GEDCOL, Orissa
- Order for 10 MWp Solar PV Power Plant from KPCL, Karnataka
- Order for 10 MWp Solar PV Power Plant from NLC, Tamil Nadu

#### Project(s) Commissioned

- 15 MW SPV Plant for NTPC Singrauli has been commissioned in Dec'14
- 5 MW SPV plant for NEEPCO Monarchak has been commissioned in Feb'15

### Preparing for Growth

BHEL is planning to ramp up PV cell & module production capacity and enhance EPC capabilities to address the domestic market demand.



15 MW SPV Plant for NTPC Singrauli commissioned by BHEL

#### 1.2.2.4 Water

### Business Environment & Opportunities

On account of increasing water scarcity, Industries have started to opt for desalination & water recycling to meet their increasing water requirements. Policy related developments like enforcement of water discharge regulation and increase in industrial water tariff will result in stimulating the demand for water recycle and effluent treatment plants. Various government initiatives like cleaning of rivers, setting up of smart cities and developing industrial corridors will positively impact the water management business.

Water segment is an extremely competitive industry. Many new players are making their foray, conventional technology is preferred by the customers, however, market is tending towards membrane based technology owing to its advantages like less footprint area, low chemical consumption and reduced O&M requirements. EPC is a preferred project model for Water System in Power Plants. Industries prefer setting up independent water package with O&M requirement while municipalities go for projects through BOO / BOOT mostly with conventional technologies.

### Offerings

Complete Water Treatment Solutions for power plants, industries and other utilities for all feed water characteristics:

- Sea Water Reverse Osmosis (SWRO) plants and Demineralization (DM) Plants
- Treatment plants for Water/ Waste Water, Effluent & Sewage
- Zero Liquid Discharge (ZLD)

### Achievements during the year

#### Order Receipt

- Order for 13.5 MLD SWRO & 2.6 MLD DM plant for TANGEDCO Ennore TPP (2X660 MW)
- Order for 0.41 MLD RO-DM plant for KPCL Yelahanka CCPP (370 MW)

#### Project Commissioned

- 1000 cum/hr. treated water facility phase-1 commissioned at OPAL Dahej Raw Water Treatment Plant in Jan'15



1000 cum/hr. treated water facility phase-1 commissioned at OPAL Raw Water Treatment Plant

### Preparing for Growth

BHEL has identified water segment as a potential business area and is gearing itself to address water segment business comprehensively for Power & Industries. With a view to enhance its presence in the segment BHEL has already entered into a long term Manufacturing Associate Agreement (MAA) with GE India Industrial Pvt. Ltd. for membrane based technology. BHEL is also exploring the possibility of in-house development of identified critical equipment.

#### 1.2.2.5 Defence

### Business Environment & Opportunities

Through the "Make in India" initiative, government

aims at promoting self-reliance, indigenisation, technology upgradation and achieving economies of scale and developing capabilities for exports in the defence sector. As a step towards promoting Indian Defence Manufacturing, GOI has increased the Foreign Direct Investment (FDI) limit from 26% to 49%.

GOI is promoting the procurement of defence equipment through indigenous sources and has targeted to increase the indigenous procurement to 70% from current level of 30% over the next decade. The present business environment can be summarised as below:

1. Competitive bidding process initiated and MOD moving away from nomination route.
2. Private sector has started participating aggressively in defence business by entering into strategic partnerships with global defence OEMs.

### Offerings

BHEL has emerged as a reliable supplier of strategic equipment and services to Indian Defence and Para-military forces for over 20 years. BHEL, in order to meet Indian Defence requirements, has set up a large infrastructure which includes dedicated engineering & manufacturing facilities at various locations. Major products being manufactured by BHEL include Super Rapid Gun Mount, Integrated Platform Management System for Naval ships, Thermo-pressed components, Turret castings for T72 tanks and other strategic equipment.

### Achievements during the year

#### Order Receipt

- Highest value order of spares for 76/62 Super Rapid Gun Mount
- Order for forgings secured from M/s Midhani for the first time
- Order for Permanent Magnet (PM) based Motors received from Ministry of Defence

#### Other Achievements

- 76/62 Super Rapid Gun Mount (SRGM) and Auxiliary Control System (ACS) successfully commissioned on-board INS D-63, Kolkata



Super Rapid Gun Mount (SRGM) mounted atop naval ship

### Preparing for Growth

To cater to the upcoming opportunities in defence sector, long term tie-up with OEMs is being sought for Buy and Make India requirements. Further, BHEL is looking for joint working arrangement with DRDO and defence PSUs for joint development of products/ systems and business co-operation. MoU signed among BHEL, HSL & MIDHANI to address business opportunity of 06 nos. Submarines under P75 I programme of Indian Navy.

#### 1.2.2.6 Captive Power Plants

### Business Environment & Opportunities

CPP business which saw demand shrinkage in last few years is expected to witness increase in market demand with revival of industrial growth in India. New Urea policy with the objective to maximise indigenous urea production and promote energy efficiency in Urea units is providing business opportunities for CPP. Initiative by GOI for "Make in India" will also result in growth in domestic manufacturing of capital goods. Cogeneration and waste heat recovery are emerging as options for CPP as companies get the Clean Development Mechanism (CDM) benefits under this system in addition to achieving higher energy efficiency. The government has also targeted doubling of domestic coal production from current levels. Coal block auctioning has also removed the deadlock in the captive business with hopes of revival expected in this segment soon.

#### Offerings

- Steam turbine based captive power plants up to 200 MW using coal, lignite, oil, natural gas or

a combination of these fuels

- Gas turbine based captive power plants (co-generation and combined-cycle), frame size up to 126 MW

### Achievements during the year

#### Milestones achieved in design and performance of equipment

- Improved design resulting in improvement in Heat Rate for 2% in 120-200 MW double cylinder steam turbines
- Design of 100% Blast Furnace Gas (BFG) fired boilers without oil support

#### Order Receipt

- 51 MW Combined Cycle Power Plant (CCPP) from ONGC Hazira
- 22.5 MW Gas Turbine based Cogen Plant from CPCL Manali
- 1x150 TPH Utility boiler (Gas & Oil fired) from CPCL Manali
- 2x36 MW Steam Turbine package from Sarda Energy & Minerals Ltd.
- 1x50 MW Steam Turbine package from Spectrum Coal & Power
- 1x30 MW Steam Turbine package, Emami Cement

#### Projects Commissioned

1,373 MW of captive power projects were synchronized during 2014-15.



376 MW captive power plant set up by BHEL at IOCL's Paradip refinery

#### List of Major Projects Synchronised:

- Anrak Aluminium Limited (Thyssen Krupp) Unit-3 (74.6 MW)

- Hindalco Industries Ltd. - Aditya Aluminium Unit-3 & 4 (300 MW)
- Hindalco Industries Ltd. - Mahan Aluminium Unit-4 (150 MW)
- ONGC Petro additions Ltd. GTG-1, 2 & 3 (101.25 MW)
- OPGS Kutch Gujarat Unit-1 (150 MW)
- IOCL, Paradeep Refinery GTG-1 & 2, STG-1 (232 MW)

### Preparing for Growth

To maintain and enhance its presence in captive power segment, BHEL has taken initiatives for improving the performance parameters of existing products. Thermal cycle optimisation and development of new competitive products (i.e. 150 MW Single Cylinder Steam Turbine, 200 MW Two Cylinder Steam Turbine, Wing walled & Cold Cyclone CFBC Boilers, etc.). Further, new business opportunities in Municipal Solid Waste & Washery rejects based power plants, petcoke fired CFBC boilers, etc. are also being explored.

#### 1.2.2.7 Industrial Products (including Oil & Gas)

### Business Environment & Opportunities

In the year 2014, India's Oil Production stood at 895,000 bpd against consumption of 3.8 million bpd. To bridge this gap between demand and supply, country imported about 78% of crude oil and about 33% of Natural Gas. To reduce the quantum of huge imports, it is imperative to accelerate the exploration & production activities and realise our full potential with the appraisal of 100% of the Indian Sedimentary area from current level of 48.04% in line with India Hydrocarbon vision 2025. GOI has also adopted a multipronged strategy for providing momentum to exploration and production efforts in the country. Government is focussing on development of alternate sources of Hydrocarbon like Coal Bed Methane & Shale Gas and R&D for new sources like Gas Hydrates which are positive enablers for BHEL.

The Indian refinery Industry has established itself as a major player globally with current refining capacity of 215 MMTPA which exceeds the domestic demand. India is emerging as a refinery hub for exports. India is the largest exporter of Petroleum products in Asia since 2009. Also, upgradation of refineries to Euro-V and higher grades are expected in near future.

Comprehensive New Urea Policy 2015 for the next four financial years has the objective of maximizing indigenous urea production, thus creating good opportunities for domestic manufacturers of equipment for Fertilizer Industry. Therefore, Oil & Gas and Fertilizer industry in India hold promising growth opportunities for various value chain partners.

In Oil & Gas Upstream Sector, there is a declining trend of crude oil prices, hence subdued market position. Though there is some initial backlash in procurement of capital equipment i.e. Drilling Rigs but acquisition of new rigs is essential in view of thrust on increasing the domestic crude oil production and ageing of rig fleet of ONGC and OIL.

Also, the idea of upgrading the existing rigs to ultra-modern technology equipment has been mooted by BHEL so that the advantages of latest generation AC VFD rigs is available to customer with minimum investment.



*On-shore drilling rig with AC-SCR and AC-VFD technology*

'Make in India' initiative of GoI is likely to accrue business potential for Offshore Compressors, Drilling Equipment and Natural gas Pipeline compressors in oil and gas sector.

In Oil & Gas Downstream Sector, the upgradation of refineries to Euro-V norms is likely to yield business potential for compressors, Columns & Reactors, Pressure Vessels & Heat Exchangers.

In fertilizer sector, present production level of Urea is 23 MTPA against demand of 31 MTPA. GoI has planned to cover up the gap by recently approving the various revival projects of Fertilizer Units viz. FCI Sindri, Ramagundam, Talcher, Gorakhpur & HFCL Barauni, and have also approved setting up of new Amonia-Urea complex at Namrup. GoI's above measures will result in new business opportunities for BHEL compressors with suitable drives and H<sub>2</sub> & N<sub>2</sub> separation units.

The HT motor business of the company saw limited opportunities due to continued slowdown in its traditional markets of Power, Refineries and Cement. However demand is expected to pick up by Q3 of FY16, on the back of overall economic recovery. Potential has also been seen in the irrigation sector where there is a growing requirement for HT machines.

## Offerings

- **Oil Rigs** - A variety of on-shore drilling rigs with AC-SCR and AC-VFD technology for drilling up to depths of 9,000 metres, work-over rigs for servicing up to depths of 6,100 metres, mobile rigs for drilling up to depths of 3,000 metres. Beside complete rig package, BHEL also supplies on-shore drilling rig equipment like draw works, rotary table, travelling block, swivel, mast & substructure, mud systems, Refurbishment and upgradation of BHEL and non-BHEL make oil rigs and rig electrics to leading oil and natural gas exploration companies of India
- **Well Heads and X-mas Trees** - Up to 10,000 psi, Mud Line Suspension, Choke and Kill manifold, CBM Well heads, DSPM H-Manifold Assembly, Mud valves, ESP hangers, Block type X-mas Trees & Landing Bases for Casing Heads
- **Compressors** - Manufacturing and service of various types of multi stage Centrifugal compressors as per API 617, flow up to



Multi-stage centrifugal compressor manufactured & supplied by BHEL

3,00,000 m<sup>3</sup>/hr & pressure up to 350 bar for application in Fertilizers, Refineries, Petrochemicals, Pipelines, Gas processing, Steel industries, etc. BHEL has the capability to produce Centrifugal Compressors to handle all types of process gases.

- **Mechanical Packages** - These include fabricated equipment like Air separation Units, Cryogenic systems, Column and Reactors, Pressure Vessels, Heat Exchangers, Fired Heaters and Purge Gas Recovery Unit.
- **Electrical Machines** - These include AC Squirrel cage, Slip Ring, Synchronous Motor (for safe and hazardous area application), Variable speed motors, Industrial Alternators, Special-purpose machines.

### Achievements during the year

#### Order Receipt

- First ever order received for Centrifugal Turbo Blower Package for Blast Furnace application in Steel Plants from M/s Essar Projects India Ltd for SAIL Rourkela
- 1 No. Motor driven Booster Compressor from M/s BPCL Kochi.
- Prestigious order for Purge Gas recovery unit received from M/s NFL Vijaipur.
- Entered into rate contract with M/s ONGC for a period of 2 years for supply of 125 Nos. Alternators.
- Entered into rate contract with M/s ONGC for a period of 3 years for supply of 850 Nos. Well Heads & 550 Nos. Xmas Trees to various assets of ONGC.

- 5 nos. 15-30 MW Synchronous motors along with Static Frequency Converter from WPIL Ltd. for Pranahita Chevella Lift Irrigation Scheme (LIS).
- 12 nos. 4.7 MW Synchronous motors along with static excitation system and spares from Megha Engineering Infrastructure Ltd for Pattisam LIS.

#### Preparing for Growth

BHEL is focussing on enhancing presence in irrigation sector which has growing requirement for motors for Lift Irrigation schemes. BHEL is also exploring new market segment in offshore drilling rig equipment. ●

# International Operations

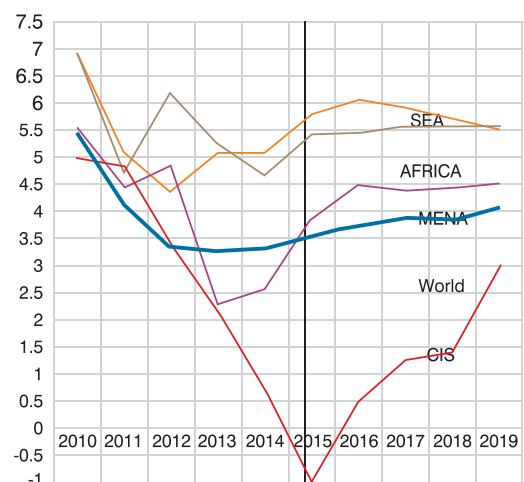
## I.2.3 International Operations

### Macro opportunities

By the latest estimate of the International Monetary Fund (IMF) world, GDP growth was measured at 3.3 percent for 2014 and is likely to grow by between 2.8 and 3.8 percent in 2015-16 - about one percentage point lower than last year's forecasts. World Power Generation Scenario estimates that electricity demand will grow by 2.1% per year on average over a period of next 15 years. This would translate into increase of the present installed capacity from about 6000 GW to 10,700 GW by 2040. However, global power mix sees a significant transformation with renewable energy (including hydro) share to become almost half and more than that of coal & gas combined. Power systems remain one of the most important element of energy supply which underpins economic growth and prosperity of a region. Though in developed economies, demand growth is expected to be slow, Industrialization, rising incomes & expanding population are pushing rapid demand growth in emerging economies.

On the other hand, increasing geopolitical instability may become a leading risk for global growth. Also, fluctuating oil prices weigh heavily on growth prospects as well as investment sentiments. The Eurozone crisis is still continuing resulting in slow investments worldwide. Power sector structural reforms across emerging countries remain major concern.

GDP, constant prices (% change)



Source: World Economic Outlook



The world is moving towards a better consensus on global warming issue and there is a renewed thrust on higher efficiency and clean coal technologies in the fossil fuel segment. Consequently, nearly one-third of the investments in energy supply is in construction of new power plants.

### Current Business Environment

Global economy in the year 2014-15 remained sluggish not gaining expected pace due to various factors. Some of the factors not helping growth of infrastructure sector i.e. turmoil in parts of the Middle East, conflict between Russia and Ukraine and Greece debt crisis etc. Global energy trends not being so optimistic; challenges over the security and sustainability of energy supply are expected to still persist. This would have a major impact on our immediate business prospects.

Despite the uncertain current economic environment, focused efforts have helped BHEL in consistently enhancing its global footprints. Major generation capacity addition is planned in emerging economies to sustain high growth. South East Asia, Middle East, CIS countries and Africa are emerging as markets for BHEL. However, funding remains a challenge apart from political instability in some of these target regions. ASEAN is one of the fastest growing regions today and after China & India, Indonesia, Vietnam, Thailand and Malaysia are going to add huge amount of generation capacity in the near future. In Africa around 600 million people are without electricity and huge potential for capacity addition exists though funding remains an issue. The CIS countries (erstwhile USSR) have increasing demands for renovation and modernization of ageing power plants along with exploring the untapped hydro potential. BHEL has a strong presence in neighboring countries and it would always remain a target market providing significant opportunities for thermal & hydro sectors. With the thrust on renewables, BHEL is also gearing up to address the potential in this field, especially solar, worldwide.

### Our experience in exports

BHEL has been the flag bearer of Indian engineering enterprises across the globe for over four decades. Continuing its focus on globalization, BHEL has achieved consistent growth in its exports. Our references encompass almost the entire range of

BHEL's products and services, covering thermal, hydro and gas-based turnkey power projects, substation projects, rehabilitation projects, besides a wide variety of products like Transformers, Compressors, Motors, Valves and Oil field equipment, Electrostatic Precipitators, Photovoltaic equipment, Insulators, Heat Exchangers, Switchgears, Castings and Forgings, etc.

The cumulative capacity of power plants with BHEL supplied equipment stands at close to 10 GW in overseas market. The first large turnkey project export by an Indian company was done by BHEL in Libya (1977) and since the past few decades, BHEL has been expanding its operations in the field of exports. Currently, we have established references in 77 countries across the globe with major contributions in the power sector of various countries. With the growing impetus on the renewables sector worldwide, BHEL has reinforced its presence in this segment with recent orders from Turkey and Nigeria.

### Achievements during the year

#### Order Receipts:

During the year, BHEL secured the following prestigious orders:

#### Comoros – Entry into new country

Secured order for 18 MW HFO based Diesel Thermal Power Plant from Comoros Islands (First ever order for Diesel based power project from Africa).

#### Turkey – New product in existing market - Hydro

Secured first ever order from M/s EÜAŞ, Turkey for rehabilitation of 8x183 MW Keban Hydropower project (first ever order from hydropower segment in Middle East).



Keban Dam, Turkey

## Global Footprints of BHEL



### AFRICA

ALGERIA  
BURUNDI  
COMOROS  
DR CONGO  
EGYPT  
ETHIOPIA  
GHANA  
KENYA  
LIBYA  
MALAWI  
MAURITIUS  
NIGERIA  
RWANDA  
SENEGAL  
SOUTH AFRICA  
SUDAN  
SWAZILAND  
TANZANIA  
UGANDA  
ZAMBIA  
ZIMBABWE

### ASIA

AFGHANISTAN  
AZERBAIJAN  
BANGLADESH  
BHUTAN  
CHINA  
HONG KONG  
INDONESIA  
IRAN  
IRAQ  
JAPAN  
JORDAN  
KAZAKHSTAN  
KUWAIT  
LAOS  
MALAYSIA  
MYANMAR  
NEPAL  
OMAN  
PHILIPPINES  
SAUDI ARABIA  
SINGAPORE

SRI LANKA  
SYRIA  
TAIWAN  
TAJIKISTAN  
THAILAND  
UAE  
VIETNAM  
YEMEN

### EUROPE

BELARUS  
BULGARIA  
CYPRUS  
FINLAND  
FRANCE  
GEORGIA  
GERMANY  
GREECE  
IRELAND  
ITALY  
MALTA  
POLAND

ROMANIA  
RUSSIA  
SWEDEN  
SWITZERLAND  
TURKEY  
UKRAINE  
UK

### NORTH AMERICA

CANADA  
TRINIDAD AND TOBAGO  
USA

### OCEANIA

AUSTRALIA  
NEW CALEDONIA  
NEW ZEALAND  
SAMOA

### SOUTH AMERICA

SURINAME

### Nigeria – Largest order for Solar Products

Largest order for solar products from the Kaduna State Government, Nigeria was secured for supply of 50 kVA Solar Power Mini Grid and Substation to Nigeria; which is also the first ever order for solar products from Africa.

### Italy, Algeria & Trinidad & Tobago - New product in existing market

Maiden order for motors was secured from Italy. Also, secured maiden order for the supply of Transformer bushings to Algeria and to Trinidad & Tobago.

**Belarus – Largest order for Capital Spares from CIS Region**

Secured BHEL's largest order for export of Capital Spares from Belarus (largest in CIS).

**Myanmar – Regaining customer confidence**

After a gap of several years, BHEL secured orders for supply of well-heads and x-mas trees for MOGE (Myanma Oil and Gas Enterprises).

**Repeat orders**

**Kenya - Motors**

Mombasa Cement Ltd., Kenya has once again chosen BHEL with repeat orders for Motors for the 4<sup>th</sup> consecutive year.

**USA – Control Equipment**

Metso Automation, USA has placed a repeat order for supply of Control Equipment on BHEL for the 4<sup>th</sup> consecutive year.

**After sales service**

Orders have been received from across the globe for spares & after sales services, including Bangladesh, Bhutan, Indonesia, Iraq, Ireland, Kazakhstan, New Caledonia, New Zealand, Oman, Sri Lanka, Tanzania, UAE and Zambia.

**Overseas Project Execution:**

A major milestone of the year was the commissioning of power plants in Ethiopia, Oman, Rwanda and Sudan totaling to 319 MW. Major projects executed during the year are:



126 MW Qarn Alam-3 Power Project executed by BHEL at Oman

- Rwanda - 28 MW Nyabarongo Hydro-Electric Power Project

- Sudan – 3<sup>rd</sup> unit of 125 MW Kosti Thermal Power Project
- Ethiopia - 2x20 MW Tendaho Sugar Factory power plant
- Oman - 126 MW Qarn Alam-3 Power Project

**Accolades:**

- BHEL successfully commissioned 2x14 MW Nyabarongo Hydro Electric Project, Rwanda. The plant was formally inaugurated by H.E. the President of Republic of Rwanda. This being biggest Hydro Electric Project in Rwanda enhanced the power capacity of the country by 21%. Both the units achieved higher performance than the guaranteed parameters



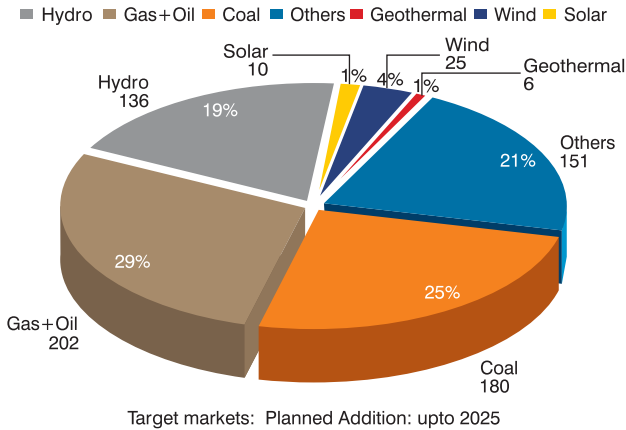
2x14 MW Nyabarongo Hydro Electric Project commissioned by BHEL in Rwanda

- For 24<sup>th</sup> consecutive year in succession, BHEL has been conferred the 44<sup>th</sup> EEPC India Regional Award for the 'Top Exporter for the year 2011-12, Gold Trophy (Large Enterprise)'

**Preparing for Growth**

Exports remain a focus area for BHEL as geographical diversification is one of the key strategies of the company and thus, adequate thrust is being given to enhancing International Business. Towards this objective, detailed action plan is in place to achieve growth in overseas business with identification of the target markets. This has been instrumental in expanding successfully the presence of BHEL in overseas markets, year by year.

The company has been successful in meeting the requirements of international markets in terms of complexity of work as well as technology, quality



Source: WEO/Platts Database 2014

and other requirements. BHEL also possesses the requisite flexibility to interface and complement other international companies for large projects, and has exhibited adaptability by manufacturing and supplying intermediate products. The company has initiated several measures to fuel further growth to achieve its Strategic Plan objective of multi-fold increase in

overseas business. Major initiatives include:

- Identification and perusal of opportunities for strengthening its manufacturing and equipment servicing through formation of Joint ventures with local market players
- Targeting new opportunities by means of localisation in target countries as well as looking into mergers and acquisitions to enhance markets
- Forging opportunity-specific and market-specific alliances to attempt large projects and strengthen BHEL's role as an EPC Contractor in the International market
- Exploring and Leveraging financing options along with its proposals and offer a comprehensive solution to its customers. Efforts are being made to attain project financing vide Line of Credit through Govt. of India, project recourse financing, NEIA scheme, etc. ●

### 1.3 Financial Performance of the Company

#### 1.3.1 Standalone Financial Results

##### 1.3.1.1 Balance Sheet

###### Share Capital

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Authorised Share capital	2000	2000
Issued, subscribed & Paid up Share Capital	490	490

Govt. shareholding remained at same level at 63.06%.

###### Reserves & Surplus

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Capital Reserve	37	37
General Reserve	32350	31350
Surplus of Profit & Loss	1209	1171
	33596	32558

A sum of ₹ 1000 Crore has been transferred to General Reserve out of profit for the year 2014-15.

###### Borrowings

(₹ in Crore)

	F.Y. 2014-15			F.Y. 2013-14		
	Long Term	Short Term	Total	Long Term	Short Term	Total
Unsecured Loans- Financial lease obligation	61	0	61	105	0	105
Secured Loan- Rupee export packing credit	0	0	0	0	2550	2550
	61	0	61	105	2550	2655

Repayment of Short term secured borrowing in the form of Rupee export packing credit during 2014-15 resulting to overall reduction in borrowings.

### Other Long Term / Current Liabilities

(₹ in Crore)

	F.Y. 2014-15			F.Y. 2013-14		
	Other Long Term Liabilities	Current Liabilities	Total	Other Long Term Liabilities	Current Liabilities	Total
Trade payables (Incl. Acceptances)	702	8799	9501	765	8718	9483
Deposits from contractors & others	94	517	611	75	538	613
Advances Received from customers & others	4563	6969	11532	5760	8902	14662
Other payables/ liabilities	0	1637	1637	0	2005	2005
	5359	17922	23281	6600	20163	26763

Decrease in liabilities (both current & non-current) is mainly due to lower level of operation and decrease in advances from customers.

###### Provisions

(₹ in Crore)

	F.Y. 2014-15			F.Y. 2013-14		
	Long Term	Short Term	Total	Long Term	Short Term	Total
Provision for employee benefits	2706	574	3280	2438	570	3008
Provision for contractual obligation	3598	2511	6109	4693	944	5637
Proposed Dividend (Incl. Div. tax)		183	183		435	435
Other Provisions	451	1017	1468	365	881	1246
	6755	4285	11040	7496	2830	10326

Increase in total provisions is mainly due to increase in provisions for contractual obligation and marginal increase in provision for employees benefits.

## Fixed Assets

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Gross Block	12589	12050
Less: Depreciation/ amortisation	8451	7360
Less: Lease Adjustment Account	(2)	(3)
Net Block	4141	4693
Capital Work-in-Progress	501	622
Intangible assets under development	17	20
	4658	5335

## Non Current Investments

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Long Term Trade Investments	418	420

The investment made with M/s Latur Power Company Ltd. (under liquidation) has been received back resulting in reduction in Long term trade investments.

## Deferred Tax Assets (Net)

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Deferred Tax Assets (Net)	2221	1969

The net increase in Deferred Tax Assets is mainly on account of items which are in the nature of timing difference including impact of revised depreciation policy.

## Loans & Advances

(₹ in Crore)

	F.Y. 2014-15			F.Y. 2013-14		
	Long Term	Short Term	Total	Long Term	Short Term	Total
Loans & Advances	1219	2225	3444	1167	2024	3191

Increase in loans & advances is mainly on a/c of increase in deposits/ advances with statutory authorities.

## Inventories

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Inventories	10102	9798

Increase in inventory is mainly on a/c of induction of material pending conversion to FG.

## Receivables

(₹ in Crore)

	F.Y. 2014-15			F.Y. 2013-14		
	Long Term	Trade Receiva- bles	Total	Long Term	Trade Receiva- bles	Total
Trade Receivables (Net)	11414	26224	37638	11881	28072	39953

Decrease in receivables is in line with reduced level of operations.

## Cash and bank balances

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Cash & bank balances	9813	11873

The cash and bank balances as at 31-03-2015 is ₹ 9813 Crore as against ₹ 9323 Crore (net of short term borrowings) as at 31-03-2014.

## Other Current Assets

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Other Current Assets	175	253

Other current assets represent Interest accrued on banks deposits.

### 1.3.1.2 Statement of Profit & Loss

#### Revenue from Operations

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Gross Turnover	30947	40338
Less : Excise Duty	920	1342
Less : Service Tax	485	607
Revenue from operations (Net)	29542	38389

In the year 2014-15, Power segment and Industry segment contributed 77% and 23% respectively for the total revenue of the company as against 80% and 20% last year.

#### Other Operational Income

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Export Incentive	100	27
Scrap Sales	244	285
Others	297	408
	641	720

Decrease in other operational income is on a/c of decrease in insurance and freight income due to reduced level of operations.

#### Other Income

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Exchange variation (net)	0	659
Interest Income	811	631
Others	409	326
	1220	1616

Decrease in other income is mainly on a/c of exchange variation loss (net) incurred during FY 2014-15. The exchange variation loss (net) is shown under other expenses of Manufacturing, Administration, Selling & Distribution.

#### Cost of Material consumption, Erection & Engineering Expenses

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Cost of consumption of raw material & components	13704	17141
Consumption of stores & spares	472	569
Erection & Engineering Expenses	3582	4393
	17758	22103

Material consumption as percentage of net turnover after adjustment of accretion/decretion to WIP & FG is 59.90% as against 59.67% in 2013-14.

#### Employee Benefits Expense

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Employee Benefits Expense	5450	5934

Reduction of 8% in employee benefits expenses is mainly on a/c of decrease in manpower strength by 2620 (net).

#### Finance Costs

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Interest and other borrowing costs	92	133

Reduction in Finance cost is due to lower borrowings.

#### Other Expenses of Manufacturing, Administration, Selling & Distribution

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Other expenses of Manufacturing, Administration, Selling & Distribution	3637	3309

Increase in other expenses is mainly due to exchange variations loss (net) incurred in FY 2014-15.

#### Provisions (Net)

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Provisions (Net)	1604	2259

Reduction in provisions includes provision for contractual obligations and other provisions created/withdrawn in line with applicable accounting standards and guidelines.

#### Depreciation

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Depreciation	1077	983

Increase in depreciation is mainly on account of impact of the revised depreciation policy during the year.

## Tax Expense

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Income Tax-Current Year	1005	1900
-Earlier Years	(54)	11
Deferred tax charge/ (credit)	(230)	(357)
Tax Expenses (Net)	721	1554

Decrease in tax expense (Net) is in line with dip in profit for the year.

## Profit after Tax

(₹ in Crore)

	F.Y. 2014-15	F.Y. 2013-14
Profit after Tax	1419	3461

## 1.3.2 Financial Review of Subsidiary Company

### BHEL Electrical Machines Ltd.

A subsidiary Company has been incorporated on 19<sup>th</sup> January, 2011 as “BHEL Electrical Machines Ltd.”, with BHEL holding the majority stake of 51% with an equity investment of ₹ 5.36 Crore and Govt. of Kerala retaining 49%. In 2014-15, BHEL EML recorded a loss of ₹ 3.96 Crore on a turnover of ₹ 21.88 Crore.

(₹ in Crore)

Particulars	F.Y. 2014-15	F.Y. 2013-14
BHEL's Investment in Equity	5.36	5.36
Turnover	21.88	37.03
Profit after Tax	(3.96)	(1.06)

## 1.3.3 Financial Review of Joint Venture Companies

### BHEL-GE Gas Turbine Services Pvt. Ltd. (BGGTS)

BGGTS is a Joint Venture Company of BHEL and GE, USA formed to take up repair & servicing of GE designed Gas Turbines. The financial highlights of

the company are as under:

(₹ in Crore)

Particulars	F.Y. 2014-15	F.Y. 2013-14
BHEL's Investment in Equity	2.38	2.38
Orders booked during the year	506.90	576.05
Turnover	592.70	782.62
Profit After Tax	68.70	75.75
Net Worth	221.91	193.59

For the year 2014-15, BGGTS paid interim dividend at 510 % and proposed final dividend of 200% on the equity share capital of ₹ 4.76 Crore.

### NTPC BHEL Power Projects Pvt. Ltd. (NBPPL)

BHEL along with NTPC Ltd. has promoted a joint venture company “NTPC BHEL Power Projects Private Limited” for carrying out EPC contracts for Power Plants and other Infrastructure Projects in India and abroad. The JVC is implementing Phase-I of the investment for carrying out EPC and manufacture of Balance of Plant (BoP) equipment for power plants. The facility for manufacturing of BoP equipments at Mannavaram, AP has commenced production since Dec 2014. NBPPL has an ongoing technology collaboration agreement with M/s DMW, USA for manufacture and supply of Coal Handling Plants. The JVC is executing an EPC contract for 1x500 MW Feroze Gandhi Unchahar Thermal Power Project received from NTPC in August 2013. In the financial statements for 2014-15, the Company has reported contingent liability of ₹ 43.95 Crores against risk & cost to BHEL for Namrup Project. The financial highlights are as under:

(₹ in Crore)

Particulars	F.Y. 2014-15*	F.Y. 2013-14
BHEL's investment in equity	50.00	50.00
Turnover	588.60	85.70
Profit after tax	1.66	9.15

\* Based on provisional unaudited figures

### Raichur Power Corporation Limited (RPCL)

BHEL has promoted a Joint Venture Company by the name of “Raichur Power Corporation Limited” on April 15<sup>th</sup>, 2009 with Karnataka Power Corporation Limited (KPCL) for setting up of a 2x800 MW Supercritical Thermal Power Plant at Yeramarus,



Raichur, Karnataka and 1x800 MW Supercritical Thermal Power Plant at Edlapur, Raichur, Karnataka on build, own and operate basis. The original project cost for 2x800 MW Yeramarus Project was estimated at ₹ 9015 Crore with debt: equity ratio of 80:20. The final equity holding would be KPCL 50%, BHEL 26% and IFCI 24%.

Execution of 2x800MW Yeramarus project is in advanced stages and it is expected that both the units will achieve synchronization during 2015-16. The LOA for 1x800MW Edlapur project valuing ₹ 3600 Crore was received earlier but Notice to Proceed would be issued after MOEF clearance which has been pending for want of firm coal linkage.

The financial highlights are as under:

(₹ in Crore)

Particulars	F.Y. 2014-15*	F.Y. 2013-14
BHEL's Investment in Equity	331.52	331.52
Net Block	107.59	40.31
Capital Work in Progress (Including advances for capital expenditure)	9246.48	6535.81

\*Based on provisional unaudited figures

#### Dada Dhuniwale Khandwa Power Limited (DDKPL)

BHEL has promoted a Joint Venture Company with Madhya Pradesh Power Generating Company Ltd. (MPPGCL) for setting up of a 2x800MW Supercritical Thermal Power Plant at Khandwa, Madhya Pradesh on build, own and operate basis. The JVC was incorporated on February 25, 2010 under the name of "Dada Dhuniwale Khandwa Power Ltd.". The initial authorized and paid up equity of the JVC was ₹ 5 Crore subscribed to equally by MPPGCL and BHEL. The paid up equity capital is ₹ 45 Crore, with BHEL and MPPGCL each having subscribed to ₹ 22.5 Crore. In spite of best possible efforts, the coal linkage or allocation of coal block for the JVC could not materialize. Considering that coal linkage is not expected to be available in near future, the Board of Directors of DDKPL in the meeting held on 27.03.2015 has recommended for voluntary winding up of the JVC. The proposal for winding up has also been approved by BHEL Board in the meeting

held on 26.05.2015. Approval of MPPGCL Board is expected to be sought in the next Board Meeting.

(₹ in Crore)

Particulars	F.Y. 2014-15	F.Y. 2013-14
BHEL's Investment in Equity	22.50	22.50
Net Block	0.01	0.03
Capital Work in Progress	13.36	1.68

#### Latur Power Company Limited (LPCL)

BHEL promoted a Joint Venture Company with Maharashtra State Power Generation Company Ltd (MAHAGENCO) for setting up a 2x660 MW Thermal Power Plant or 1500 MW gas based Combined Cycle Power Plant (CCPP) in Latur, Maharashtra. The JVC was incorporated on April 6, 2011 under the name of "Latur Power Company Ltd."

Due to non availability of coal linkage and domestic gas also not being available, both the promoters (BHEL and MAHAGENCO) had approved for voluntary winding up of the JVC by mutual consent. The winding up process was accordingly initiated in Sept 2014 and joint liquidators were appointed to carry out the winding up in line with relevant provisions of the Companies Act. Subsequent to completion of necessary activities, the JVC has returned ₹ 2.68 Crore each to the promoter companies in February 2015 against equity investment of ₹ 2.50 Crore each. The winding up process is expected to be completed shortly.

#### Power plant Performance Improvement Limited (PPIL)

The Joint Venture Company, Power plant Performance Improvement Ltd. (PPIL), has been promoted by BHEL with Siemens, Germany for plant performance improvement of old fossil fuel power plants.

Since sufficient business to ensure viability of the company has not been forthcoming, the promoter partners have mutually agreed to gradually wind up the company. PPIL is in the process of settlement of outstanding issues, collection of withheld payments and closing of the two pending contracts. Winding up process would be initiated after closure of pending contracts.

## I.3.4 Consolidated Financial Statement (CFS)

Consolidated Financial Statements have been prepared in accordance with Accounting Standard-21 on 'Consolidated Financial Statements' and Accounting Standard - 27 on "Financial Reporting of Interest in Joint Ventures."

A brief summary of the results on financial performance in line with the above AS are as under:

(₹ in Crore)

	Financial Year	
	2014-15	2013-14
<b>Statement of Profit &amp; Loss</b>		
Turnover	31555	40802
Profit Before Tax	2187	5078
Profit After Tax	1452	3503
<b>Balance Sheet</b>		
Sources of Funds		
Shareholders fund	34207	33157
Share Application money pending allotment	0	14
Minority Interest	2	4
Non current liabilities		
	13863	16072
Current liabilities		
	22817	25997
<b>Total</b>	<b>70889</b>	<b>75244</b>
Application of Funds		
Net Block (incl. CWIP)		
	6852	7660
Non Current Investments		
	6	6
Deferred Tax Assets		
	2230	1976
Other Non current assets		
	12760	13207
Current Assets		
	49041	52395
<b>Total</b>	<b>70889</b>	<b>75244</b>

## 1.4 Capital Investment

BHEL has invested a sum of ₹ 395 Crore in the company's assets with focus continuing on the Productivity Enhancement, Indigenization & Capability Building in specific areas. The major

highlights of Capital Investment Include:

- State-of-the-art Transformer Test Facilities comprising 450 kJ Impulse Generator, 170 kV Test Points with advanced GIS System and PLC Controls meeting latest Indian Standards as well as IEC International Standard set up at BHEL Bhopal
- Series Resonant Tester with capability for testing of 1200 kV Class Power Transformers installed at BHEL Bhopal. This will be used for testing of  $\pm 800$  kV HVDC transformers being manufactured by BHEL Bhopal for the first time in India



Series Resonant Tester with capability for testing of 1200 kV class power transformers installed at HEP, Bhopal

- CNC 6 Axis Taping Machine for quality taping of insulations installed at HPEP Hyderabad enhancing Turbo Generator manufacturing capability



CNC 6 Axis Taping machine installed at HPEP, Hyderabad for enhancing Turbo Generator manufacturing capability

- Strengthening the in-house manufacturing

capability for quality forgings, Vertical Shaft Furnace for heat treatment of more than 10M long forgings established at CFFP Haridwar



Vertical Shaft Furnace for heat treatment of more than 10M long forgings established at CFFP, Haridwar

- As part of modernization of plant 20 Torch Panel Welding Station, Automatic Tube Cutting & Edge Preparation Machine, CNC Multi-Plane Pipe Cold Bending Machine, Tube Bending Machine, Long Seam/Cir Seam Grinding Machine installed at HPVP Vishakapatnam
- Showcasing our dedication in preserving environment, BHEL is establishing a Sewage Treatment Plant at BHEL Hyderabad with an aim of Zero Discharge. The under construction plant with latest MBR technology will ensure Zero Discharge of Industrial effluents

Attention is continued on rebuilding and retrofitting of existing facilities to enhance their life, accuracy and productivity through an additional investment of ₹ 42 Crores.

## 1.5 Quality Performance Highlights

### Customer Satisfaction Survey:

- Customer Satisfaction Survey for Power Sector completed by M/s IMRB International. CSS index for Power Sector is 71 out of 100 against the last year score of 67 (% improvement is 5.97%)
- Customer Satisfaction Survey for Industry Sector completed by M/s TNS India Pvt Ltd. CSS for Industry Sector is 76 out of 100 against the last year score of 65 (% improvement is 16.9%)

### 25<sup>th</sup> BHEL Annual Quality circle Convention:

- The 25<sup>th</sup> BHEL Annual Quality Circle Convention was held at HEEP, Haridwar during 19–20<sup>th</sup> November, 2014. 50 circles from various MUs participated in the convention. 22 models under manufacturing category were displayed in the convention
- QC no. 18 (category- manufacturing) of EPD-Bengaluru bagged Shri S R Udpa Trophy for best Quality Circle

### Centralized Online SAR/CAR System:

- Centralized online system launched for capturing & resolution of Site Action Request (SAR) & Commissioning Action Request (CAR) for all divisions

## 1.6 Human Resource Management

### 1.6.1 Industrial Relations

- The Industrial Relations scenario in the various Manufacturing Units and the Business Sector/ Offices of the Company remained harmonious and peaceful during the year 2014-15. No mandays were lost during the year
- The thrust on participative culture and communication continued during the year. Three meetings of the apex level bipartite forum, namely "The Joint Committee for BHEL" were held during the year. There were 72 meetings of the Plant Councils and 485 meetings of the Shop Councils. In addition, meetings were also held with the representatives of Executives and Supervisors of the various Manufacturing Units including the Business Sector/Offices
- The focus of discussions in the various Fora centered on improvement of the overall performance of the Company. The main thrust was on the issues related to increasing the productivity of the employees, cost reduction, quality and sequential delivery in order to meet the customer commitments
- A two day Workshop for Representatives of Supervisors was also organized to apprise the Supervisory Association Members about the challenges being faced by the Company as also the role of the Supervisors to overcome

these challenges. The Workshop focused on evolving strategies to meet the challenges and customer commitment. The response from the Members has been overwhelming. The suggestions made during this Workshop by the Syndicate groups was sent to all the Units/ Divisions for sharing at the grass root level as well as for implementation

- The employees of the company showed solidarity with their fellow citizens distressed by natural calamities which struck different parts of the country during the year by contributing the amount as mentioned below:-
  - a) “Devastating Floods” in - ₹ 6.09 Crores  
Jammu & Kashmir State
  - b) “Hudhud” cyclone in - ₹ 4.42 Crores  
Andhra Pradesh State



*BHEL employees contributed a sum of ₹ 4.42 Crores to Andhra Pradesh Chief Minister's Relief Fund for Hudhud cyclone affected people*

## 1.6.2 Human Resource Development

### Human Resource Development Institute (HRDI)

The Human Resource Development Institute (HRDI) situated in NOIDA is the cornerstone of BHEL's learning infrastructure along with Advanced Technical Training Education Centre at Hyderabad and Human Resources Development Centre (HRDCs) at different units. Just as every function in the organization plays its role to contribute its best to the organizational goals, HRDI responds by keeping people in a state of “Readiness” to meet with the Business challenges.

Following seven core areas for improvement have been identified based on the stake-holder's expectation study using surveys and focused group

discussion tools in 2014-15. Road map for these areas are being developed with continuous support from cross functional teams across organization.

1. Enhancing focus on Technical Programs
2. Introduction of E-learning
3. Program Evaluation and Post Training Effectiveness
4. Training Need Identification and Nomination Process
5. Induction Training for all levels
6. Content, Methodology and Duration of Core Programs
7. Infrastructure Development of HRDI and HRDCs

To make full use of current technologies available in the field of learning and development, the organization has made a maiden entry in the field of e-learning by launching two initiatives on leadership and project management. The company has tied up with Harvard business publishing for its premier e-learning module on leadership titled Harvard Manage Mentor for its 1000 executives (E3-E5) who are undergoing the course. An in-house module on Project Management has been developed by Trichy in collaboration with Project Management Group for E1 & E2 across the organization. 900 executives have successfully completed the module.

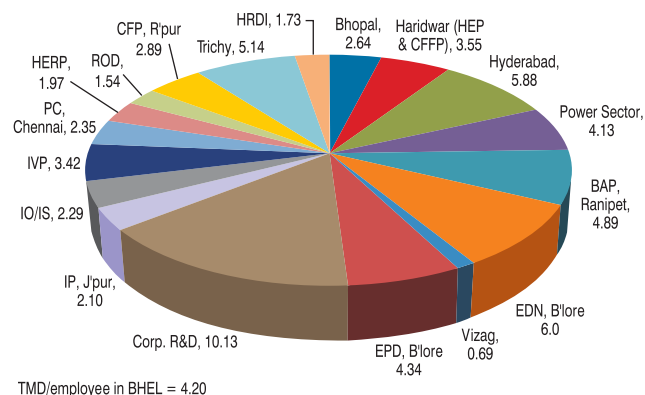
An apex committee was formed consisting of GMs to identify technical training needs of the organization in line with the strategic plan, MoU and business needs. Based on the recommendation of the committee new areas in the field of technical training were identified and three programs viz. Solar Energy Technologies, W/s on Transportation System Technology and Multidisciplinary Simulation for Power plant components were conducted at HRDI, Noida. To lay consistent focus on technical training, a separate technical cell has been formed at major HRDCs and HRDI and continuous efforts have been made to strengthen these cells with the required manpower and adequate resources.

To align the core programs with the business objective of the organization the structure of the programs (content, methodology, duration and eligibility) have been reviewed. Based on the need of the hour some new programs like resilient leadership and winning together have also been designed, implemented and successfully included as a part of the core programs.

## Year at a Glance

### A GLIMPSE OF TRAINING AT BHEL

**BHEL Employee Training Man-days (TMDs):** Training Man Days per employee in BHEL achieved is 4.20



### 1.6.3 Manpower strength

The manpower strength of the Company as on 31.03.2015 was 44905.

### 1.6.4 Performance and career development

BHEL has identified People Development as the key area through Technical/ Functional and Behavioural Competency assessment to prepare and align young employees to face Company's Challenges. To enhance performance, develop potential and to encourage healthy competition BHEL is taking new initiatives like Young Executive of the quarter and High Potential Employees Scheme.

A strong need was being felt in the organisation for identification & grooming of individuals with high potential in a systematic and time bound manner. To meet the career development aspirations of Individuals and also to build a pipeline of potential candidates to feed into the Succession Planning process a scheme for High Potential employees was conceptualized and prepared at New Initiative Cell of Corporate Office.

A scheme has been designed and is being implemented during 2015-16.

### Disclosure under section 134 (3)(p) of the Companies Act.

As per Section 134 (3)(p) of the Companies Act, 2013, the Board's Report of a Listed Company shall include a statement indicating the manner of formal

annual evaluation of Board, individual directors etc. The MoU signed between the company and the Govt. of India details out the parameters and initiatives that the company is required to undertake during that financial year. This MoU is evaluated at the end of the year by the Govt. and a performance rating is assigned to BHEL based on its performance on the spelt out parameters. The terms of reference of Board Level Committees are approved by the Board. The minutes of Board Level Committees are placed before the Board for its perusal. Further, there is a well laid down procedure for evaluation of CMD and Functional Director's performance. Department of Public Enterprises (DPE) has designed a format and laid down a procedure for filling up and evaluation of the Director's performance. As soon as the concerned Director does self assessment, his evaluation is done next by CMD, then by Secretary, Heavy Industries and closed by the Minister-in-charge. The tenure of Functional Directors as spelt out in their Terms and Conditions of Appointment is five years or the date of their superannuation, whichever is earlier.

As per Schedule IV of the Companies Act, 2013, on the basis of performance evaluation of Independent Directors, it shall be determined whether to extend or continue their term of appointment. Since the appointment of the Independent Directors is decided by the Govt. of India and as the tenure of Independent Directors is normally for a period of three years, also as decided by the Govt. of India, the Board is not in a position to decide their continuance or otherwise on the basis of performance evaluation. Recently, MCA has vide its notification dated 5<sup>th</sup> June, 2015 notified the [HYPERLINK "http://www.mca.gov.in/Ministry/pdf/Exemptions\\_to\\_govt\\_companies\\_05062015.pdf"](http://www.mca.gov.in/Ministry/pdf/Exemptions_to_govt_companies_05062015.pdf) Exemptions to Government Companies from the provisions of the Companies Act, 2013 which inter-alia provides that Sec. 134(3)(p) regarding statement on formal annual evaluation shall not apply to Government Companies in case the directors are evaluated by the Ministry which is administratively in-charge of the company as per its own evaluation methodology. Further, in line with above exemptions, Sub-Sections (2), (3) & (4) of Sec. 178 regarding appointment, performance evaluation and remuneration shall not apply to Directors of Government Companies.

## 1.6.5 Status on Presidential Directives

### 1.6.5.1 Directives on reservation policy for reserved category persons

Presidential Directives on reservation policy issued by Central Govt. from time to time provide for certain percentages of reservation in direct recruitment as well as promotion in specified posts and for specified reserved category of candidates, i.e SCs, STs, OBCs and Physically Challenged. Besides, the Directives also contain provision of certain concessions and relaxations in direct recruitments, promotions and reservation for housing for specified category of employees. The Presidential Directives on the subject from time to time are being strictly complied with and reservation percentages are ensured through maintenance of Post Based Roster system as prescribed by Govt. However, there is no direct impact of these guidelines on the financial position of the company.

#### 1. Activities of the company for welfare and advancement of SCs and STs

During the year 2014-2015, various Community Development activities focused on Socio-Economic development for those below poverty line including SCs, STs OBCs and physically handicapped, have been carried out in identified areas under BHEL Scheme of Corporate Social Responsibility.

#### 2. Representation of SC/ST employees

The overall representation of SC/ST/OBC employees in total manpower was 19.93%, 6.21% and 27.91% for SCs, STs and OBC respectively as on 31/12/2014. However, the percentages in direct recruitment during the year are 18.39% for SCs, 6.32% for STs and 28.62% for OBCs

The Annual Statement in the prescribed format showing the representation of SCs, STs and OBCs as on 31/12/2014 and number of appointments made during the preceding calendar year, as furnished to the Government, is given at **Annexure - A**.

#### 3. Manpower strength of Physically Challenged employees as on 31/12/2014

As on 31/12/2014, we have a total of 945 Physically Challenged employees in BHEL. The group wise manpower strength of Physically

Challenged employees in the Company as on 31/12/2014 is given at **Annexure - B**.

### 1.6.5.2 Safeguard of Women at Workplace

An Act to provide protection against sexual harassment of women at workplace and for the prevention and redressal of complaints of sexual harassment and for matters connected therewith or incidental thereto called "The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013", has come into force from 9<sup>th</sup> December 2013 with notification of rules by Government of India, Ministry of Women and Child Development called "The Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Rules, 2013".

The provisions of the Act and the rules thereon are being strictly complied with. In accordance with the Act, Internal Complaints Committee has been constituted in all units of BHEL and their constitution and contact details have been hosted on unit's website. A poster has been designed, which includes key provisions of the Act, Duties of the Employer, Complaints Redressal Mechanism, Action for Malicious Complaints & various misconceptions about Sexual Harassment and was circulated to all units for display at conspicuous places. Posters in Hindi, English and Regional languages have been displayed in all units. 130 Workshops / awareness programmes were conducted in units on Gender Sensitization, self defence and on awareness about the Act. 7132 employees attended these workshops of which 1316 were women and 5816 were men. The Annual Report showing details on number of complaints of sexual harassment received during the year 2014-2015 and status thereof as on 31.03.2014 is given at **Annexure - C**.

Annexure - A

Annual Statement Showing the Representation of SCs, STs and OBCs as on 1/1/2015 and No. of appointments made during the preceding calendar year

Groups	Representation of SCs/STs/OBCs				No. of appointments made during the calendar year 2014											
	(As on 1/1/2015)				By Direct Recruitment				By Promotion*			By Deputation/ Absorption				
	Total No. of Employees	SCs	STs	OBCs	Total	SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs	OBCs	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	
Group A	13974	2260	939	2797	11	2	1	2				3			1	
Group B	9289	1665	419	1451												
Group C	21355	4895	1447	8179	859	158	54	247								
Group D (Excl. SW)	814	161	23	280												
Group D (SW)	105	95	1	1												
<b>Total</b>	<b>45537</b>	<b>9076</b>	<b>2829</b>	<b>12708</b>	<b>870</b>	<b>160</b>	<b>55</b>	<b>249</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>0</b>	<b>1</b>	

\* In BHEL, no appointments are made at induction level by promotion.

Annexure - B

Representation of the persons with Disabilities as on 01/01/2015

Groups	Number of Employees (Representation)				Direct Recruitment (During the calendar year 2014)								Promotion*							
	As on 01/01/2015				No. of Vacancies Reserved			No. of Vacancies Made (appointed)					No. of Vacancies Reserved			No. of Vacancies Made (appointed)				
	Total	VH	HH	OH	VH	HH	OH	Total	VH	HH	OH	VH	HH	OH	Total	VH	HH	OH		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19		
Group A	13974	4	18	206				11												
Group B	9289	9	15	162																
Group C	21355	25	37	448	13	13	8	859	2	2	12									
Group D	919	1	5	15																
<b>Total</b>	<b>45537</b>	<b>39</b>	<b>75</b>	<b>831</b>	<b>13</b>	<b>13</b>	<b>8</b>	<b>870</b>	<b>2</b>	<b>2</b>	<b>12</b>									

Note: (i) VH stands for Visually Handicapped (persons suffering from blindness or low vision)

(ii) HH stands for Hearing Handicapped (persons suffering from hearing impairment)

(iii) OH stands for Orthopaedically Handicapped (persons suffering from locomotor disability or cerebral palsy)

\* There is no reservation in Promotion from Group B to A and within Group A. In BHEL within Group C & D, seniority-cum-merit promotion policy is followed, wherein all employees on completion of prescribed eligibility period in a Grade and subject to attaining satisfactory levels in conduct and performance are promoted to the next higher grade.

## Annexure - C

### Annual Report on Safeguard of Women at Workplace 2014-15

1	No. of complaints received during the year 2014-15	3 + 2 B/f from previous year
2	Number of complaints disposed off during the year 2014-15	5
3	Number of cases pending for more than ninety days	0
4	Number of workshops or awareness programme against sexual harassment carried out	130
5	Nature of action taken by the employer on recommendations of ICC	
	<ul style="list-style-type: none"> <li>Punishment was imposed on the respondent by reducing his pay by one stage for 1 year (B/f previous year)</li> </ul>	Case closed
	<ul style="list-style-type: none"> <li>Inquiry completed and concluded that Complaint is not covered under Sexual Harassment Act (B/f previous year)</li> </ul>	Case closed
	<ul style="list-style-type: none"> <li>Inquiry completed. Respondent got retired</li> </ul>	Case closed
	<ul style="list-style-type: none"> <li>Respondents pleaded guilty. Case solved amicably. Both the complainant and the respondent transferred to different division</li> </ul>	Case closed
	<ul style="list-style-type: none"> <li>On enquiry, it was established that the respondent had discussed on rumours pertaining to complainant's activities outside BHEL premises. Respondent was issued warning letter.</li> </ul>	Case closed

### 1.7 Right To Information Act, 2005

BHEL is a front-runner in implementing the Right to Information (RTI) Act, 2005 and has embraced the Act in true letter and spirit.

A Central Public Information Officer (CPIO) and a Central Assistant Public Officer (CAPIO) aided by a Senior Executive (Law) at the company level and 17 CPIOs at each of the major administrative units are functioning as part of the Right to Information Group.

An Appellate Committee is functioning at the Company level to dispose off first appeals filed under the RTI Act.

To assist and facilitate the citizens in obtaining information, detailed guidelines have been placed on BHEL's website, spelling out the procedure for securing access to information and filing of first appeals under the Act.

Instructions have been issued to administrative units to ensure compliance to the mandatory requirements of the Act.

Proactive disclosures have been made on BHEL's website in line with Section 4 (1) (b) of the Act, disseminating various categories of information so that citizens have minimum need to resort to the Act for the purpose of obtaining information.

BHEL is an active member of Steering Committee on RTI constituted by Standing Conference of Public Enterprises (SCOPE).

The CPIOs and the other stakeholders involved are sensitized regularly about their obligations under the Act through various trainings and workshops. BHEL organized its Annual workshop on Right to Information Act, 2005 on 21.3.2015 for the benefit of new and existing CPIOs/CAPIOs. The key note address was delivered by Prof (Dr.) M. Sridhar Acharyulu, Hon'ble Central Information Commissioner.

BHEL received 1351 RTI applications and 321 appeals during the year 2014-2015 which were dealt with as per the provisions of the Act.

### 1.8 Internal Control System

The company has an in-house Internal Audit Department commensurate with its size of operations. It has Internal Audit cells located at major manufacturing units, regional offices and at corporate office of the company which carry out audits as per Annual Audit Programme approved by Board Level Audit Committee. The Internal Audit department reviews & evaluates the adequacy and effectiveness of internal control system through regular audits, system reviews and provides



assurance on compliance to the legal, regulatory and internal policies and procedures of the company.

The Company has well placed proper and adequate systems of internal control and documented procedures covering all financial and operating functions. Adequate internal control measures are in the form of various codes, manuals and procedures issued by the management covering all critical and important activities. Functioning of Internal Audit and Internal control systems are periodically reviewed by the Board Level Audit Committee which is supported by Unit Level Audit Committees and necessary directions are issued wherever required to further strengthen the internal control system keeping in view the dynamic environment in which the company is operating. The company continues its efforts to align all its processes and controls with global best practices.

### 1.9 Mergers & Acquisitions

BHEL has also been pursuing inorganic growth route of M&A for achieving its objectives of getting a strong global foothold in target markets, getting state-of-the-art technology, gaining access to new international markets and diversifying company's product portfolio in high potential growth areas like transportation and transmission.

To support its overseas M&A endeavours, BHEL has a panel of leading global investment banks, consultants and law firms as M&A advisors. The panel comprises Financial Advisors, Accounting & Tax Due Diligence Advisors and Legal Due Diligence Advisors.

### 1.10 Opportunities and Threats

The global economy continued to expand during 2014 across major countries and regions at a moderate but uneven pace and still shrouded in uncertainty. The recurring theme is that the global economy is struggling to generate the desired traction necessary for maintaining a consistent growth trajectory. Economy of United States, is expected to improve in 2015 with real GDP growth projected at 3.6% aided by improving labour and housing market conditions. Economic condition in Euro region remain weak although some pick-up is expected supported by lower crude prices and the depreciation in the euro as well as increased bank lending. Japan too, is still struggling with growth contraction.

Potential spillovers from Geopolitical tensions and the weaker-than-expected performance of developed economies and domestic supply-side constraints have impacted the emerging economies over the past year. Geopolitical tensions in Iraq, Libya, Yemen, the Syrian Arab Republic and Ukraine have already had economic impacts at the national and sub-regional levels. Most of the world's major oil-producing countries are still grappling with investment decisions, and subdued output despite modest rebound after the almost collapse in international crude oil prices. In this context, even with increase in oil production by the United States to render resilience to the global oil market, major downside risk due to sudden and drastic stoppage of exports by major supplier countries cannot be ruled out.

India's coal consumption was at 11.1 per cent in 2014. Even with 301 billion tonnes of coal reserves, yet, India has been struggling to increase coal supplies to meet the growing requirements of its power and other industries. Fuel availability for new projects is still a concern. E-auction / allocation of coal blocks and Govt's objective to double domestic coal production by 2020 is likely to improve the prospect of fuel availability for existing projects. Land acquisition remains a complex issue as the existing and new projects still await clearances affecting take-off. Evacuation infrastructure, another issue, is critical to meet the 1.5 billion tonnes production target by 2020.

The subdued growth of the core industries has remained a drag on industrial production. Eight core industries, constituting 38% in Index of Industrial Production, have decelerated further after registering only 3.59% Y-o-Y growth, the lowest in the last five years, due to a decline in crude oil, natural gas production and steel.

Apart from these issues, climate change is going to be one of the foremost factors impacting the industry in near future. With the spurt in unexpected climate events across the world, global population has started experiencing its adverse impact which will compel various countries to commit to reduction of emissions. Further, acceptability of the fact that global warming is majorly human induced will provide the additional thrust to reduce the emissions further. This trend presents a lot of opportunities for companies like BHEL and at the same time, presents many challenges, particularly related to 'Green technology' development.

But economy is experiencing a turnaround and the initiatives initiated by the new government would act as enablers for resolution of impending issues. Allocation of Coal Blocks through e-auction, rationalization of gas prices, Single Window Concept, Coal Swapping etc. are likely to improve the fuel availability for existing power projects. Demand for electrical transmission equipment is expected to improve with more and more generation, transmission and distribution projects taking off aided by the Distribution reforms such as feeder segregation and separation of content and carriage in distribution. The Government has proposed 100 GW capacity addition in solar and 60 GW in wind by 2022. Transportation sector is likely to see a lot of traction in the days to come. The positive steps taken by the government are likely to translate into more business opportunities and finalization of several new opportunities in the near and medium term. Moreover, the “Make in India” initiative by the Government is poised to catapult Indian Industry into a new phase of growth trajectory by strengthening business confidence and investment climate. The opportunities have been discussed in detail in the respective chapters on Business Sectors under Annexure-1 of Management Discussion and Analysis.

The overall business scenario is improving at a moderate pace and BHEL would certainly leverage the opportunities arising out of the next phase of economic growth.

## 1.11 Positioning for future

With a sturdy foundation of 50 illustrious years of engineering excellence, BHEL has been the forebearer of India’s success in achieving self-sufficiency in the indigenous manufacture of heavy electrical equipment. BHEL’s 55% share in India’s total installed capacity and 62% share in the country’s total generation from thermal utility sets (coal based) as of March 31, 2015 stand testimony to its valuable contribution towards nation building.

Amidst the difficult external economic and business environment, BHEL continues to face challenges in the current year also. Nevertheless, the company has developed considerable resilience to leverage its engineering strength and manufacturing prowess to regain growth momentum in next phase of Indian economic growth. Overall business scenario is improving and the ‘Make in India’ initiative of Government of India is poised to drive the

manufacturing sector into a new phase of growth.

- To enhance the share of business in power sector, company has been adopting two pronged strategy; focus on EPC business and enlarging scope of offer. BHEL is expanding its portfolio by adding Flue-Gas Desulfurization (FGD), Water Management system, Air Cooled Condenser, and other Balance of Plant (BoP) systems. Company is fully harnessing potential in Spares & Services area and forging partnerships with other value chain partners. Increasing level of indigenization in Supercritical Technology and development of Adv. Ultra Supercritical Technology are major strategies in Power Sector
- Diversification of business has been the focus of the Management in recent years so as to enhance share of Industry Segment in business-mix. BHEL has taken various initiatives in recent past to expand its presence in Transportation (Rail), Solar, Defence and Transmission business areas, both by way of investments in existing facilities and by exploring new business models with focus on collaboration with value chain partners. BHEL has demonstrated its capability to design and offer all variants of 765 kV class Transformers and Shunt Reactors and is well positioned to capitalize on the premium 765 kV voltage segment
- BHEL’s products and systems are technology intensive and thus, the company has adopted R&D and technology development as the central driver for implementing its strategy. We have maintained R&D expenditure at plus 2.5% of the turnover for more than 5 years. Recently your company has indigenously designed and developed Fuel Flexible Boiler which is capable of blending & firing any percentage mix of imported & indigenous coals. BHEL has successfully developed, manufactured and commissioned India’s first ‘Phase Shifting Transformer’ (PST) at Kothagudem TPS in Telangana. The PST improves transmission efficiency and is an outstanding solution for smart grid ensuring multiple benefits for transmission networks
- BHEL will continue to pursue its key strategy of accelerating project execution. Company is also focusing on intermediate milestones, delivery cycle reduction, central monitoring system and deployment of additional Tools &

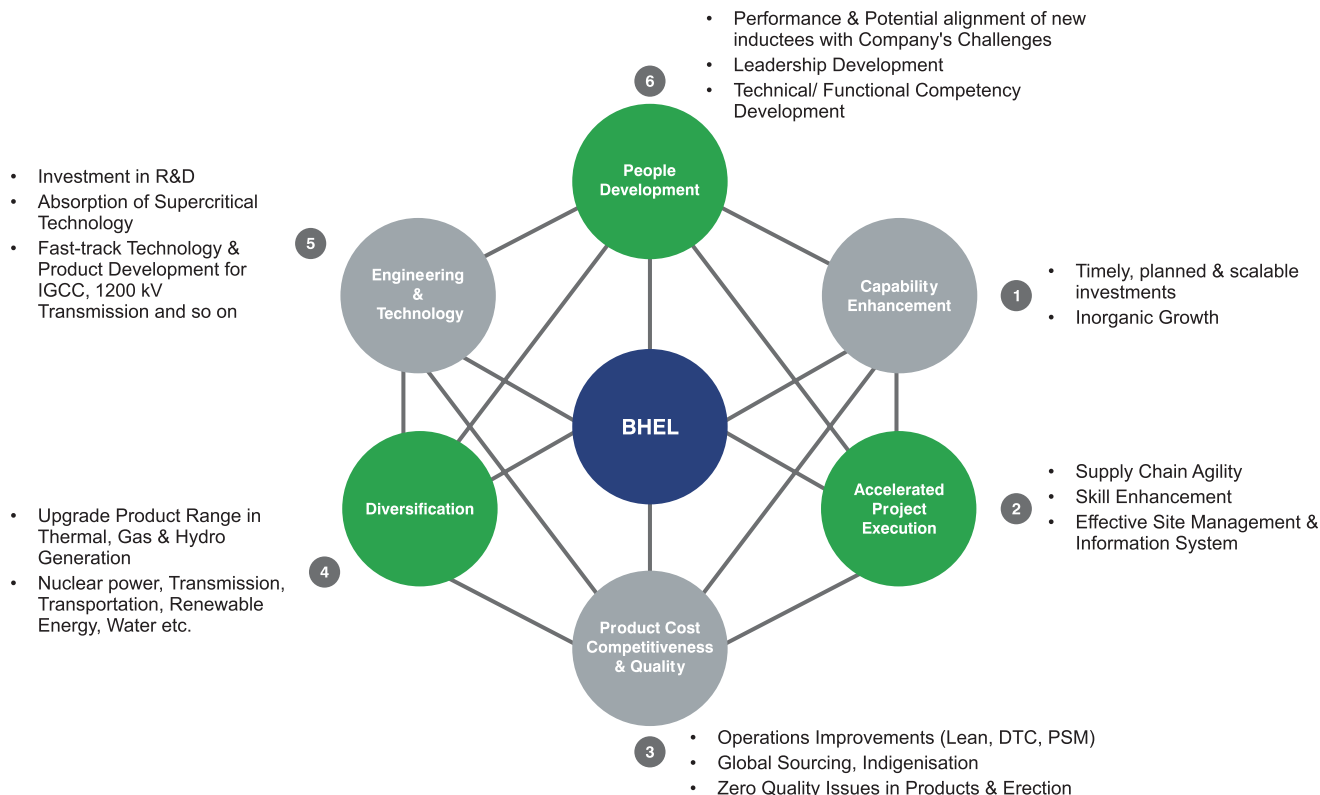
Plants. The significant achievements in execution include commissioning of first indigenously manufactured 660 MW supercritical thermal set at NTPC Barh, commissioning of first indigenously manufactured 800 MW supercritical boiler at APPDCL Krishnapatnam. We have also commissioned 736 MW of hydro projects during 2014-15. Notably, this is 100% of hydro projects commissioned in India during the year and also the country's highest in last 10 years

- To address prevailing pricing pressures, company is focusing on cost optimization measures in different areas of operations through competitive buying, increased localization, design/layout optimization, supply risk mitigation, IT applications, operations improvement and better employee productivity
- BHEL has been in the field of Photovoltaics, a strategically important area of non-conventional energy and has been contributing to the national effort for developing and promoting renewable energy based products on a sustained basis. The company has generated expertise in the critical parts of the silicon value chain, viz., Silicon

Wafer to Cell, Cell to PV Module and in EPC & O&M of MW-size Solar PV power plants offering turnkey solutions for Solar PV plants. BHEL has a dedicated R&D group in the area of semiconductor materials, Nano-and thin-film devices at their plants in Hyderabad and Gurgaon

- In line with the growing aspirations of millennial generation of the company, the 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
- BHEL 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 6-Point agenda to harness the opportunities arising out of improved economic and business conditions

### Six-Point Agenda



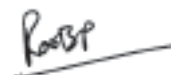
## 1.12 Risks and Concerns

BHEL has in place a Board approved Risk Management Charter & Policy (RMCP) which provides overall framework for Risk Management (RM) in the company. In line with revised Clause 49 of Listing Agreement, we have a Board Level Risk Management Committee (BLRMC) in place. The role of BLRMC is to assist the Board in the company's management of key risks as well as formulation and implementation of guidelines, policies and processes for monitoring and mitigating such risks. Further, a Risk Management Steering Committee (RMSC) is in place with responsibility for implementing the RM framework across the organization. Chief risk Officer (CRO) is the convener of RMSC and BLRMC and is responsible for periodic reporting to BLRMC/ Board based on the deliberations in RMSC.

Some of the key risks the Company faces, their impact and corresponding strategies undertaken for mitigation by the Company are discussed in the table:

Risk Statement	Mitigation Strategies
Order Book Reduction due to increasing competition, excess domestic manufacturing capacities and low business sentiments.	<ul style="list-style-type: none"> <li>- Focus on EPC business</li> <li>- Enhancing techno-commercial competitiveness</li> <li>- Increasing scope of offer</li> <li>- Improving performance parameters</li> </ul>
Delayed delivery of projects leading to LDs, penalties, and customer dissatisfaction.	<ul style="list-style-type: none"> <li>- Shifting focus to intermediate milestones</li> <li>- Delivery cycle reduction</li> <li>- e-procurement implementation</li> <li>- Central monitoring system</li> <li>- Deployment of additional Tools &amp; Plants</li> <li>- Building agile supply chain</li> </ul>
Online data & information security breach leading to loss and critical information infrastructure breakdown.	<ul style="list-style-type: none"> <li>- Policies in place for Technical controls</li> <li>- Implementation of Cyber security incident capturing system across the company</li> <li>- Third party audit as per ISO27001 ISMS Standards</li> <li>- Business Continuity Plan (BCP) &amp; Disaster Recovery (DR) strategy in place</li> <li>- Setting up of Security Operations centre</li> <li>- Crisis Management Grouping place</li> </ul>
Impact of External Factors viz. Govt. Policy, infrastructure inadequacy, constrained BoP inputs etc. may adversely impact the business.	<ul style="list-style-type: none"> <li>- Policy advocacy through Administrative Ministry &amp; Industry Associations</li> <li>- Liaison with key business partners</li> </ul>
Rising debtors and shrinking order book may lead to working capital pressure.	<ul style="list-style-type: none"> <li>- Special Groups to accelerate cash collections</li> <li>- Swift closure of punch-points with customers</li> <li>- Better scheduling of supplies</li> <li>- Taking up with financial institutions for direct payments</li> <li>- Flagging the issues with government in case of State Utilities</li> </ul>

For and on behalf of the Board of Directors of  
**BHARAT HEAVY ELECTRICALS LTD.**



**(B. Prasada Rao)**  
Chairman & Managing Director

Place : New Delhi  
Dated : 24.07.2015

# Annexure-II

## CEO and CFO Certification (As per Clause 49(IX) of Listing Agreement)

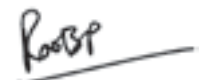
To,

The Board of Directors  
Bharat Heavy Electricals Ltd.,  
New Delhi.

- (a) We have reviewed financial statements and the cash flow statement of Bharat Heavy Electricals Limited for the year ended 31<sup>st</sup> March, 2015 and that 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) There are, to the best of our knowledge and belief, no transactions entered into by the Company during the year 2014-15 which are fraudulent, illegal or violative of the Company's Code of Conduct.
- (c) We accept responsibility for establishing and maintaining internal controls for financial reporting and that we have evaluated the effectiveness of the internal control systems of the company pertaining to financial reporting and we have disclosed to the auditors and the Audit Committee, deficiencies in the design or operation of such 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 auditors and the Audit Committee.
- (i) significant changes in internal control during the year 2014-15;
  - (ii) significant changes in accounting policies during the year 2014-15 and that 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.



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



**(B. Prasada Rao)**  
Chairman & Managing Director

Place: New Delhi  
Date: 26.05.2015

# Sustainable Development

## Annexure-III

### Sustainable Development

For BHEL, sustainability is about achieving prosperity by balancing social equity and staying within the carrying capacity of the environment. At BHEL, we believe in doing business in a sustainable manner that extends across the spheres of our business strategy, environmental action, social support and governance. Sustainability has been just a natural extension of the way BHEL saw itself and its responsibility. For almost fifty years of its existence, company has been leveraging technology and innovation for providing products, systems and services to its customers and enable them to use resources with better efficiency and productivity which is also evident from its Mission Statement – **“Providing Sustainable Business solutions in the fields of Energy, Industry & Infrastructure”**.

Structured approach towards sustainability is in itself a value proposition which adds to the triple bottom line. This helps us in reducing - material, water & energy consumption, emission and waste generation; providing more acceptability for our operations in the society; and making our products & services more sustainable and profitable. It also enables us to contribute towards equitable development as a central theme so that the benefits of economic and business growth can reach to the maximum populace.

### 3.1 Our Sustainability Performance- Environmental

#### Sustainability framework

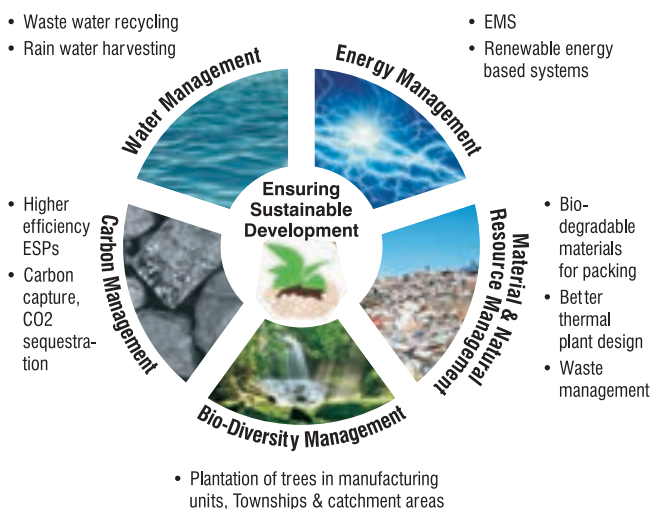
Any successful initiative requires being loaded with enabling structures right from the beginning. For sustainable development, a guiding force has also been created in the form of a ‘Sustainable Development Policy’ keeping in view the scale and nature of activities, products & services.

The policy is further ingrained and reflected in the strategy of the company through its Strategic Plan 2012-17. The focus areas have been identified for ensuring sustainable Development in BHEL through its products and services as well as in-house activities.

Key projects & initiatives are undertaken in the areas of Renewable energy generation through Solar Power



Plants & other solar systems, tree plantation, water conservation, energy efficiency, workplace environment improvement by installing Fumes Extraction Systems, Noise Level Reduction Systems, Resource Conservation Systems.



**Responsible Consumption of Natural Resources and Other Materials.**

There is continued stress on conservation and effective utilization of various natural resources in manufacturing activities and at project site.

The Company has a strong institutionalized mechanism to recycle the products and wastes to the extent feasible. For example, each MT of the molten steel produced at our CFFP unit contains 54% of the recycled scrap (of CFFP) and 45% of MS Scrap (from other BHEL units), thus making it an almost 100% recycled product.

Overall, more than 70 projects have been taken across various units of BHEL in 2014-15 related to reduction/recycling/reuse of waste across BHEL

with an objective of reducing use of virgin material and consequently reducing the environmental footprint of BHEL. Some of the activities related to material and natural resource management carried out during 2014-15 include:

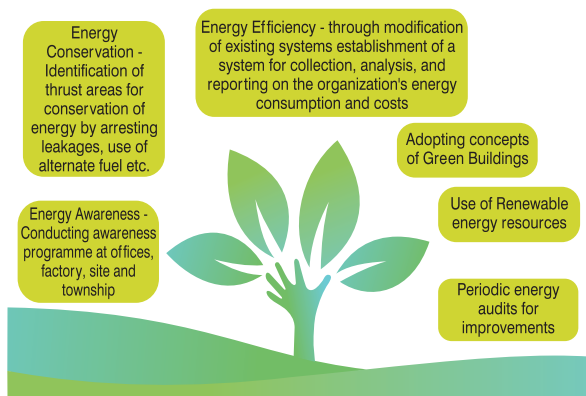
- Bhopal Unit: Recycling of cutting fluid [coolant] used in machining
- HPEP Unit, Hyderabad: Recycling of Ferrous and non-ferrous scrap, enhancement of shelf life of paint through additives and fabrication of a 20MT Gantry Crain using waste material
- TP, Jhansi: Use of oil skimmer for collection of waste oil from drainage water
- PPPU Thirumayam: Development of Hydraulic and lubrication oil reclamation system
- Reuse of 200 MT cut bit steel pipes as raw material @ PPPU Thirumayam
- EPD Bengaluru: Recycling of fired-rejected insulators for making Grog granules which is used in CAP & Disc shell assembly in manufacturing process
- HEEP Haridwar: About 31MT of used /waste oil has been recovered from coolant recovery system and with the help of oil skimmers fitted on main waste water drain
- HPEP Hyderabad: Recycling of 368.5 MT of MS scrap and nearly 30% reduction in paper usages

In addition to these activities, under Swachh Bharat Abhiyaan, a total of 1.5 million documents were scanned and fed to a documents management system, WRENCH for easy storage and retrieval of documents at our ISG Bengaluru facility. It has helped the unit in moving towards becoming a paperless office and thus reducing use of paper which is a precious natural resource.

**Managing energy requirements at workplace**

As the country grapples with shortage of electricity, it is imperative that industries need to consume energy in a more responsible manner. BHEL being a major supplier of power plant equipments is very much aware of its social responsibility towards making conscious efforts in moving towards use of sustainable energy mix in its operations. Thus, thrust on energy conservation and energy efficiency is identified as strategic business need. Use of renewable energy [solar power] in our manufacturing activities is gradually going up on account of generation of solar energy.

Thrust areas in BHEL pertaining to generation/ use of Renewable Energy are:



Focus areas of energy conservation/efficiency efforts in BHEL

- Energy Conservation - Identification of thrust areas for conservation of energy by arresting leakages, use of alternate fuel etc.
- Energy Efficiency - through modification of existing systems establishment of a system for collection, analysis, and reporting on the organization's energy consumption and costs
- Adopting concepts of Green Buildings
- Use of Renewable energy resources
- Periodic energy audits for improvements
- Energy Awareness - Conducting awareness programme at offices, factory, site and township

Installation of Roof Top Solar PV Systems  
 Installation of Solar Water Heating Systems  
 Installation of Grid interactive SPV Power Plant (sub MW and MW scale)  
 Installation of Solar Street light

BAP Ranipet unit is the first unit to install a 5 MWp grid interactive solar power plant which has generated nearly 6.23 Million Units of green electricity during 2014-15 resulting in mitigation of carbon footprint to the extent of 5600 MT CO<sub>2</sub>-e additionally. A 1.5 MWp solar power plant is also under installation at our Hyderabad unit.

Some of the activities pertaining to energy efficiency/ conservation and renewable energy undertaken during 2014-15 include:

- EPD Bengaluru: Usages of Variable Frequency Drive (VFD) for Kiln motors
- Trichy unit: Installation of 2x50 kWp rooftop grid connected solar PV plant and 80 nos. 40W Solar powered LED street lights
- HEEP Haridwar: Replacement of 700 M<sup>2</sup> of metallic sheets with polycarbonate sheets at selected location of block roof for better natural lighting & conservation of energy
- HPEP Hyderabad: Installation of 50 nos. Solar Street Lights in factory area and more than 100 LED lamps
- PPPU Thirumayam: Installation of 20 nos. of 36 Watt LED Street Light with Solar PV Modules

### Managing Water & Bio-diversity within Our Premises

At BHEL, water and waste water systems are sustainably managed to meet the needs of a

growing community through emphasis on recycling and reusing of water at workplace. In line with the India's National Water Policy 2012 which lays emphasis on water recycling & reuse and Zero Liquid discharge (ZLD), many of our units are already ZLD and others are taking steps in that direction. Some of the activities undertaken in 2014-15 for water management include:

- Bhopal Unit: Creation of rainwater recharge pond near Gadia.
- IVP, Goindwal: Modification in existing sewage disposal system and installation of 100 KLD capacity sewage treatment plant.
- EPD Bengaluru: Recycling of Ceramic Insulator trade effluent and reusing it for pebble washing, filter press cloth washing, Patas washing and gardening.

With respect to its concern for environmental protection and soil conservation, BHEL has undertaken afforestation activities such as mass tree plantation and development of green belt which has resulted in development of nearly 4.7 million M<sup>2</sup> of green coverage and plantation of more than 3 million trees till date. It has resulted in 1°- 2° lower temperature in our premises as compared to its vicinity. Some of the activities undertaken for afforestation in our units during 2014-15 include:

- Trichy Unit: Development of Golden jubilee Biodiversity Park "Vanavil".
- Bhopal Unit: Plantation of 8000 trees and development of 800 M<sup>2</sup> green cover.
- HPEP Hyderabad : Tree planation by all superannuating employees 1000 Nos.
- Power Sector Northern Region: Tree plantation at Bara and Lalitpur project sites.

### Emissions and Carbon Management

BHEL units have initiated quantification of relevant gaseous emissions. However, the emission level of NO<sub>x</sub>, SO<sub>x</sub>, SPM & other significant parameters are well within the limits prescribed by respective State Pollution Control Boards. Monitoring and control of emissions from boiler & gas plant furnaces are undertaken regularly to maintain pollution levels below the permissible limits.

- As a part of MoU 2014-15 commitment, BHEL has avoided a carbon foot-print of 2410 MT CO<sub>2</sub>-e due to various energy efficiency measures and generation/use of renewable energy. Additionally a 5 MWp capacity grid



interactive solar power plant at BAP Ranipet has helped in avoidance of carbon Footprint to the extent of 5600 MT CO<sub>2</sub>-e during 2014-15

- In addition to generation of renewable energy at our premise, the usages of cleaner fuels is also one of the factors which is helping us in mitigating our carbon footprint
- EPD Bengaluru unit has stopped using LPG completely and switched over to natural gas (RLNG) which is safer and is having negligible emission to atmosphere w.e.f. December 2014. HEEP Haridwar unit has switched over to natural gas from producer gas
- CFFP Haridwar unit has converted Oil-fired burners to Natural Gas fired burners

### 3.2 Our Sustainability Performance- Social

#### 3.2.1 Our sustainability performance- Social

The major focus of Corporate Social Responsibility (CSR) is inclusive growth aimed at capacity building, empowerment of communities, environment protection, development of backward regions and upliftment of the marginalized & under-privileged sections of the society. Company has supported various social initiatives across the country by undertaking projects in diversified areas like Community Development, Health & Hygiene, Education, Environment Protection, Disaster Management, and Talent upgradation/Skill development. BHEL undertakes CSR initiatives for implementation through various NGOs/Trusts/Social Welfare Societies engaged in social activities throughout the country. Our focus areawise major CSR activities undertaken by the company is as follows:

#### HEALTHY INDIA

- BHEL joined hands with HelpAge India by providing them with 05 Mobile Medical Units (MMUs) for operation in the vicinity of remote project sites of its 04 Power Sector Regions - PSNR, PSSR, PSER and PSWR and 01 at Guruharsahai, Ferozepur district (Punjab). The MMUs are fully equipped with basic diagnostic equipments such as Stethoscope, BP Apparatus, Glucometer for measuring blood-sugar levels, weighing machine etc. including medicines for common ailments such as Hypertension, Diabetes, Arthritis, etc. and are operating at Nimoo Bazgoo in Leh, Angul

(Odisha), Durgapur (West Bengal), Nagpur (Maharashtra) & Guruharsahai in Ferozepur district (Punjab)

- BHEL is continuing with its dream CSR project titled 'Heal a Soul' that involves providing medical assistance to people including children suffering from Hemophilia. The initiative is focused mainly on patients coming from below-the-poverty line (BPL) families located in the vicinity of TBG projects/sites
- BHEL has conducted two Eye check-up camps at Chowari and Tissa tehsils of Chamba district, Himachal Pradesh along with Doctors from Rotary Eye Hospital, Palampur (Maranda) on 30<sup>th</sup> and 31<sup>st</sup> March 2015 respectively. The Company will be providing financial support for a total 100 identified cataract surgeries at Rotary Eye Hospital, Maranda, Palampur
- Provided financial support for construction of "Ganga Prem Hospice" – a 30-bed cancer hospice (a home providing palliative care to terminally ill cancer patients) near Rishikesh through an NGO named "Shradha Cancer Care Trust"
- Provided financial support for palliative care to terminally ill patients including cancer patients in Delhi/NCR region and Bhopal coming from poor background and with inadequate means of subsistence through an NGO named "Global Cancer Concern India (GCCCI)"
- Deployed two Mobile Medical Vans – One each for operation in flood-ravaged state of Jammu & Kashmir (J&K) and Hudhud cyclone-affected regions of Andhra Pradesh (AP)



BHEL deployed two Mobile Medical Vans for relief operations in regions affected by natural calamities in the states of Jammu & Kashmir and Andhra Pradesh

## CLEAN INDIA

- BHEL contributed ₹ 20 Crore to 'Swachh Bharat Kosh' under the 'Clean India Initiative' of the Govt. of India
- The company has undertaken a prestigious CSR project under the Govt. of India's Clean India Initiative' by signing MoU with FICCI for installation of 25 Bio-digester toilet clusters on the banks of river Ganges near Rishikesh & Haridwar
- The employees pledged to work 2 Hours every week under Swachh Bharat Abhiyaan and this campaign is being run across the whole of BHEL



₹ 20 Crore contributed by BHEL to 'Swachh Bharat Kosh' under 'Clean India Initiative' of the Govt. of India

## EDUCATED INDIA

- BHEL supported a project to promote education and skill development of disadvantaged children and youth by imparting non-formal education to 1260 street/slum children including skill training to 240 youth (both



NGO Bal Sahyog's learning through remedial teaching initiative for slum children supported by BHEL

boys and girls) living in ten slum clusters of Delhi. Appropriate teaching & learning materials, visual aids, puppets, stories, songs, educational games, etc. have been prepared for imparting joyful and child-centric learning environment for the children. Bridge courses and cooperative learning are also included in the curriculum to support quick learning and also improve their functional literacy

- BHEL is providing financial support for education of more than 20,000 school children in 23 schools located in the premises of the township of its various Units viz. Haridwar, Jhansi, Bhopal, Ranipet, RC Puram, Hyderabad, Trichy and Jagdishpur
- Provided financial support for Renovation and Modernization of Library at National College, Trichy (Tamil Nadu)

## RESPONSIBLE INDIA

- Undertook a project "Technology-based advanced agricultural interventions" in tribal dominated Khargone district of Madhya Pradesh for upliftment and economic empowerment of marginalized farmers
- Provided financial support for installation of R.O. Plants (10 Nos.) for providing Safe Drinking Water to the rural community by de-flouridization in the villages located in the vicinity of BHEL's Bhandara Unit through the NGO named 'Safe Water Network (India)'
- Carried out infrastructure development activities such as Construction/ Renovation of Community Centres, Construction of Toilets, Construction of Classrooms in Schools, Installation of Solar Lights etc. in the nearby villages of Haridwar, Bhopal, Trichy and PSER Sites. Each activity has been completed in 5 or more villages totalling 28 activities covering a spread of more than 15 villages

## GREEN INDIA

- Provided financial support for setting up of a 60 kW multiple-grid interactive SPV Power Plant in two rural Akal Academies – schools for children coming from poor & rural background (30 kW each in Akal Academy, Dadehar Sahib and Akal Academy, a Teja Singh Wala of Tarn Taran district, Punjab) through Kalgidhar Trust (a non-profit charitable organisation)

## Making in India

...Five Decades of Excellence

- BHEL has supported “Adoption of 15 Villages for Sustainable use of rain water harvesting to enhance livelihood of poor small farmers” in Bijawar block of Chhatarpur district, (M.P), which is poverty-stricken and predominantly inhabited by tribal and OBCs with drastically poor irrigation facilities
- Installed Solar Water Heaters in Guru Granth Sahib Sri Vidya Kendra, Chattarpur, Delhi for the benefit of interned orphaned children who are being imparted Value education & vocational training

### HERITAGE INDIA

Signed MoU with National Culture Fund and Archaeological Survey of India for refurbishment of Swatantrata Sangram Sangrahalaya in Red Fort premises of Delhi – a CSR initiative of BHEL under its thrust area titled ‘Heritage India’



MoU signing with National Culture Fund and Archaeological Survey of India for refurbishment of Swatantrata Sangram Sangrahalaya at Red Fort, Delhi

### DISASTER MANAGEMENT

#### Efforts made in Hudhud:

- BHEL’s HPVP unit at Vizag was a victim of the cyclone. All the production shops and offices were damaged. Due to uprooting of thousands of trees, there was no power and water supply to the factory and township. All the roads were clogged by fallen trees. The teams of volunteers from BHEL armed with power saws and cranes, joined in the rescue/relief operations clearing the roads blocked by the uprooted/fallen trees. The team restored normal operation on roads in just 3 days.
- On receiving SOS requests from GVMC,

APEPDCL, Post Office, SBI a BHEL-HPVP team was quickly pressed into service for their assistance. Alternate office accommodation was arranged for Post Office. Meals & food supplements were arranged for the NDRF teams, police personnel and Fire Brigade Personnel

- In association with HelpAge India organized Emergency Health Camps in 09 villages near Visakhapatnam – under Kanthi PHC like Gangwaram, Yarada, Thikkavanipalem, Mutyalamma Palem, Dibbapalem (V. Cheepurupalli), Chepala Palem, Palavalasa, Dana Boina Palem, Marikavalasa through MMU from 17<sup>th</sup> to 22<sup>nd</sup> September 2014. More than 700 patients benefitted from these health camps
- In addition to this, BHEL has started a CSR Project “Deployment of Mobile Medical Van” for one year in Hudhud affected area of Visakhapatnam in association with an NGO named Wockhardt Foundation
- A team from BHEL-PSSR had distributed essential items such as food, medicines and water in the flood-affected areas of Visakhapatnam viz. MVP Labor Colony, Shramik Nagar, China Waltair, Jallara Peta, Beach Road after consultation with the local authorities

#### Support during J&K Disaster:

- BHEL plunged into action to alleviate the sufferings of people severely affected by unprecedented floods in the state of Jammu



Medical aid provided to patients in the Medical Mobile Van deployed by BHEL in the disaster-affected areas of J&K

& Kashmir (J&K). To support the humanitarian cause, the company had rushed two of its HelpAge run Mobile Medicare Units operating in Guruharsahai (Punjab) and Leh (Nimoo Bazgo) to effectively engage in medical relief operations for the flood-ravaged people of the J&K

- One Mobile Medical Van is currently deployed in Jammu & Kashmir's flood-affected areas for one year through the NGO, M/s Wockhardt Foundation for providing medical assistance to the needy people of flood-affected areas

### 3.2.2 United Nations Global Compact Programme

BHEL remained committed to United Nations Global Compact (UNGC) Programme and the set of core values enshrined in its ten principles on human rights, labour standards, environment and anti-corruption. BHEL has taken a lead role in promoting global compact principles in Indian organisations through active participation in Global Compact Network (GCN) – an apex level nodal agency, formed by leading Indian organisations. BHEL is now a Lifetime Corporate Member of Global Compact Network, India. BHEL continued to remain in the forefront in all activities of the network as its Secretary and was one of the silver sponsors of its 10<sup>th</sup> national convention on the theme “Sustainable transformation for India: 2015 and beyond”. Further, the company continued with its commitment to the UNGC Programme through regular pooling of Communication of Progress (COP).

### 3.2.3 Occupational Health & Safety

Dedicated Safety and Occupational Health Centres are being run in the factory premises taking care of safety and health issues at the work place. Some of the initiatives taken in our units to build and maintain safety and health culture at work place during 2014-15 are:

- Sponsoring BHEL officials for 1 year advanced Diploma course in Industrial Safety conducted by Central / Regional Labour institute at Mumbai, Kanpur, Kolkata, Chennai and Faridabad
- Periodic Health and Safety awareness campaigns
- Regular health and safety related training programmes
- Display of posters and safety instructions
- Safety pledge & Tool box meetings
- Regular Plant Safety Inspections
- Encouraging use of Personal Protective Equipment
- Mock Drills in identified hazardous areas at specified frequency
- Publication of in-house magazines and hand books on various safety topics
- Work Permit system for carrying out critical activities
- Conducting periodic safety drills, Internal audits & 3<sup>rd</sup> party audits
- Job Safety Analysis for identified activities
- Monthly departmental Safety Committee meetings and plant safety committee meetings
- Scheduling preventive maintenance of machine/ equipment
- Periodic Maintenance & Testing of material handling equipment (including cranes, hoists, lifting tackles, forklifts, pallets); all pressure vessels/ air receivers, power presses
- Making available Material Safety Data Sheet (MSDS) for all the hazardous chemicals and safe work procedures are followed
- Developing operation control procedures (OCPs) and providing it to the concerned for effective implementation

Annual Safety Heads Meet was conducted at Corporate Office on 16<sup>th</sup> & 17<sup>th</sup> September, 2014 for sharing of experience amongst the people directly involved in ensuring safety at their respective workplaces.

## 3.3 Sustainable Development – way forward

The concept of sustainable development is inculcated in the DNA of BHEL which is evident from its mission statement- “providing sustainable business solutions in the fields of energy, industry and infrastructure”. The future is filled with both exciting opportunities & gruelling challenges. With the golden legacy of 50 illustrious years on its side, BHEL has embraced this business dynamism by expanding its offerings and enhancing competitiveness seeking to realize its long term vision and stay relevant with the changing times. With its committed workforce and enabling framework in place, BHEL is poised to move ahead towards the journey of Sustainability with more vigour.

### 3.4 Reporting of Corporate Social Responsibility (CSR)

1. Period for which CSR is being reported: 01/04/2014 to 31/03/2015.
2. Information does not include any CSR data/information regarding any BHEL's subsidiary or Joint Venture.
3. No information is included about any other entity pertaining to CSR activities.
4. BHEL is having its own CSR Policy. A brief outline of the company's CSR policy, including overview of projects or programs undertaken and a reference to the web-link to the CSR policy and projects or programs is enclosed as **Annexure –A**.
5. The composition of CSR committee at BHEL: CSR Committee at BHEL is called Board Level Committee (BLC) for CSR and consists of Director (HR), Director (Finance), one Part-time Official Director and at least one Independent Director. Chairman of the Committee is an Independent Director. Decision with regard to change in composition or re-constitution of CSR Committee is done with approval from the Board. The constitution of the BLC for CSR during Financial Year 2014-15 was as below:

Name (S/Sri)	Designation	Position in CSR Committee
Ms. Harinder Hira	Part-time Non-official Director	Chairperson
Ambuj Sharma	Part-time Official Director	Member (Up to 21.12.2014)
Rajesh Kumar Singh	Part-time Official Director	Member (Since 22.12.2014)
P. K. Bajpai	Director (Finance)	Member
R. Krishnan	Director (Human Resources)	Member

6. Average net profit of the company for last three financial years (2011-12, 2012-13, 2013-14) calculated in accordance with Section 198 of the Companies Act, 2013 is ₹ **8222.33 Crore**
7. Prescribed CSR Expenditure (2% of the amount

as in item 6 above) comes to ₹ **164.45 Crore**, in view of which Board approved the CSR budget for 2014-15 as ₹ **165 Crore**.

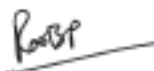
8. Details of CSR spend during the financial year (2014-15):
  - a. Total amount to be spent under CSR: ₹ **165 Crore**
  - b. Expenditure incurred : ₹ **102.06 Crore**
  - c. Amount committed but unspent (Carried forward): ₹ **62.94 Crore**
  - d. Manner in which the amount spent in 2014-15 is detailed in **Annexure-B**
9. Reasons for delay in spending:
  - I. Section 135 of Companies Act, 2013 relating to expenditure on CSR activities, Schedule VII & CSR Rules came into force w.e.f. 1<sup>st</sup> April, 2014. However, throughout the year, several clarifications & amendments were issued with regard to CSR provisions in the Act as well as in the Rules.
  - II. The new section & Rules mandated that a CSR policy is to be formulated and recommended to the Board by a CSR Committee which shall indicate the activities to be undertaken by the Company, as specified in Schedule VII of the Act.
  - III. The Board thereafter was required to approve the CSR policy taking into account the recommendation of the CSR Committee.
  - IV. As such any expenditure on CSR activity in FY 2014-15 could only be incurred after formulation of the CSR Policy. Even the on-going projects were also required to be ratified by the Board in line with the new policy.
  - V. Though BHEL was one of the first CPSEs to formulate the CSR Policy (in August, 2014), there was less time available for execution of the projects. Further, certain infrastructure development projects being of longer duration, can only be completed in subsequent years.
  - VI. Moreover, BHEL being a CPSE, had to

revise its CSR Policy in line with DPE Guidelines on CSR & Sustainability issued in October, 2014.

- VII. In spite of the above, BHEL allocated funds for more than the budgeted amount and was able to spend about 62% of the CSR budget of 2014-15 in 50% of time available for spending i.e. Q3 & Q4 of FY2014-15 after approval of revised CSR policy.
- VIII. It is pertinent to mention that the unspent CSR amount shall not lapse and will be carried forward to 2015-16 for utilisation for the purpose for which it was allocated,

in line with DPE Guidelines on CSR & Sustainability, issued in October, 2014.

10. We, hereby, declare that the implementation and monitoring of CSR Policy, is in compliance with CSR objectives and Policy of the company.



**(B. Prasada Rao)**  
Chairman & Managing  
Director



**(Harinder Hira)**  
Chairperson, CSR  
Committee

New Delhi  
24<sup>th</sup> July, 2015

Annexure - A

**BHEL Corporate Social Responsibility (CSR) Policy Outline**

A brief outline of the company's CSR policy, including overview of projects or programs undertaken and a reference to the web-link to the CSR policy and projects or programs are:

**CSR Vision:**

A responsible corporate citizen working towards a better tomorrow

**CSR Mission:**

To sincerely & effectively discharge company's responsibility in the identified CSR thrust areas and other areas listed out in the Companies Act, 2013

**Objectives of the Policy:**

The objectives of BHEL's CSR Policy are:

- To define CSR projects or programs which BHEL plans to undertake and which fall within the purview of the Companies Act 2013, the Companies (CSR Policy) Rules, 2014 and the prevailing DPE Guidelines;
- Modalities of execution of such CSR projects or programs;
- Monitoring process of such CSR projects or programs;
- To make the stakeholders aware about CSR practices in BHEL.
- To work keeping in mind the larger objective of sustainable development in conduct of business and in pursuit of CSR agenda

**Salient Points of the Policy:**

The salient features of BHEL's CSR Policy are:

- It covers the requirements stated in the Companies Act, the Companies (CSR Policy) Rules, 2014 and DPE Guidelines on CSR & Sustainability 2014;
- Thrust areas for CSR activities have been identified and included in Chapter-2 (CSR Policy Statement), based on the activities mentioned in Schedule VII of the Companies Act, 2013. The same are: 1) Inclusive India 2) Healthy India 3) Clean India 4) Educated India 5) Responsible India 6) Green India 7) Heritage India;

- Policy specifies 2% of average profit of the company computed in the manner prescribed in the Act during the three immediately preceding financial years as CSR Budget for CSR activities (Chapter-3);
- The company shall give preference to the local areas (district in which Unit is present and the adjoining districts) for spending at least 75% of the amount earmarked for CSR activities.
- Generally CSR initiatives shall be taken up in project mode.
- A project whose total value (whether or not extending over one or more FYs) is more than ₹ 2 Crore will be termed as 'Mega Project'. Impact assessment of such projects will be mandatory by an external agency;
- Provision to reserve 5% of the annual CSR budget as Emergency Fund has been made for carrying out relief activities for any disaster/calamity;
- In line with the Companies (CSR Policy) Rules, 2014, and DPE Guidelines, 2014, up to 5% of CSR Budget of the year shall be kept as a reserve for capacity building including administrative overheads. This fund shall be utilized for capacity building of the company personnel as well as those of its implementing agencies (through Institutions with established track record of at least three financial years), base line survey & Impact assessment and CSR staffs' salary;
- Implementation, monitoring & reporting mechanism has been defined;
- 3-tier CSR structure at Corporate Level (consisting of Board Level Committee (BLC), Level – 1 Committee and Level – 2 Committee, along with their members and roles) and CSR Nodal officer (the concerned Unit Head) & CSR Committees at Units/Regions/Divisions level (along with their roles) have been defined.

**Web-Link to CSR Policy:**

BHEL CSR Policy is hosted on the Company's website at [http://www.bhel.com/CSR/csr\\_policy.php](http://www.bhel.com/CSR/csr_policy.php) under CSR section.

# DIRECTORS' REPORT



## Annexure-B

(₹ in Lakhs)

S. No.	CSR Project or activity identified	Sector in which the project is covered	Project or programs Local area or other (Specify the State and district where projects or programs were undertaken)			Amount outlay (budget) project wise	Amount spent on the project or programs	Cumulative-expenditure up to the reporting period	Amount spent directly or through implementing agency	"Name of Implementing Agency"
			Area	State	District / Area					
1	Palliative Care through Palliative Clinic and Mobile Unit	Health	Local	Haryana	Gurgaon	44.00	24.70	26.70	Implementing Agency	Global Cancer Concern India
2	School Expenditure	Education	Local	Tamil Nadu	Vellore	91.81	91.81	91.81	Direct	BAP, Ranipet Unit
3	Skill Development Expenses	Skill Development	Local	Tamil Nadu	Vellore	91.75	91.75	91.75	Direct	BAP, Ranipet Unit
4	Providing R.O. Water facility for Government Girls Higher Secondary School, Sholingur	Safe Drinking water	Local	Tamil Nadu	Vellore	1.73	1.73	1.73	Direct	BAP, Ranipet Unit
5	Construction of toilet, providing drinking water and improvement of layout for the benefit of local vendors who put up vegetable, fruits and meat stalls etc. At shanties located inside BHEL township premises	Sanitation & Safe Drinking water	Local	Tamil Nadu	Vellore	11.85	10.62	11.12	Direct	BAP, Ranipet Unit
6	Construction of toilet and water tank for Sr. Ambedkar Memorial Charitable Trust	Sanitation	Local	Tamil Nadu	Vellore	2.80	2.43	2.93	Direct	BAP, Ranipet Unit
7	Providing RCC roof for Nursery class room in BHEL SRK School in place of existing asbestos roofing which is damaged condition.	Education	Local	Tamil Nadu	Vellore	9.05	6.47	6.47	Direct	BAP, Ranipet Unit
8	Construction of toilet with septic tank in Govt. Hr. Secondary School at Guruvarajapet	Sanitation	Local	Tamil Nadu	Vellore	7.42	3.30	3.30	Direct	BAP, Ranipet Unit
9	Construction of toilet without septic tank in Govt.Hr.Secondary School at Rendadi.	Sanitation	Local	Tamil Nadu	Vellore	6.86	1.71	1.71	Direct	BAP, Ranipet Unit
10	Construction of computer class room / lab for Govt. Hr. Secondary School at Kodaikkal.	Education	Local	Tamil Nadu	Vellore	15.11	4.59	4.59	Direct	BAP, Ranipet Unit
11	Construction of Compound wall for Govt. Girls Higher Secondary School Walajapet.	Education	Local	Tamil Nadu	Vellore	10.00	2.55	2.55	Direct	BAP, Ranipet Unit
12	Construction of Drinking water sump, 2 numbers of cup board for storing record books and barbed fencing for compound wall at Govt. Higher Secondary school in Arakonam	Safe Drinking water & Education	Local	Tamil Nadu	Vellore	3.24	1.97	1.97	Direct	BAP, Ranipet Unit
13	Construction of compound wall for Govt. Hr. Secondary School, Kodaikkal to improve safety of the school children	Education	Local	Tamil Nadu	Vellore	4.00	3.48	3.48	Direct	BAP, Ranipet Unit
14	Misc. Works and Admin Overheads	Capacity Building	Local	-	-	0.07	0.07	0.07	Direct	BAP, Ranipet Unit
15	ASA-Rain water harvesting at Bijawar Block, Distt. Chatarpur	Environmental sustainability	Other	Madhya Pradesh	Chhatarpur	305.52	52.63	162.47	Implementing Agency	Action for Social Advancement
16	"Mobile Van Project by Phd Chamber of Commerce and Industries"	Health	Local	Madhya Pradesh	Bhopal	66.00		-	Implementing Agency	PHD Rural Development Foundation
17	Agriculture Technology improvement Project at Khargone District by Manthan Gramin Vikas Seva Samiti	Livelihood Enhancement	Other	Madhya Pradesh	Khargone	395.96		23.70	Implementing Agency	Manthan Gramin Vikas Seva Samiti
18	Palliative care through palliative Clinic and Mobile Unit	Health	Local	Madhya Pradesh	Bhopal	20.00	11.85	11.85	Implementing Agency	Global Cancer Concern India
19	Construction of Concrete Cement Roads in 73 villages of Chhindwara	Rural Development	Other	Madhya Pradesh	Chhindwara	640.00	171.53	593.46	Implementing Agency	NBCC
20	Scholarship for Engg/MBBS (42 nos.)	Education	Local	Madhya Pradesh	Bhopal	0.20		-	Direct	HEP, Bhopal Unit



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21	"Skill Development programs like Beauty Parlour (DIET) Embroidery(DIET) Purse making(DIET) Web designing (EDI) 265000 Computer Hardware (EDI) (270000) Plumber (EDI) 215000 Flower Bouquet making, purse making, Beautician etc.(BHEL Ladies Club) 100000"	Skill Development	Local	Madhya Pradesh	Bhopal	5.16	2.14	5.15	Implementing Agency	"Entrepreneurship Development Institute of India (EDI), District Institute Of Education And Training (DIET)"
22	Adopting 20 Tribal children for providing education and related facilities along with lodging and boarding in Vivekananda Vidyapeeth, Piplani.	Education	Local	Madhya Pradesh	Bhopal	3.00	3.00	3.00	Direct	HEP, Bhopal Unit
23	Miscellaneous works like Website designing and development,	Capacity Building	Local	Madhya Pradesh	Bhopal	0.12	0.12	0.12	Direct	HEP, Bhopal Unit
24	Misc. Admin overhead exp	Capacity Building	Local	-	-	0.41	0.41	0.41	Direct	HEP, Bhopal Unit
25	Aarambh - Support to the Umeed Shelter Home	Education	Local	Madhya Pradesh	Bhopal	0.90	0.90	0.90	Implementing Agency	Aarambh Foundation
26	Miscellaneous works like Website designing and development, Documentation, training, seminars, Creation of a Record room for CSR, Digitalisation of records, Yoga training classes etc.	Capacity Building	Local	Madhya Pradesh	Bhopal	3.80	0.33	1.59	Direct	HEP, Bhopal Unit
27	Scholarships to orphans, widow wards and differently abled students	Education	Local	Madhya Pradesh	Bhopal	6.00	5.70	5.70	Direct	HEP, Bhopal Unit
28	Scholarships to engineering & MBBS students	Education	Local	Madhya Pradesh	Bhopal	5.00	4.56	4.56	Direct	HEP, Bhopal Unit
29	Scholarships to disabled students of ITI & Polytechnic	Education	Local	Madhya Pradesh	Bhopal	25.90	23.10	23.10	Direct	HEP, Bhopal Unit
30	Community development (Medical camps, Yoga classes, waste reduction awareness programs, support to schools etc., Infrastructure at anganwadi)	Health	Local	Madhya Pradesh	Bhopal	6.00	3.61	3.61	Direct	HEP, Bhopal Unit
31	Support to Vivekananda School, Awadhपुरi, Bhopal	Education	Local	Madhya Pradesh	Bhopal	3.00	3.00	3.00	Direct	HEP, Bhopal Unit
32	Aarambh - Umeed Shelter Home	Education	Local	Madhya Pradesh	Bhopal	2.00	2.00	2.00	Implementing Agency	Aarambh Foundation
33	Skill development programs	Skill Development	Local	Madhya Pradesh	Bhopal	12.90	12.88	12.88	Implementing Agency	EDI, DIET & Parivartan Sandesh
34	Construction of a Public Toilet at Panchi Vihar, Bhopal	Sanitation	Local	Madhya Pradesh	Bhopal	10.00		-	Implementing Agency	Bhopal Municipal Corporation
35	Support for construction of additional infrastructure facilities at Jyoti disabled school, Anand Nagar, Bhopal	Education	Local	Madhya Pradesh	Bhopal	15.00	15.00	15.00	Direct	HEP, Bhopal Unit
36	Repair and renovation works at Triveni Girls Hostel, Govindpura, Bhopal	Hostel for Women	Local	Madhya Pradesh	Bhopal	59.50	50.98	50.98	Direct	HEP, Bhopal Unit
37	Empowering children to prevent them from community/ culture based prostitution and sexual abuse, Rajgarh district, M.P.	Education	Local	Madhya Pradesh	Bhopal	4.00		-	Direct	HEP, Bhopal Unit
38	Repair and renovation works at Aanganwadi Kendra in Hostel no. 5 run by Madhya Pradesh Bal Kalyan Parishad	Education	Local	Madhya Pradesh	Bhopal	8.00		-	Direct	HEP, Bhopal Unit
39	Rain water harvesting with Stop dam in BHEL Sports Complex, Barkhera	Environmental sustainability	Local	Madhya Pradesh	Bhopal	10.70	2.14	2.14	Direct	HEP, Bhopal Unit

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40	Installation of Solar Street Lights at Kamla Nehru Park to develop it as energy park	Environmental sustainability	Local	Madhya Pradesh	Bhopal	15.00		-	Direct	HEP, Bhopal Unit
41	School Expenditure	Education	Local	Madhya Pradesh	Bhopal	1192.94	1192.94	1192.94	Direct	HEP, Bhopal Unit
42	School Expenditure - Infrastructure Improvement	Education	Local	Madhya Pradesh	Bhopal	283.80	178.39	178.39	Direct	HEP, Bhopal Unit
43	Skill Development Expenses	Skill Development	Local	Madhya Pradesh	Bhopal	117.33	117.33	117.33	Direct	HEP, Bhopal Unit
44	MoU Projects - Providing Solar utilities	Environmental sustainability	Local	Madhya Pradesh	Bhopal	60.00		-	Direct	HEP, Bhopal Unit
45	MoU Projects - Infra Improvement in School, Toilet and Classroom	Sanitation & Education	Local	Madhya Pradesh	Bhopal	70.00	6.31	6.31	Direct	HEP, Bhopal Unit
46	MoU Projects - Community Centre	Rural Development	Local	Madhya Pradesh	Bhopal	70.00		-	Direct	HEP, Bhopal Unit
47	Contribution to Swachh Bharat Abhiyaan	Sanitation	Local	-	-	2000.00	2000.00	2000.00	Direct	BHEL Corporate Office, Delhi
48	MDP by IICA for capacity building	Capacity Building	Local	Delhi	Delhi	0.35	0.35	0.35	Direct	BHEL Corporate Office, Delhi
49	Training for CSR - Centre for Development of HR	Capacity Building	Local	Delhi	Delhi	0.34	0.34	0.34	Direct	BHEL Corporate Office, Delhi
50	CSR Training Program	Capacity Building	Local	Delhi	Delhi	0.10	0.10	0.10	Direct	BHEL Corporate Office, Delhi
51	CSR Workshop for Unit Coordinators - Sep-14	Capacity Building	Local	Delhi	Delhi	0.17	0.17	0.17	Direct	BHEL Corporate Office, Delhi
52	Contribution to the Sustainability initiative - Global Compact	Capacity Building	Local	Delhi	Delhi	3.00	3.00	3.00	Direct	BHEL Corporate Office, Delhi
53	Distribution of books from ISKCON in Tihar Jail for the benefit of inmates	Education	Local	Delhi	Delhi	17.22	17.22	17.22	Implementing Agency	ISKCON
54	Payment to Noida School towards non-BHEL wards	Education	Local	Uttar Pradesh	Noida	5.09	5.09	5.09	Direct	BHEL Corporate Office, Delhi
55	Misc. Admin Expenses	Capacity Building	Local	-	-	6.42	6.42	6.42	Direct	BHEL Corporate Office, Delhi
56	Booking of Salary of CSR staff	Capacity Building	Local	-	-	336.71	336.71	336.71	Direct	BHEL Corporate Office, Delhi
57	installation of 100 nos. Solar Pumps for Irrigation	Environmental sustainability	Local	-	-	44.73	-	-	Implementing Agency	In collaboration with IIM-A
58	Special CSR "Providing Computers & Furniture to school".	Education	Local	Uttarakhand	Nainital	9.50	8.84	8.84	Implementing Agency	Paryavaran Evam Jan Kalyan Samiti
59	Medical Camp	Health	Local	Uttarakhand	Udham Singh Nagar	1.50	0.54	0.54	Implementing Agency	Garhwal Vikash Kendra
60	Toilet construction for girls dominated primary schools	Sanitation	Local	Uttarakhand	Udham Singh Nagar	3.05	3.05	3.05	Implementing Agency	Garhwal Vikash Kendra
61	Dress distribution to primary school children belonging to rural backward areas	Education	Local	Uttarakhand	Udham Singh Nagar	2.00	1.59	1.59	Implementing Agency	Paryavaran Evam Jan Kalyan Samiti
62	Desks and benches to primary school	Education	Local	Uttarakhand	Udham Singh Nagar	4.00	3.57	3.57	Implementing Agency	Paryavaran Evam Jan Kalyan Samiti
63	Misc. Admin Expenses	Capacity Building	Local	-	-	0.03	0.03	0.03	Direct	CFP, Rudrapur
64	Skill Development Expenses	Skill Development	Local	Uttarakhand	Haridwar	0.42	0.42	0.42	Direct	CFFP, Haridwar Unit
65	Study material like note books	Education	Local	Karnataka	Bengaluru	0.98		-	Direct	EDN, Bengaluru Unit
66	Sweet for Children Day	Capacity Building	Local	Karnataka	Bengaluru	0.07		-	Direct	EDN, Bengaluru Unit
67	Health Awareness program	Health	Local	Karnataka	Bengaluru	0.13		-	Direct	EDN, Bengaluru Unit

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			Area	State	District / Area					
68	Solar powered UPS for School	Environmental sustainability	Local	Karnataka	Bengaluru	0.54		-	Direct	EDN, Bengaluru Unit
69	Braille books for NAB	Education	Local	Karnataka	Bengaluru	1.91		-	Direct	EDN, Bengaluru Unit
70	Aids for differently abled children	Community Development	Local	Karnataka	Bengaluru	0.32		-	Direct	EDN, Bengaluru Unit
71	"Van" for Akshay Patra Scheme	Education	Local	Karnataka	Bengaluru	5.19		-	Direct	EDN, Bengaluru Unit
72	Equipment for School, Lab in Box (12-13 project)	Education	Local	Karnataka	Bengaluru	8.82		-	Implementing Agency	Agastya International Foundation
73	Skill Development Expenses	Skill Development	Local	Karnataka	Bengaluru	39.55	39.55	39.55	Direct	EDN, Bengaluru Unit
74	Boundary walls/ roofs at schools in adopted villages at Doddagularhatti & Bairagi Colony	Education	Local	Karnataka	Bengaluru	10.00		-	Direct	EDN, Bengaluru Unit
75	Supply of boards and tree guards to Pollution Control Board	Environmental sustainability	Local	Karnataka	Bengaluru	10.00		-	Direct	EDN, Bengaluru Unit
76	Classroom furniture at Bachehalli & Ramesandra, Dodda Basti Govt School	Education	Local	Karnataka	Bengaluru	5.00		-	Direct	EDN, Bengaluru Unit
77	Aid for differently abled persons at Snehaddeep, Dibyajyoti & Mobility India	Community Development	Local	Karnataka	Bengaluru	5.00	4.36	4.36	Direct	EDN, Bengaluru Unit
78	RO plant at school in Doodagullarhatti	Safe Drinking Water	Local	Karnataka	Bengaluru	2.00	0.87	0.87	Direct	EDN, Bengaluru Unit
79	Uniforms/ School bags/ Stationery and Study Material to Schools in adopted villages	Education	Local	Karnataka	Bengaluru	4.00	0.39	0.39	Direct	EDN, Bengaluru Unit
80	Medical camps at Doddagullarhatti/ Bairagi Colony	Health	Local	Karnataka	Bengaluru	1.00		-	Direct	EDN, Bengaluru Unit
81	Providing medicines for MMU (Karuna Trust)	Health	Local	Karnataka	Bengaluru	4.00		-	Implementing Agency	Karuna Trust
82	Sports equipment to schools	Education	Local	Karnataka	Bengaluru	2.00		-	Direct	EDN, Bengaluru Unit
83	Providing books/ furniture/ facilities for library	Education	Local	Karnataka	Bengaluru	4.00	0.23	0.23	Direct	EDN, Bengaluru Unit
84	Construction of Classrooms at Sphoorthidama Ambedkar Memorial Campus	Education	Local	Karnataka	Bengaluru	20.00		-	Direct	EDN, Bengaluru Unit
85	Plantation & its Maintenance at Kakarpara Site, Tapi, Gujarat	Environmental sustainability	Other	Gujarat	Tapi	4.50		-	Direct	EDN, Bengaluru Unit
86	Support to Day Care Centre working for rehabilitation of children afflicted with cerebral palsy	Day Care Centre	Local	Maharashtra	Thane	5.00	4.32	4.32	Implementing Agency	Swayam Rehabilitation Trust
87	Construction of one Anganwadi (Crèche building) for children of daily wage earning women of rural village at Devanhalli Tq., Karnataka	Day Care Centre	Local	Karnataka	Bengaluru	7.00	6.76	6.76	Direct	EPD, Bengaluru Unit
88	"Construction of Girl's toilet at Govt. High School, Ramanagara & Construction of Anganwadi building at Hospalya, Kumbalgudu Grama Panchayat, Bidadi Hobli, Ramangara Tq."	"Sanitation & Day Care Centre"	Local	Karnataka	Bengaluru	19.00	14.90	14.90	Direct	EPD, Bengaluru Unit
89	Opening of 3 cycle stations in Malleshwaram through "Ride a Cycle Foundation" for promoting cycling as a means of commute and transport in our neighbourhood, Malleshwaram	Environmental sustainability	Local	Karnataka	Bengaluru	6.00		-	Implementing Agency	Ride-a-Cycle Foundation
90	Providing both Boarding & Lodging facility to Intellectually Disabled Children, while they undergo Data Entry Training at AMBA Foundation	Day Care Centre	Local	Karnataka	Bengaluru	1.00	0.88	0.88	Direct	EPD, Bengaluru Unit

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91	Implementing Community Based RO Water Purification plants at - Musturu and Siddihalli Villages	Safe Drinking Water	Local	Karnataka	Devangere	19.50		-	Direct	EPD, Bengaluru Unit
92	Implementing Community Based RO Water Purification plants at Moodal Machikere Village	Safe Drinking Water	Local	Karnataka	Devangere	6.00		-	Direct	EPD, Bengaluru Unit
93	Three free medical camps in adopted/neighbouring villages	Health	Local	Karnataka	Bengaluru	1.52	1.52	1.52	Direct	EPD, Bengaluru Unit
94	Skill Development Expenses	Skill Development	Local	Karnataka	Bengaluru	16.44	16.44	16.44	Direct	EPD, Bengaluru Unit
95	Construction of Ganga Prem Hospice (30-bedded) for terminally ill cancer patients near Raiwala, Rishikesh	Health	Local	Uttarakhand	Rishikesh	243.00	66.63	87.27	Implementing Agency	Shraddha Cancer Care Trust
96	PHD Rural Development Foundation for Mobile Medical Van	Health	Local	Uttarakhand	Haridwar	66.01	14.64	45.45	Implementing Agency	PHD Rural Development Foundation
97	Udayan Care - Scholarship to 100 Girls students	Education	Local	Uttarakhand	Haridwar	99.00	13.45	33.82	Implementing Agency	Udayan Care
98	Financial support for Mobile Science Labs (3 Nos.) for schools - AGASTYA	Education	Local	Uttarakhand	Haridwar	56.19	11.46	11.46	Implementing Agency	Agastya International Foundation
99	installation of 25 sets of Community Bio-digester Toilets Cluster (₹ 465 Lakh) along with drinking water facility (₹ 100 Lakh) - FICCI & DRDO	Sanitation	Local	Uttarakhand	Haridwar	565.00	95.00	95.00	Implementing Agency	FICCI & DRDO
100	Construction of physiotherapy hall (approx. area 800sqft) along with toilet for old age people at community centre Phase-I, Shivalik Nagar (civil & elect).	Health	Local	Uttarakhand	Haridwar	15.00	13.25	16.75	Direct	HEEP, Haridwar Unit
101	Modification/renovation of toilets of school buildings in township	Sanitation	Local	Uttarakhand	Haridwar	11.70	6.45	8.20	Direct	HEEP, Haridwar Unit
102	Beautification At Har Ki Pauri Haridwar In Association With Other Agencies	Protection of site of historical importance	Local	Uttarakhand	Haridwar	20.00	18.00	18.00	Direct	HEEP, Haridwar Unit
103	Repair, Maintenance & Security of working women hostel	Hostel for Women	Local	Uttarakhand	Haridwar	10.00	9.84	9.84	Direct	HEEP, Haridwar Unit
104	Skill Development In Various Traits Like: Tailoring, Beauty Parlour, Purse Making, Flower Bouquet Making, Beautician, Etc.	Skill Development	Local	Uttarakhand	Haridwar	2.16	2.15	2.15	Direct	HEEP, Haridwar Unit
105	Conducting Plastic Surgery operations For The Needy And Poor People Through Rotary Club	Skill Development	Local	Uttarakhand	Haridwar	5.15	5.15	5.15	Implementing Agency	Rotary Club
106	Electrification Of Cremation Ground	Community Development	Local	Uttarakhand	Haridwar	1.00		-	Direct	HEEP, Haridwar Unit
107	Misc. Admin overheads, small CSR activities and Project related expenses	Capacity Building	Local	-	-	5.00	3.61	3.61	Direct	HEEP, Haridwar Unit
108	School Expenditure	Education	Local	Uttarakhand	Haridwar	2,205.22	2,205.22	2,205.22	Direct	HEEP, Haridwar Unit
109	School Expenditure - Infrastructure Improvement	Education	Local	Uttarakhand	Haridwar	67.80	12.36	12.36	Direct	HEEP, Haridwar Unit
110	Skill Development Expenses	Skill Development	Local	Uttarakhand	Haridwar	40.77	40.77	40.77	Direct	HEEP, Haridwar Unit
111	MoU Projects - Providing Solar utilities	Environmental sustainability	Local	Uttarakhand	Haridwar	20.00	11.69	11.69	Direct	HEEP, Haridwar Unit
112	MoU Projects - Infra Improvement in School, Toilet and Classroom	Sanitation & Education	Local	Uttarakhand	Haridwar	30.00	44.35	44.35	Direct	HEEP, Haridwar Unit
113	MoU Projects - Community Centre	Rural Development	Local	Uttarakhand	Haridwar	150.00		-	Direct	HEEP, Haridwar Unit
114	Misc. Admin Overheads	Capacity Building	Local	-	-	0.09	0.09	0.09	Direct	HERP, Varanasi Unit

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115	Construction of two Community halls at Siddharthnagar (U.P.)	Rural Development	Other	Uttar Pradesh	Siddharthnagar	51.18	20.00	30.00	Implementing Agency	Rural Engineering Division
116	IRCS, Deoghar Project	Health	Other	Bihar	Deoghar	50.74		-	Implementing Agency	Indian Red Cross Society
117	Construction of 6 baby friendly toilets at Aanganwadi centres	Sanitation	Local	Uttar Pradesh	Varanasi	2.31	1.16	2.31	Implementing Agency	Sulabh Sanitation Mission Foundation, New Delhi
118	Corrective surgery and rehabilitation for children affected with cerebral palsy and polio at M/s. Kiran Society and INSTALLATION of SOLAR water Heating System	Health	Local	Uttar Pradesh	Varanasi	7.35	6.89	6.89	Implementing Agency	KIRAN Society
119	Provision for Braille Machine, Hostel Materials & Gym Equipment Jeevan Jyoti Institute, Varanasi to National Assoc. for Blind (Braille); Ram Lawlin Singh & Assoc (Bed); Kallia Sports (Gym Equip)	Community Development	Local	Uttar Pradesh	Varanasi	5.65	5.65	5.65	Implementing Agency	Divya Jyoti Society
120	Skill Development Expenses	Skill Development	Local	Uttar Pradesh	Varanasi	2.39	2.39	2.39	Direct	HERP, Varanasi Unit
121	Education Scholarship to mentoring students belonging to BPL and disabled category. Project duration 5 years. - FAEA	Education	Local	Delhi	Delhi	600.00	105.27	204.11	Implementing Agency	Foundation for Academic Excellence and Access
122	"Graded value education program, Ramakrishna Mission"	Education	Local	"Delhi Madhya Pradesh"	Bhopal	228.60	50.11	188.21	Implementing Agency	Ramakrishna Mission
123	Financial supports towards interiors of basement auditorium meant for music education - KSS	Promoting Art & Culture	Local	Delhi	Delhi	35.00	14.00	14.00	Implementing Agency	Karnataka Sangeetha Sabha
124	Udaan: Skill Development Project	Skill Development	Local	-	-	68.00	4.08	4.08	Direct	"EDN, Bengaluru Unit PSSR Region, Chennai HRDI, Noida"
125	Construction of Oncology & Surgical Block, King George Hospital, Visakhapatnam (KGH)	Health	Local	Andhra Pradesh	Vizag	1500.00		-	Implementing Agency	King George Hospital
126	Running of MMU for disaster affected area for a period of one year	Health	Local	Andhra Pradesh	Vizag	27.00	5.18	5.18	Implementing Agency	Wockhardt Foundation
127	Building Model Houses (96) for Hud-Hud affected people in partnership with Govt. of A.P.	Community Development - Disaster related	Local	Andhra Pradesh	Vizag	500.00	-	-	Implementing Agency	Govt. of A.P.
128	Hud Hud Relief	Community Development - Disaster related	Local	Andhra Pradesh	Vizag	20.00	7.46	7.46	Direct	HPVP, Vizag Unit
129	Medical Camp	Health	Local	Andhra Pradesh	Vizag	1.00	1.05	1.05	Direct	HPVP, Vizag Unit
130	Furniture for School	Education	Local	Andhra Pradesh	Vizag	4.00	3.71	3.71	Direct	HPVP, Vizag Unit
131	School Expenditure	Education	Local	Andhra Pradesh	Vizag	131.34	131.34	131.34	Direct	HPVP, Vizag Unit
132	ITI Adoption under PPP. Mentor BHEL Hyderabad.	Skill Development	Other	Maharashtra	Latur	128.98	16.00	38.91	Direct	HPEP, Hyderabad Unit
133	RAMKY Foundation - Water plant in Nalgonda	Safe Drinking Water	Local	Telangana	Nalgonda	14.17	10.02	10.02	Implementing Agency	Ramky Foundation
134	Construction of 16 Class room & Compound wall.	Education	Local	Telangana	Medak	40.71		-	Direct	HPEP, Hyderabad Unit
135	Development works in Parking area at main check post maintained by M/s. Abhilasha	Day Care Centre	Local	Telangana	Medak	13.10	4.54	12.55	Direct	HPEP, Hyderabad Unit
136	Construction of Additional Class rooms and Toilet at First floor in Special care school	Sanitation & Education	Local	Telangana	Medak	7.90	7.89	7.89	Direct	HPEP, Hyderabad Unit

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			Area	State	District / Area					
137	Construction of Hostel for SC/ST girls at Chitkul	Education	Local	Telangana	Medak	13.70	0.45	13.78	Direct	HPEP, Hyderabad Unit
138	Construction of Hostel for SC/ST girls at Ongole	Education	Local	Andhra Pradesh	Ongole	45.00	29.25	40.50	Implementing Agency	District Administration, Prokasam thru APEWIDC
139	Setting Up Adolescent counselling centre and career guidance centre in BHEL T/s by M/s Urivi Vikram Charitable Trust	Education	Local	Telangana	Medak	9.60	3.84	6.72	Implementing Agency	Urivi Vikram Charitable Trust
140	Support for Govt. Degree College for Women, Sangareddy- Construction of Additional Class rooms, Furniture, Toilets & Drinking water	Education	Local	Telangana	Medak	26.50		-	Direct	HPEP, Hyderabad Unit
141	Support for Mandal Upper Primary School Madinaguda- Construction of Additional Class rooms, Furniture, Toilets & Drinking water	Sanitation & Education	Local	Telangana	Medak	12.15		-	Direct	HPEP, Hyderabad Unit
142	Support to LWC for running Spoken English and Computer classes in Science Library premises for benefit of under-privileged children from nearby Schools and colleges	Education	Local	Telangana	Medak	2.00	1.00	1.00	Implementing Agency	Helping Hands
143	Providing furniture & other equipment for BHEL-UVCT Adolescent Counselling Centre	Education	Local	Telangana	Medak	1.00	1.06	1.06	Direct	HPEP, Hyderabad Unit
144	Support to SAHI – Foundation for undertaking Cochlear implant surgeries for 3 nos. hearing impaired children	Health	Local	Telangana	Medak	16.00	16.05	16.05	Implementing Agency	Society to Aid Hearing Impaired (SAHI)
145	Screening Medical Camps and health care support for under-privileged persons in surrounding areas of the unit	Health	Local	Telangana	Medak	5.00	2.40	2.40	Direct	HPEP, Hyderabad Unit
146	Construction of Public toilets in Wednesday and Saturday market areas of Township	Sanitation	Local	Telangana	Medak	12.00		-	Direct	HPEP, Hyderabad Unit
147	Expenditure towards need assessments and Impact assessments for CSR projects to be undertaken	Capacity Building	Local	-	-	4.00	2.00	2.00	Implementing Agency	National Institute for Micro Small & Medium Enterprises (NI-MSME)
148	Providing spares and repairs for running of Toy Train Services (Train donated by BHEL in 80's) in Nehru Zoological Park Hyderabad	Environmental sustainability	Local	Telangana	Medak	9.10	3.65	3.65	Direct	HPEP, Hyderabad Unit
149	RO plant at school in Pati Village and Development of Dump Yard as park	Safe Drinking Water	Local	Telangana	Medak	20.50		-	Direct	HPEP, Hyderabad Unit
150	School Expenditure	Education	Local	Telangana	Medak	15.43	15.43	15.43	Direct	HPEP, Hyderabad Unit
151	School Expenditure - Infrastructure Improvement	Education	Local	Telangana	Medak	236.00	228.47	228.47	Direct	HPEP, Hyderabad Unit
152	Skill Development Expenses	Skill Development	Local	Telangana	Medak	147.30	147.30	147.30	Direct	HPEP, Hyderabad Unit
153	MoU Projects - Providing Solar utilities	Environmental sustainability	Local	Telangana	Medak	25.00		-	Direct	HPEP, Hyderabad Unit
154	MoU Projects - Infra Improvement in School, Toilet and Classroom	Sanitation & Safe Drinking water	Local	Telangana	Medak	40.00		-	Direct	HPEP, Hyderabad Unit
155	MoU Projects - Community Centre	Rural Development	Local	Telangana	Medak	135.00		-	Direct	HPEP, Hyderabad Unit
156	Skill Development Expenses	Skill Development	Local	Delhi	Delhi	2.58	2.58	2.58	Direct	IO Division, Delhi
157	School Expenditure	Education	Local	Uttar Pradesh	Jagdishpur	147.14	147.14	147.14	Direct	IP, Jagdishpur Unit

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			Area	State	District / Area					
158	Skill Development Expenses	Skill Development	Local	Uttar Pradesh	Jagdishpur	4.19	4.19	4.19	Direct	IP, Jagdishpur Unit
159	PHD Rural Development Foundation for Mobile Medical Van	Health	Local	Uttar Pradesh	Jagdishpur	66.01	14.45	36.02	Implementing Agency	PHD Rural Development Foundation
160	Installation of 100 Hand Pumps & 100 solar street lights	Rural Development	Local	Uttar Pradesh	Barabanki	55.00	16.50	44.00	Implementing Agency	National Charitable Welfare Society
161	Construction / installation of borewells, water tanks, solar dual pumps and beautification of area in Raebareli district.	Rural Development	Local	Uttar Pradesh	Raebareli	275.00	93.17	137.22	Implementing Agency	Zilla Parishad
162	Computer installation 2 No. BARABANKI	Education	Local	Uttar Pradesh	Barabanki	1.77	0.63	1.75	Direct	IP, Jagdishpur Unit
163	Construction of boundary wall in BHEL Kendriya Vidyalaya	Education	Local	Uttar Pradesh	Jagdishpur	10.00	10.03	10.03	Direct	IP, Jagdishpur Unit
164	Construction of platform and shed in the cremation ground	Rural Development	Local	Uttar Pradesh	Jagdishpur	1.50		-	Direct	IP, Jagdishpur Unit
165	Providing computers for blind students of Jeevan path vidyalaya, Phoola singh block, Amethi	Education	Local	Uttar Pradesh	Amethi	1.50		-	Direct	IP, Jagdishpur Unit
166	Misc. Admin Expenses	Capacity Building	Local	-	-	0.02	0.02	0.02	Direct	IP, Jagdishpur Unit
167	Refurbishment of Swatantrata Sangram Sanghralaya	Protection of National Heritage	Local	Delhi	Delhi	200.00	40.00	40.00	Implementing Agency	National Cultural Fund
168	Misc. Admin Expenses	Capacity Building	Local	-	-	1.52	1.52	1.52	Direct	Industry Sector, Delhi
169	Construction of one side of Kambala Stadium in Karnataka (Agreement yet to be signed)	Rural Development	Other	Karnataka	Udupi	25.00	10.00	10.00	Implementing Agency	Udupi Nirmithi Kendra
170	Construction of RCC Deck Slab Bridge at Makali to Horokyathanahalli Road, Dasanapura Hobli, Dasanapura Grama Panchayath, Bengaluru North	Rural Development	Other	Karnataka	Bengaluru	80.00		-	Implementing Agency	Panchayat Engineering Division
171	Providing various items at Govt. Model Primary School, Atigupee, Banaglore-38	Education	Other	Karnataka	Bengaluru	1.00	0.33	0.99	Direct	ISG, Bengaluru Unit
172	Providing medicines for children suffering from epilepsy at Mathushree Manovikasa Kendra, Bengaluru	Health	Other	Karnataka	Bengaluru	1.25	0.75	1.19	Direct	ISG, Bengaluru Unit
173	Providing various items at Govt. Higher Primary School, Ahalokottai, Magadi Taluk, Ramanagara district	Education	Other	Karnataka	Ramanagar	0.76	0.09	0.78	Direct	ISG, Bengaluru Unit
174	Providing various items at Govt. Higher Primary School, Hollahally, Harrowhally Hobli, Kanakpura Taluk, Ramnagar district	Education	Other	Karnataka	Ramanagar	1.00	0.47	0.79	Direct	ISG, Bengaluru Unit
175	Providing various items at Govt. Primary School-B, Narayanpura, Bengaluru	Education	Other	Karnataka	Bengaluru	1.00	0.26	0.84	Direct	ISG, Bengaluru Unit
176	Providing various items at Govt. Higher Primary School, Hoodi, Bengaluru	Education	Other	Karnataka	Bengaluru	1.00	0.26	0.84	Direct	ISG, Bengaluru Unit
177	Providing various items at Govt. Higher Primary School, Aloor, North Bengaluru	Education	Other	Karnataka	Bengaluru	1.00	0.26	0.90	Direct	ISG, Bengaluru Unit
178	Providing training kit, water purifier, TV sets and indoor sports items at Manav Charities, NGO for differently abled children	Community Development	Other	Karnataka	Bengaluru	1.50	1.50	1.50	Implementing Agency	Manav Charities
179	Providing computer sets and its peripherals at Govt. Higher Secondary School, Madavara	Education	Other	Karnataka	Bengaluru	2.00	2.16	2.16	Direct	ISG, Bengaluru Unit

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			Area	State	District / Area					
180	Providing Cots, tables, chairs etc. at New Ark Mission of Hope	Community Development	Other	Karnataka	Bengaluru	2.00	2.16	2.16	Direct	ISG, Bengaluru Unit
181	Medical camps in the villages of Nelamangala Taluk	Health	Other	Karnataka	Bengaluru	2.00	1.80	1.80	Implementing Agency	New Ark Mission of India
182	Providing almirahs, aqua guard, uniforms, sports items and library books to Govt. High School, Muddenahally	Education	Other	Karnataka	Chikkaballapur	1.50	0.67	0.67	Direct	ISG, Bengaluru Unit
183	Providing various utility items at Govt. High School, B. Narayanpura	Education	Other	Karnataka	Bengaluru	2.00	2.08	2.08	Direct	ISG, Bengaluru Unit
184	Providing various utility items at Ashray Seva Trust	Community Development	Other	Karnataka	Bengaluru	1.01	0.56	0.56	Direct	ISG, Bengaluru Unit
185	Providing training in tailoring through Dr. B.R.Ambedkar Yuvaka Sangh	Skill Development	Other	Karnataka	Bengaluru	2.50	2.59	2.59	Direct	ISG, Bengaluru Unit
186	Providing desks and benches, water filter and podium at Govt. First Grade College	Education	Other	Karnataka	Bengaluru	2.00	2.15	2.15	Direct	ISG, Bengaluru Unit
187	Impact Analysis Expense	Capacity Building	Other	-	-	3.39	3.39	3.39	Direct	ISG, Bengaluru Unit
188	Multiple -Grid Interactive SPV Power plants of total 10 KWP in rural schools in Taran Taran district of Punjab.	Environmental sustainability	Other	Punjab	Tarn Taran	67.00	40.92	67.00	Implementing Agency	Kalgidhar Trust
189	Mobile Medicare Unit (MMU) through PHDRDF	Health	Local	Punjab	Goindwal	66.01	20.28	37.81	Implementing Agency	PHD Rural Development Foundation
190	Mobile Medical Vans in the rural areas in the vicinity of Goindwal through HelpAge India	Health	Local	Punjab	Firozpur	60.86	14.06	28.95	Implementing Agency	Helpage India
191	Donation of 100 benches, 01 water filter and water cooler to Elementary school, Goindwal Sahib (Near Baoli Sahib Gurudwara)	Safe Drinking water & Education	Other	Punjab	Tarn Taran	2.06	1.44	1.44	Direct	IVP, Goindwal Unit
192	Ceiling fans, stabilizer and swings in Govt. Elementary school, Goindwal Sahib	Education	Local	Punjab	Goindwal	0.63	0.90	0.90	Direct	IVP, Goindwal Unit
193	Donation of 30 benches and water unit plus swings, etc. to the Govt. Elementary school, Hansawala	Education	Local	Punjab	Goindwal	1.61	0.97	0.97	Direct	IVP, Goindwal Unit
194	Donation of water cooler and water filter to Navodaya Vidyalaya, Goindwal Sahib	Education	Local	Punjab	Goindwal	0.97	0.97	0.97	Direct	IVP, Goindwal Unit
195	"Red Cross, Tarn Taran a) Donation of 50 Tri-Cycles b) Wheel Chair, 4 in No. c) Stretchers, 4 in No."	Community Development	Other	Punjab	Tarn Taran	2.65	2.56	2.56	Direct	IVP, Goindwal Unit
196	Tree plantation in Govt. Elementary School	Environmental sustainability	Local	Punjab	Goindwal	0.02	0.02	0.02	Direct	IVP, Goindwal Unit
197	Donation of 100 benches and water unit plus swings, etc. to the Govt. Elementary school (Boys), Baoli Sahib	Education	Other	Punjab	Tarn Taran	2.06	1.61	1.61	Direct	IVP, Goindwal Unit
198	Donation of 30 benches and water unit plus swings, etc. to the Govt. Elementary school (Boys), Chohla Sahib	Education	Other	Punjab	Tarn Taran	1.76	0.56	0.56	Direct	IVP, Goindwal Unit
199	School Expenditure	Education	Local	Uttar Pradesh	Jhansi	315.51	315.51	315.51	Direct	TP, Jhansi Unit
200	Skill Development Expenses	Skill Development	Local	Uttar Pradesh	Jhansi	2.36	2.36	2.36	Direct	TP, Jhansi Unit
201	Environment Awareness program & Education for children of Labours.	Education	Local	Uttar Pradesh	Jhansi	3.10	-	-	Implementing Agency	Nav Jyoti Shiksha Avem Samaj Kalyan Samiti
202	Financial support for Mobile Science Labs (3 Nos.) for schools - Agastya	Education	Local	Uttar Pradesh	Jhansi	56.19	11.46	11.46	Implementing Agency	Agastya International Foundation



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203	Cutting and Tailoring Training for poor village girls/ ladies	Skill Development	Local	Uttar Pradesh	Jhansi	4.00	1.26	1.26	Implementing Agency	Nav Jyoti Shiksha Avem Samaj Kalyan Samiti
204	Distribution of scrap wood furniture to schools in nearby villages	Environmental sustainability	Local	Uttar Pradesh	Jhansi	2.00	1.62	1.62	Direct	TP, Jhansi Unit
205	Creating sports and education infrastructure in the village schools	Education	Local	Uttar Pradesh	Jhansi	1.00	1.00	1.00	Direct	TP, Jhansi Unit
206	Providing water hand pumps in nearby villages	Rural Development	Local	Uttar Pradesh	Jhansi	2.00		-	Direct	TP, Jhansi Unit
207	Provision of Bus Stop	Rural Development	Local	Uttar Pradesh	Jhansi	3.00		-	Direct	TP, Jhansi Unit
208	Construction of cremation ground with shed in a nearby village	Rural Development	Local	Uttar Pradesh	Jhansi	3.00		-	Direct	TP, Jhansi Unit
209	Bal Sahyog Project - Education in Slum	Slum Development	Local	Delhi	Delhi	17.31	4.31	4.31	Implementing Agency	Bal Sahyog
210	Disabled friendly wheelchair accessible mini-bus for facilitating mobility/ transport of students with disabilities in the campus	Community Development	Local	Delhi	Delhi	30.35	20.00	20.00	Implementing Agency	JNU, Delhi
211	Medical camp at Primary School, Sector-12, Noida, Bal Sahyog Campus, Suthiana Village	Health	Local	Uttar Pradesh	Noida	1.50	0.97	0.97	Direct	PEM Division, Noida
212	Providing Miscellaneous items for school/society	Community Development	Local	-	-	0.50		-	Direct	PEM Division, Noida
213	Sevac - 50 Bedded Mental Hospital-cum Rehabilitation Centre, Day Care Centre, Education Wing for at least 500 mental patients	Health	Local	West Bengal	Kolkata	100.00	5.00	100.00	Implementing Agency	SEVAC
214	HelpAge Mobile Medicare Unit	Health	Local	West Bengal	Bardhaman	62.71	14.81	44.30	Implementing Agency	Helpage India
215	Jharkhand CSR project	Community Development	Local	Jharkhand	Bokaro	15.37	11.65	11.65	Direct	PSER Region, Kolkata
216	To arrange de-addiction training programmes near our project sites, in association with specialized NGOs. The result might well have positive impact upon the theft activities near project sites.	Community Development	Local	Project Sites	Project Sites	1.00		-	Direct	PSER Region, Kolkata
217	Training of 5-10 welding trainees belonging to the Govt. ITI, nearest to their newly opened project sites, in WRI Trichy, on the practical aspects of hands on training on latest welding technology.	Skill Development	Local	Project Sites	Project Sites	1.00		-	Direct	PSER Region, Kolkata
218	Misc. Admin Expenses	Capacity Building	Local	-	-	4.38	0.25	0.25	Direct	PSER Region, Kolkata
219	Sustainability - Tree Plantation at Suratgarh Site	Environmental sustainability	Local	Rajasthan	SriGanganagar	8.25		-	Direct	PSER Region, Kolkata
220	MoU Projects - Providing Solar utilities	Environmental sustainability	Local	West Bengal	Kolkata	40.00		-	Direct	PSER Region, Kolkata
221	MoU Projects - Infra Improvement in School, Toilet and Classroom	Sanitation & Education	Local	West Bengal	Kolkata	50.00	7.17	7.17	Direct	PSER Region, Kolkata
222	MoU Projects - Community Centre	Rural Development	Local	West Bengal	Kolkata	110.00		-	Direct	PSER Region, Kolkata
223	HelpAge Mobile Medicare Unit	Health	Other	Jammu & Kashmir	Leh	67.80	17.16	48.94	Implementing Agency	Helpage India
224	Running of MMU for disaster affected area for a period of one year	Health	Other	Jammu & Kashmir	Srinagar	27.00		-	Implementing Agency	Wockhardt Foundation
225	Distribution of utilities in backward schools, Mirzapur	Education	Local	Uttar Pradesh	Mirzapur	0.09	0.09	0.09	Implementing agency	Gramin Uthan Samiti, Shankargarh

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226	Community based Rehabilitation programme for the differently abled persons with the help of DISHA a non profit organisation	Community Development	Local	Rajasthan	Jaipur	7.50	7.50	7.50	Implementing agency	Disha Foundation
227	Eye check-up and cataract surgery - i care	Health	Local	Haryana, Uttar Pradesh, Delhi	NCR	4.06	4.06	4.06	Implementing agency	I Care Noida
228	Eye check-up and cataract surgery camp at remote site areas. Mela Mal Sood	Health	Local	Himachal Pradesh	Chamba	7.14	6.50	6.50	Direct	PSNR Region, Noida
229	Donating RO plants to the schools in the vicinity of the remote sites.	Safe Drinking Water	Local	"Uttar Pradesh Uttarakhand"	Unchahar, Aligarh, Lalitpur, Shankargarh	5.40	5.65	5.65	Implementing agency	TWIF
230	Institute of Applied Sciences and Rural Development: training and capacity building in schools in field of environment preservation and sustainability	Environmental sustainability	Local	Uttar Pradesh	Amroha	9.00	9.00	9.00	Implementing Agency	Institute of Applied Sciences and Rural Development
231	Misc. Admin Expenses	Capacity Building	Local	-	-	0.11	0.11	0.11	Direct	PSNR Region, Noida
232	HelpAge Mobile Medicare Unit	Health	Local	Odisha	Angul	61.43	15.10	44.86	Implementing Agency	Helpage India
233	Environment &Species Protection through reforestation the Ramdurga, Koppal Dt.,Karnataka for 5 years - Wildlife SOS	Environmental sustainability	Local	Karnataka	Koppal	40.00	3.90	32.50	Implementing Agency	Wildlife SOS
234	"Infrastructure improvement for Primary School, Mirzapur village, Dongalia, Dohad, Bhaisava - MALWA SITE"	Education	Local	Madhya Pradesh	Khandwa	6.14	6.14	6.14	Direct	PSSR Region, Chennai
235	Infrastructure improvement for Govt. Primary School, Chiksuguru	Education	Local	Karnataka	Raichur	1.49	1.49	1.49	Direct	PSSR Region, Chennai
236	Setting up Diagnostic Centre at Kudathini Village	Health	Local	Karnataka	Bellary	11.00	9.39	9.39	Direct	PSSR Region, Chennai
237	Infrastructure Improvement in schools at Yerasmus site	Sanitation & Education	Local	Karnataka	Raichur	17.08	18.80	18.80	Direct	PSSR Region, Chennai
238	Infrastructure Improvement in schools at Tuticorin site	Education	Local	Tamil Nadu	Tuticorin	22.50	22.37	22.37	Direct	PSSR Region, Chennai
239	Equipment to NGO for vocational training of mentally challenged students, Secunderabad	Skill Development	Local	Telangana	Secunderabad	3.00	2.72	2.72	Direct	PSSR Region, Chennai
240	Specialised equipment for hospice, RMD Pain and Palliative Care Trust, Chennai	Health	Local	Tamil Nadu	Chennai	3.68	3.68	3.68	Implementing Agency	RMD Pain and Palliative Care Trust
241	Distribution of mobility aids to physically challenged	Community Development	Local	Tamil Nadu	Cuddalore	6.42	6.42	6.42	Implementing Agency	Freedom Trust
242	R.O Unit, Solar Lights, Flush cots, Rehoboth, Chennai	Safe Drinking Water & Community Development	Local	Tamil Nadu	Chennai	5.69	5.69	5.69	Implementing Agency	Rehoboth
243	Equipment for Laboratory, Little Drops Chennai	Health	Local	Tamil Nadu	Chennai	5.50	5.50	5.50	Implementing Agency	Little Drops Public Charitable Trust
244	Supporting Leprosy Affected Persons, R K Math, Chennai	Health	Local	Tamil Nadu	Chennai	3.50	3.50	3.50	Implementing Agency	Ramakrishna Math
245	Relief Measures for Vizag - "Hud Hud"	Community Development - Disaster related	Local	Andhra Pradesh	Vizag	0.85	0.85	0.85	Direct	PSSR Region, Chennai
246	Water Facility to School Toilets, Monnet	Safe Drinking Water	Local	Odisha	Angul	0.40	-	-	Direct	PSSR Region, Chennai
247	Repair works for Govt. Residential School for Visually Challenged Girls, Vizag	Education	Local	Andhra Pradesh	Vizag	3.00	-	-	Direct	PSSR Region, Chennai

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248	Installation of RO Plants at Ongole	Safe Drinking Water	Local	Andhra Pradesh	Ongole	10.00		-	Direct	PSSR Region, Chennai
249	Misc. Admin Expenses including impact analysis expense	Capacity Building	Local	-	-	3.61	3.61	3.61	Implementing Agency	NR Management Consultancy Services
250	Infrastructure activities - Bhandara Project	Rural Development	Local	Maharashtra	Bhandara	429.00	216.47	374.38	Implementing Agency	PWD, Bhandara
251	HelpAge Mobile Medicare Unit	Health	Local	Maharashtra	Nagpur	60.86	20.11	42.93	Implementing Agency	Helpage India
252	SAFE WATER NETWORK - Pure water for districts in Bhandara	Safe Drinking Water	Local	Maharashtra	Bhandara	145.00	145.00	145.00	Implementing Agency	Safe Water Network
253	Cataract Operation at Old Age Home through Help Age India for 200 people.	Health	Local	Maharashtra	Nagpur	3.00	3.00	3.00	Implementing Agency	Helpage India
254	Support for Slum area development in Nagpur through registered NGO/ external agency/organization	Slum Development	Local	Maharashtra	Nagpur	3.50		-	Implementing Agency	-
255	Setting up/support to school at Nagpur by providing drinking water facility and sanitation/toilet facility through registered NGO.	Safe Drinking Water & Sanitation	Local	Maharashtra	Nagpur	8.00	7.49	7.49	Implementing Agency	Ashwamegh Gramin Panlot Kshetra Vikas Va Shaikshank Sanstha
256	Carrying out Tree plantation with Tree guards	Environmental sustainability	Local	Maharashtra	Nagpur	3.75		-	Implementing Agency	Sahyadri Gamin Vikas Va Bahuuddeshiya Yuvak kalyan Sanstha
257	Organizing a "Multi speciality Camp" in collaboration with Hospital (Hanumant Hospital) nearby village at Pipavav site.	Health	Local	Gujarat	Amreli	2.30	1.28	1.28	Implementing Agency	Hanumant Seva Medicare Trust
258	Organizing a "Multi speciality Camp" in Nagpur for underprivileged Children	Health	Local	Maharashtra	Nagpur	0.45	0.36	0.36	Direct	PSWR Region, Nagpur
259	Misc. Admin Expenses	Capacity Building	Local	-	-	0.54	0.54	0.54	Direct	PSWR Region, Nagpur
260	Coordinating CATARACT operations 500 nos. In 3 years(14 operations per month) with Goparaju Trust	Health	Other	Andhra Pradesh	Guntur	5.00	1.51	2.84	Implementing Agency	Goparaju Trust
261	Part funding of Teachers salary at " Aarambh" working for autism affected children	Education	Local	Telangana	Hyderabad	0.50	0.48	0.48	Implementing Agency	Aarambh Foundation
262	50% funding of 3 nos. special educators honorarium for one year for teaching hearing impaired children by Ashray-Akruti at Gandhi Hospital, Hyderabad	Education	Local	Telangana	Hyderabad	1.80	1.80	1.80	Implementing Agency	Ashray-Akruti
263	Salary of Gram Vikas Seva Samiti to run school and distribution of books, uniforms, etc. - Chanda Nayak Nagar School	Education	Local	Telangana	Hyderabad	2.53	2.06	2.06	Direct	R&D Division, Hyderabad
264	Boundary Wall - Chanda Nayak	Education	Local	Telangana	Hyderabad	3.00	2.59	2.59	Direct	R&D Division, Hyderabad
265	Installation of Solar Water Heating system for Old age home and SC/ ST Hostel	Environmental sustainability	Local	Telangana	Medak	1.84	1.80	1.80	Direct	R&D Division, Hyderabad
266	Provision of 150 dual desks for students of Zilla Parishad schools at Athamaru village, Krishna district	Education	Local	Telangana	Krishna	4.65	5.61	5.61	Direct	R&D Division, Hyderabad
267	Organizing 06 medical camps for the underprivileged in the vicinity of Hyderabad	Health	Local	Telangana	Hyderabad	1.35	0.84	0.84	Implementing Agency	Ashray-Akruti
268	Providing 19 steel almirahs for use by inmates in the old age home and orphanage run by Sai Seva Sangh, Moosapet, Hyderabad	Community Development	Local	Telangana	Hyderabad	1.33	1.33	1.33	Direct	R&D Division, Hyderabad

# DIRECTORS' REPORT



S. No.	CSR Project or activity identified	Sector in which the project is covered	Project or programs Local area or other (Specify the State and district where projects or programs were undertaken)			Amount outlay (budget) project wise	Amount spent on the project or programs	Cumulative-expenditure up to the reporting period	Amount spent directly or through implementing agency	"Name of Implementing Agency"
			Area	State	District / Area					
269	Misc. Admin Expenses	Capacity Building	Local	-	-	0.02	0.02	0.02	Direct	R&D, Hyderabad
270	Providing items for Sai Kripa, Noida - Serving Slum Children	Slum Development	Local	Uttar Pradesh	Noida	1.85	1.85	1.85	Implementing Agency	Saikripa
271	Providing items for Social & Dev. Research Action group working for child rights and education	Education	Local	Uttar Pradesh	Noida	1.10	1.10	1.10	Implementing Agency	Social & Development Research & Action Group
272	Providing items for Jan Kalyan Trust - Old Age Inmates	Community Development	Local	Uttar Pradesh	Noida	0.91	0.91	0.91	Implementing Agency	Jan Kalyan Trust
273	Providing bicycles for poor children by Bd. For research Educ. & Dev. - Serving Slum Children	Slum Development	Local	Uttar Pradesh	Noida	0.99	0.99	0.99	Implementing Agency	Bd. For Research Education & Development
274	Heal and Soul (Haemophilia Federation) - continuing Project	Health	Local	Across India	Across India	72.00	0.19	72.00	Implementing Agency	Heal a Soul Foundation
275	DISHA(Education for Street Child)	Education	Local	Delhi	Delhi	26.76	13.73	26.74	Implementing Agency	Disha Foundation
276	Heal and Soul (Haemophilia Federation) - New Project	Health	Local	Across India	Across India	320.10	50.40	50.40	Implementing Agency	Heal a Soul Foundation
277	Kalyanam Karoti - Distribution of Artificial Limbs & Medical Aids to needy people in Agra Region	Community Development	Local	Uttar Pradesh	Agra & Mathura	10.15	10.15	10.15	Implementing Agency	Kalyanam Karoti
278	providing and installing Solar Water heating system and solar home lighting system in Sri Guru Granth Sahib Vidya Kender Society	Environmental sustainability	Local	Delhi	Delhi	3.85	3.85	3.85	Implementing Agency	Sri Guru Granth Sahib Vidya Kender Society
279	Project related admin expenses	Capacity Building	local	-	-	1.36	1.36	1.36	Direct	TBG Division, Noida
280	Impact Analysis Expense	Capacity Building	Local	-	-	0.80	0.80	0.80	Direct	TBG Division, Noida
281	Financial support for Mobile Science Labs (3 Nos.) for schools - Agastya	Education	Local	Tamil Nadu	Tiruchirapalli	56.19	11.80	11.80	Implementing Agency	Agastya International Foundation
282	To sponsor feeding cost of one Indian Elephant (Saravanan) and few rare animals in Arignar Anna Zoological Park, Chennai.	Environmental sustainability	Other	Tamil Nadu	Chennai	5.00	2.89	2.89	Direct	HPBP, Trichy Unit
283	Adopted Villages : Vaalayur- well with pump and Solar Lighting in Pachamalai hills.	Rural Development	Local	Tamil Nadu	Tiruchirapalli	12.70	12.69	12.69	Direct	HPBP, Trichy Unit
284	"To conduct Medical camps in Villages, Schools etc. Diabetes, Organ Donation, Eye Donation, Leprosy"	Health	Local	Tamil Nadu	Tiruchirapalli	7.35	1.64	1.64	Direct	HPBP, Trichy Unit
285	Providing Incinerator to Schools and Colleges	Sanitation	Local	Tamil Nadu	Tiruchirapalli	20.00	19.25	19.25	Direct	HPBP, Trichy Unit
286	Scholarship to students	Education	Local	Tamil Nadu	Tiruchirapalli	6.00	6.02	6.02	Direct	HPBP, Trichy Unit
287	Skill training at TREC-STEP	Skill Development	Local	Tamil Nadu	Tiruchirapalli	15.00	12.84	12.84	Implementing Agency	TREC-STEP
288	"To conduct Promotion of Art and Culture activities. Padathini South Zone Culture Centre"	Promoting Art & Culture	Local	Tamil Nadu	Tiruchirapalli	13.60	4.20	4.20	Direct	HPBP, Trichy Unit
289	Promotion of Arts through Dr. Chinnamoulana Trust	Promoting Art & Culture	Local	Tamil Nadu	Tiruchirapalli	3.00	2.63	2.63	Implementing Agency	Dr.Chinna Moulana Trust
290	Skill training to the prisoners at Central Jail, Tiruchirapalli	Skill Development	Local	Tamil Nadu	Tiruchirapalli	17.92	15.04	15.04	Direct	HPBP, Trichy Unit
291	To provide Solar home lighting system for Villages and Schools.	Environmental sustainability	Local	Tamil Nadu	Tiruchirapalli	12.00	-	-	Direct	HPBP, Trichy Unit
292	Construction of water tank at Thuvakudy Municipality for providing drinking water facility in Self Sufficiency Scheme	Rural Development	Local	Tamil Nadu	Tiruchirapalli	30.00	30.00	30.00	Implementing Agency	DC.Office

S. No.	CSR Project or activity identified	Sector in which the project is covered	Project or programs Local area or other (Specify the State and district where projects or programs were undertaken)			Amount outlay (budget) project wise	Amount spent on the project or programs	Cumulative-expenditure up to the reporting period	Amount spent directly or through implementing agency	"Name of Implementing Agency"
			Area	State	District / Area					
293	"Free Tuition Centre: Improving the education standard of villages thru NGOs, Puthiyathalaimurai Foundn & AID India"	Education	Local	Tamil Nadu	Tiruchirapalli	10.00	2.30	2.30	Implementing Agency	Puthiyathalaimurai Foundation
294	Promotion of Sports: Cricket & Tennis, Electronic Score Board	Promotion of Sports	Local	Tamil Nadu	Tiruchirapalli	6.00	4.00	4.00	Direct	HPBP, Trichy Unit
295	"Anbalayam - Guntur 4 wheeler for mentally ill people"	Community Development	Local	Tamil Nadu	Tiruchirapalli	6.37	5.72	5.72	Direct	HPBP, Trichy Unit
296	"Govt. girls School, Vallam RO System Library Books"	Safe Drinking Water & Education	Local	Tamil Nadu	Tiruchirapalli	2.50		-	Direct	HPBP, Trichy Unit
297	Providing Sewing Machine, Iron Boxes, Agri. Hand Tool & blankets to the needy through Lion's Club	Community Development	Local	Tamil Nadu	Tiruchirapalli	14.50	14.94	14.94	Implementing Agency	Lion's Club
298	World Class community park at Panchapoor Amphi Theatre in 2 Acre	Environmental sustainability	Local	Tamil Nadu	Tiruchirapalli	25.00		-	Direct	HPBP, Trichy Unit
299	School Expenditure	Education	Local	Tamil Nadu	Tiruchirapalli	190.23	190.23	190.23	Direct	HPBP, Trichy Unit
300	School Expenditure - Infrastructure Improvement	Education	Local	Tamil Nadu	Tiruchirapalli	1107.80	70.44	70.44	Direct	HPBP, Trichy Unit
301	Skill Development Expenses	Skill Development	Local	Tamil Nadu	Tiruchirapalli	167.09	167.09	167.09	Direct	HPBP, Trichy Unit
302	Sanitary Napkins to school	Sanitation	Local	Tamil Nadu	Tiruchirapalli	1.50		-	Direct	HPBP, Trichy Unit
303	Leprosy Home -item donation	Community Development	Local	Tamil Nadu	Tiruchirapalli	0.41	0.41	0.41	Direct	HPBP, Trichy Unit
304	Deaf Foundation -item donation	Community Development	Local	Tamil Nadu	Tiruchirapalli	0.84	0.84	0.84	Direct	HPBP, Trichy Unit
305	Misc. Admin Exp on Leaflets, Events, etc.	Capacity Building	Local	Tamil Nadu	Tiruchirapalli	8.25		-	Direct	HPBP, Trichy Unit
306	Misc. Exp. Related to School events	Capacity Building	Local	Tamil Nadu	Tiruchirapalli	2.00	0.17	0.17	Direct	HPBP, Trichy Unit
307	Impact Analysis Expense	Capacity Building	Local	Tamil Nadu	Tiruchirapalli	5.00	1.83	1.83	Direct	HPBP, Trichy Unit
308	Vision to all - Misc. Exp.	Capacity Building	Local	Tamil Nadu	Tiruchirapalli	2.00	0.82	0.82	Direct	HPBP, Trichy Unit
309	MoU Projects - Providing Solar utilities	Environmental sustainability	Local	Tamil Nadu	Tiruchirapalli	65.00	35.22	35.22	Direct	HPBP, Trichy Unit
310	MoU Projects - Infra Improvement in School, Toilet and Classroom	Sanitation & Education	Local	Tamil Nadu	Tiruchirapalli	65.00	64.55	64.55	Direct	HPBP, Trichy Unit
311	MoU Projects - Community Centre	Rural Development	Local	Tamil Nadu	Tiruchirapalli	70.00	14.76	14.76	Direct	HPBP, Trichy Unit
312	Cons. of Class room at Govt Elem. School, Neduvasal	Education	Local	Tamil Nadu	Pudukottai	15.00		-	Direct	PPPU, Thirumayam Unit
313	Providing Livelihood means to PLHIV	Livelihood Enhancement	Local	Tamil Nadu	Pudukottai	6.00	6.00	6.00	Implementing Agency	"Government Hospital, Thirumayam and District AIDS Prevention and Control Unit"
314	Providing of Teaching Aids for Mentally challenged School at Ambattur	Education	Local	Tamil Nadu	Pudukottai	1.50		-	Direct	PPPU, Thirumayam Unit
<b>TOTAL</b>						<b>19551.46</b>	<b>10206.00</b>	<b>11790.44</b>		

**Note:**

The expense booked in 2014-15 is spent on the CSR projects/activities except for the Capacity building expenditure which are classified as an overhead expenditure.

# Annexure-IV

## Business Responsibility Report 2014-15

### Section A: General Information about the Company

1. **Corporate Identity Number (CIN) of the Company:** L74899DL1964GOI004281
2. **Name of the Company:** BHARAT HEAVY ELECTRICALS LIMITED
3. **Registered address:** BHEL House, Siri Fort, New Delhi – 110 049
4. **Website:** www.bhel.com
5. **E-mail id:** shareholderquery@bhel.in
6. **Financial Year reported:** 2014-15
7. **Sectors that the Company is engaged in:** Refer to 'Corporate Profile', Annual Report 2014-15
8. **List three key products/services that the Company manufactures/provides:**
  - a) Steam Turbine, Generators, Boilers & accessories for Thermal power plant
  - b) Locomotives, propulsion equipments, traction motors/alternators, Transformers, VCBs for Transportation Sector
  - c) Power & instrument transformers, reactors, switchgear, capacitors, insulators, FACTS & HVDC system for Transmission segment
9. **Total number of locations where business activity is undertaken by the Company:**
  - a) **Number of International Locations (Provide details of major 5)**  
BHEL has 6 overseas offices. Major five locations from where business activity is undertaken by BHEL are Jakarta (Indonesia), Almaty (Republic of Kazakhstan), Thimpu (Bhutan), Dubai (UAE) and Shanghai (China).
  - b) **Number of National Locations**  
The company has 17 manufacturing divisions, 2 repair units, 4 regional offices, 8 service centres, and 15 regional centres.

10. **Markets served by the Company:** BHEL serves national as well as international markets.

### Section B: Financial Details of the Company (2014-15)

1. Paid up capital : ₹ 489.52 Crores
2. Total Turnover : ₹ 30947 Crores
3. Total Profit after Tax : ₹ 1419 Crores
4. Total expenses incurred on CSR &SD : ₹ 165 Crores  
(which includes ₹ 62.94 Crores - amount yet to be spent on committed projects)
5. List of activities in which expenditure on CSR has been incurred: Refer to Annexure 1 of 'Reporting of Corporate Social Responsibility (CSR)' under **Annexure-III** on 'Sustainable Development'

### Section C: Other Details

1. **Does the Company have any Subsidiary Company/ Companies?**  
Yes, BHEL has one subsidiary company- BHEL Electrical Machines Ltd. (BHEL-EML), Kasargod as on 31-03-2015
2. **Do the Subsidiary Company/Companies participate in the BR Initiatives of the parent company? If yes, then indicate the number of such subsidiary company(s)**  
BHEL-EML, Kasaragod does not participate in the BR initiatives of BHEL. However, BHEL-EML is a Schedule 'C' Central Public Sector Enterprise which adheres to the guidelines as issued by Government of India from time to time.
3. **Do any other entity/entities (e.g. suppliers, distributors etc.) that the Company does business with, participate in the BR initiatives of the Company? If yes, then indicate the percentage of such entity/entities? [Less than 30%, 30-60%, More than 60%]**

In most of the cases, BR initiatives are carried out by BHEL only.

## Section D: BR Information

### 1. Details of Director/Directors responsible for BR

#### a) Details of the Director / BR Head responsible for implementation of the BR policy/policies

S.N.	Particulars	Details
1	DIN Number (if applicable)	03053133
2	Name	R. Krishnan
3	Designation	Director (HR)
4	Telephone number	011-26001003
5	e-mail id	rkrishnan@bhel.in

### 2. Principle-wise (as per NVGs) BR Policy/policies (Reply in Y/N)

The National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business (NVGs) released by the Ministry of Corporate Affairs has adopted nine areas of Business Responsibility. These briefly are as

under:

- P1: Businesses should conduct and govern themselves with Ethics, Transparency and accountability.
- P2: Businesses should provide goods and services that are safe and contribute to sustainability throughout life cycle.
- P3: Businesses should promote the well beings of all employees.
- P4: Businesses should respect the interests of, and be responsive towards all stakeholders, especially those who are disadvantaged, vulnerable and marginalized.
- P5: Businesses should respect and promote human rights.
- P6: Businesses should respect, protect and make efforts to restore the environment.
- P7: Businesses, when engaged in influencing public and regulatory policy, should do so in responsible manner.
- P8: Businesses should support inclusive growth and equitable development.
- P9: Businesses should engage with and provide value to their customers and consumers in a responsive manner.

S.No.	Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
1	Do you have policy/policies for	Y	Y	Y	Y	Y	Y	N	Y	Y
2	Has the policy being formulated in consultation with the relevant stakeholders?	Y	Y	Y	Y	Y	Y	N	Y	Y
3	Does the policy conform to any national /international standards? If yes, specify? (50 words)	Y	Y	Y	Y	Y	Y	N	Y	Y
4	Has the policy being approved by the Board? Is yes, has it been signed by MD/owner/CEO/ appropriate Board Director?	Y	Y	Y	Y	Y	Y	N	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	N	Y	Y
6	Indicate the link for the policy to be viewed online?	Links have been provided wherever applicable								
7	Has the policy been formally communicated to all relevant internal and external stakeholders?	Y	Y	Y	Y	Y	Y	N	Y	Y
8	Does the company have in-house structure to implement the policy/policies?	Y	Y	Y	Y	Y	Y	N	Y	Y

S.No.	Questions	P1	P2	P3	P4	P5	P6	P7	P8	P9
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	N	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	N	Y	Y

## Notes:

- We have various practices established based on these principles, but do not have formal policy document with respect to some of them. We plan to bring out such policies in due course of time.
- Once a policy is approved by the Board, it need not be necessarily signed by CMD/Board Director.
- Policies and procedures of the organization are subject to audits/reviews during/by ISO 9001, ISO 14001, OHSAS 18001, CAG, Parliamentary Committee, Board of Directors, Committee of Functional Directors, Board Level Committee and/or Management Committee etc.

### 2a. If answer to S.No. 1 against any principle, is 'No', please explain why: (Tick up to 2 options)

In respect of Principle 7 referring to Policy Advocacy, we have various practices established based on this principle, but do not have formal policy document with respect to some of them. We plan to bring out such policies in due course of time.

### 3. Governance related to BR

- Indicate the frequency with which the Board of Directors, Committee of the Board or CEO assess the BR performance of the Company. (Within 3 months, 3-6 months, Annually, More than 1 year)

To assess & review the performance of CSR activities in BHEL, the Board Level Committee for CSR met 6 times during 2014-15. While BHEL Board met 4 times in 2014-15 for assessment & review of CSR activities in BHEL

Additionally, the minutes of the various committees' meetings, particularly Stake-

holders Relationship Committee and Corporate Social Responsibility Committee are regularly put up to the Board for information

- Does the Company publish a BR or a Sustainability Report? What is the hyperlink for viewing this report? How frequently it is published?

BHEL publishes its Sustainability Report annually. Last 3 years' reports can be accessed on Corporate Webpage through the following link: [http://www.bhel.com/healthsafety/global\\_compact.php](http://www.bhel.com/healthsafety/global_compact.php)

## Section E: Principle-wise performance

### Principle 1: Ethics, Transparency and Accountability

The company has a Board approved 'Code for Business Conduct & Ethics' for all Board Members and Senior Management personnel which can be viewed through the following link:

[http://www.bhel.com/investor\\_relations/pdf/Code\\_of\\_Business\\_Conduct\\_and\\_Ethics.pdf](http://www.bhel.com/investor_relations/pdf/Code_of_Business_Conduct_and_Ethics.pdf)

In addition, as part of BHEL's persisting endeavor to set a high standard of conduct for its employees (other than those governed by standing orders), the 'BHEL Conduct, Discipline and Appeal Rules, 1975' are in place.

The Company is subject to RTI Act 2005 and audit by Statutory Auditors and CAG audit under section 139 of the Companies Act, 2013. The company has also signed MoU with Transparency International to adopt 'Integrity Pact' to make public procurement and contracting more transparent by binding both the parties to ethical conduct. A panel of three Independent External Monitors have been appointed to oversee implementation of Integrity Pact in BHEL with due approval of Central Vigilance



Commission. Under delegation of power of various functionaries, accountability is well defined. Works Policy, Purchase Policy and other policy documents facilitate transparency in our working and commitment of highest order of integrity.

The Company also has a Stakeholders Relationship Committee specifically to look into matters related to redressal of shareholders and investors complaints. As reported by M/s Karvy Computershare Private Limited (RTA), 759 complaints were received from the shareholders during the year under review and all complaints were redressed up to 31<sup>st</sup> March, 2015.

In addition, a total of 142 public grievance complaints were received from the general public under the Centralized Public Grievance Redressal and Monitoring Scheme during 2014-15. All the grievances were disposed off within the prescribed time of 60 days.

### Principle 2: Products Life Cycle Sustainability

BHEL products & services are fuel efficient, energy efficient, environment friendly and are known for world-class performance. Performance of BHEL supplied power plant equipment are driven by lower auxiliary power consumption, higher plant efficiency, lower design heat rate, better PLF all resulting in lower life cycle cost.

Four prime products which have incorporated environmental concerns in their design are Power Plants operating with Steam at Supercritical parameters, Flue-gas desulfurization (FGD), Solar Photovoltaic and Electrostatic Precipitator (ESP).

BHEL is implementing e-procurement in phased manner as business improvement and sustainable business practice. Adding another milestone towards green initiative by leveraging technology, BHEL has launched its in-house developed "Online Supplier Registration Portal" at [www.bhel.com](http://www.bhel.com). The portal enables prospective suppliers to submit their registration forms online to BHEL units.

Reusable materials are being used for packing and other activities. Company has a strong institutionalized mechanism to recycle products and wastes. One of our units, Central Foundry Forge Plant (CFFP) manufactures Steel Forgings and Casings for which the molten steel required is produced in the Steel Melting Shop using steel

scrap as a major raw material. BHEL recycled/reused nearly 3-5% of its materials as recycled input materials, thereby reducing impact on natural resources.

BHEL has pioneered entrepreneurship development in and around its manufacturing units by providing regular support to Micro and Small Enterprises (MSE) through knowledge sharing, training and development and resource mobilization etc. During 2014-15, BHEL has procured about 17% of its total procurement from MSE in compliance to Public Procurement Policy-2012 for MSEs.

### Principle 3: Employee's Well-being

BHEL has been a frontrunner in the area of human resource management and have documented the HRM policies and rules in the form of a Codified Personnel Manual to ensure transparency and uniformity of implementation.

1. The total number of regular employee as on 31-03-2015: 44,905
2. Total number of employees hired on temporary/ contractual basis: BHEL does not hire employees on temporary/ casual basis. However, BHEL awards job/works contracts to Contractors at its various Units/ Divisions/ Departments as per organizational needs. The no. of workers with Contractors varies from time to time.
3. Number of permanent women employees as on 31-03-2015: 2506
4. Number of permanent employees with disabilities as on 31-03-2015: 935
5. BHEL has 30 participating unions in respect of Workmen. There are two employee associations one for Executives and one for Supervisors in BHEL.
6. The percentage of permanent employees who are member of recognized employee association is not available.
7. In 2014-15, the company received a total of 5 complaints of sexual harassment (including 2 brought forward from previous year) and all have been resolved satisfactorily. Further, no complaint of child labour/ forced labour/ involuntary labour/ discriminatory employment has been received.

8. During the year 2014-15, total number of training man-days per employee is 4.20. In non-BHEL personnel training category, 29,494 apprentices (trade, diploma, graduate apprentices) and 10510 vocational trainees were trained in different BHEL manufacturing units. Moreover training on Health Safety & Environment (HSE) aspect is an essential element of our induction training programme. In addition, separate programmes are regularly conducted at all our manufacturing units and project sites to train employees on HSE through internal and external faculty members.

#### **Principle 4: Stakeholder Engagement**

Yes, the company has identified Customers, Employees, Shareholders, Vendors and Society as its stakeholders. BHEL has processes in place to ensure inclusion of stakeholder concerns and expectations. Key issues are identified through ongoing stakeholder engagement and addressed by programmes or action plans with clear and measurable targets. BHEL units regularly organize Vendor Meets specifically for MSEs (including local suppliers) towards capacity and capability building, which also provides opportunities for open communication for mutual benefits and support.

BHEL has clearly identified the disadvantaged, vulnerable poor, needy & marginalized stakeholder in the vicinity of the BHEL manufacturing units / regions / divisions / sites / offices and their concerns are addressed as per BHEL's CSR Policy which is in compliance with section 135 & Schedule VII of the Companies Act, 2013 and Rules made thereunder as well as DPE Guidelines on CSR.

#### **Principle 5 - Human Rights**

BHEL policies are in line with the principles of Human Rights, The Constitution of India, and various applicable Laws. BHEL has special provisions for ensuring safeguard of women employee at the workplace. No instance of Human Rights abuse has been reported in the Company.

BHEL is a life time member of United Nations Global Compact (UNGC), India Network. The company reports its performance on 10 Principles of UNGC every year since 2001 through Communication on Progress (CoP). This CoP is web-hosted on UNGC website and can be accessed through the webpage: <https://www.unglobalcompact.org/COPs/active/86321>

The same is available and accessed from: [http://www.bhel.com/healthsafety/global\\_compact.php](http://www.bhel.com/healthsafety/global_compact.php)

#### **Principle 6: Environment**

All major manufacturing units and Power Sector regions of BHEL have well established Environment Management Systems (EMS) accredited to international standard ISO 14001:2004. The organization has a corporate HSE Policy based on which all our manufacturing units and regions have derived their own HSE Policy. The HSE management system provides us an excellent framework for addressing environmental risks proactively by systematically identifying and ensuring compliance of applicable environmental, occupation health and safety related rules and regulations and drives us towards continual improvement in the system. Periodic audits are carried out by the certifying agencies to ensure effective implementation of the established system, including legal compliance. All applicable environmental consents & licenses are maintained and their terms & conditions are complied with.

BHEL has undertaken R&D initiatives towards CO<sub>2</sub> reduction and/or CO<sub>2</sub> capture through Oxy-fuel combustion, Biomass combustion, Ammonia based CO<sub>2</sub> sequestration systems etc.

As a responsible Corporate Citizen, BHEL acknowledges the strong link between Green House Gas emissions and Climate Change. To mitigate the risks of climate change, BHEL is progressively reducing the carbon footprint of its products & services as well as its internal processes across the organization. These efforts include switching over to cleaner fuels, energy conservation / efficiency measures, renewable energy measures like - setting up of grid interactive as well as rooftop solar power plants, using solar street lights, putting solar water heaters etc. Through various energy efficiency and renewable energy measures the organization has reduced its carbon footprint by 2410 MT CO<sub>2</sub>-e during 2014-15. Further, the grid interactive 5 MWp solar plant at our BAP Ranipet has generated 6.232 Million units of green electricity during 2014-15 and reduced the carbon footprint of BHEL considerably. Company has also taken number of projects related to water and energy conservation, tree plantation, waste management, resource conservation etc.

Under the aegis of the National Mission on Clean

Coal Technology, BHEL in association with IGCAR, NTPC and other organizations, is developing Advanced Ultra Supercritical Technology. In conformity with green energy initiative, an energy efficient largest single cylinder non-reheat steam turbine for 100-140 MW application has already been developed to harness waste heat.

No show cause / legal notice received from Central Pollution Control Board (CPCB) was pending as on 31-03-2015. Two show cause/legal notices received during 2014-15 from State PCBs (one each from Punjab PCB and Telangana State PCB) were duly responded to and as such there is no pendency on this account. However, 11 observations, received from Madhya Pradesh PCB during previous years, are pending as on 31-03-2015 for which various projects are under progress.

### **Principle 7: Policy Advocacy**

BHEL is a member of many trade and chamber/associations. Some of them are: Confederation of Indian Industry (CII), Federation of Indian Chambers of Commerce and Industry (FICCI), Associated Chambers of Commerce and Industry of India (ASSOCHAM), Indian Electrical and Electronics Manufacturers Association (IEEMA).

BHEL participates in policy advocacy through these bodies for promoting company's interests via knowledge sharing. Company actively contributed through public advocacy towards policies meant for strengthening of technology base in country, skill development, development of Indian Power Sector and Indian Manufacturing Industry, and growth of Public Sector Enterprises through better governance.

### **Principle 8: Inclusive Growth**

BHEL has well-structured organizational set-up, policy & processes through which various CSR programme towards inclusive growth and equitable development are being taken up. The company supports numerous social initiatives across the country by undertaking projects through specialized agency like NGOs, Govt. agencies etc. in line with the Schedule VII of section 135 of the Companies Act 2013. BHEL has undertaken several initiatives in areas such as Health, Education, Swachh Bharat Abhiyan, Environment Protection, Vocational Trainings, Skill Development Programmes, provided Infrastructure solutions and various community development programs which ultimately contributed

to holistic welfare and inclusive growth of the society. Close supervision, monitoring and Impact assessment of CSR initiatives are being carried out rigorously for effective implementation, to provide maximum benefits to the society and fruitfulness of the initiatives undertaken.

During 2014-15, five infrastructure development activities namely Construction / Renovation of Community Center, Installation of Solar Lighting System, Infrastructure improvements in school, Construction of classroom, and Construction of toilets in school were carried out covering more than 15 villages in the vicinity of BHEL's establishments.

### **Principle 9: Customer Value**

What Gandhi ji said 'He (customer) is the purpose of it (business)' is enshrined in our corporate culture. Customer focus is part of our Vision, Mission and Values statements.

Detailed Product Labels/ Name Plates/ Test Certificates are provided to customers as per their requirement and terms of the contracts with them.

Given the diversified and large scale operations of BHEL, customer complaints are handled by respective business units / project divisions. The feedback of customer is taken regularly through customer satisfaction surveys, customers' meets and face-to-face interactions. Company is also offering single IT platform 'Customer Interaction Portal' with regard to customer's complaint and feedback on product or project.

There is no case filed by any stakeholder against the company regarding unfair trade practices, irresponsible advertising and/or anti-competitive behavior during the last five years and pending as on end of financial year i.e., 31-03-2015. ●

## Annexure-V

### R&D and Technological Achievements

#### 5.1 Innovation

Continuous product development is the cornerstone of strategy for meeting the challenges in today's environment. BHEL places strong emphasis on innovation and creative development, which are the important drivers of BHEL's R&D programmes for achieving growth. The R&D efforts of the company are not only aimed at improving the performance and efficiency of the existing products, but also developing new products using state-of-the-art technologies and processes.

Over the years, BHEL entered into numerous technology collaboration arrangements with leading global manufacturing and engineering companies, such as General Electric Company of the United States, Siemens AG of Germany, Alstom SA of France, Mitsubishi Heavy Industries Ltd. of Japan and ABB Group of Switzerland. The company has successfully indigenised these technologies to meet the requirements of Indian customers and internalising manufacturing at its own facilities. Today, with eleven ongoing collaborations, BHEL is focusing on successful adaptation and timely absorption of these technologies.

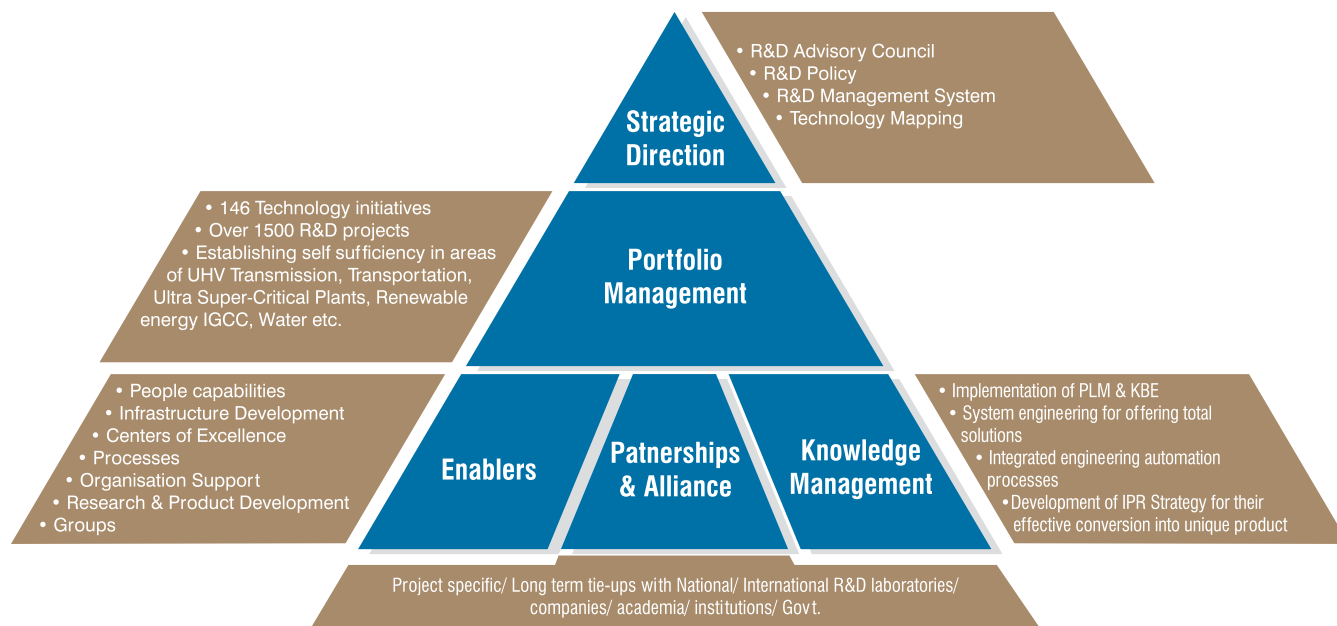
#### Ongoing Technology Collaborations (Partner / Product)

Alstom SA, France	Once through Boilers
Siemens AG, Germany	Steam Turbines, TG, Axial/lateral condensers
Mitsubishi Heavy Industries Ltd., Japan	Pumps for Boiler Feed, Booster, Cooling Water, Condensate Extraction for supercritical power plants, FGD system
General Electric, USA	Gas Turbines
Oto Melara, Italy	76 mm SRGMs (Super Rapid Gun Mount)
Sheffield Forgemasters UK	Forgings
Metso, Finland	C&I Automation platform
Nuovo Pignone, Italy	Centrifugal Compressors
Vogt Power Intl, USA	HRSG
GE India Industrial	Water Treatment Equipment
TLT GmbH, Germany	Fans



## 5.2 Strategy

Today, BHEL is deeply focused on innovation than ever before. As part of Strategic Plan 2012-17, the company is transforming its R&D and innovation in a structured and focused manner through five pronged approach consisting of Strategic Direction, Portfolio Management, Partnerships & Alliances, Knowledge Management and Enablers.



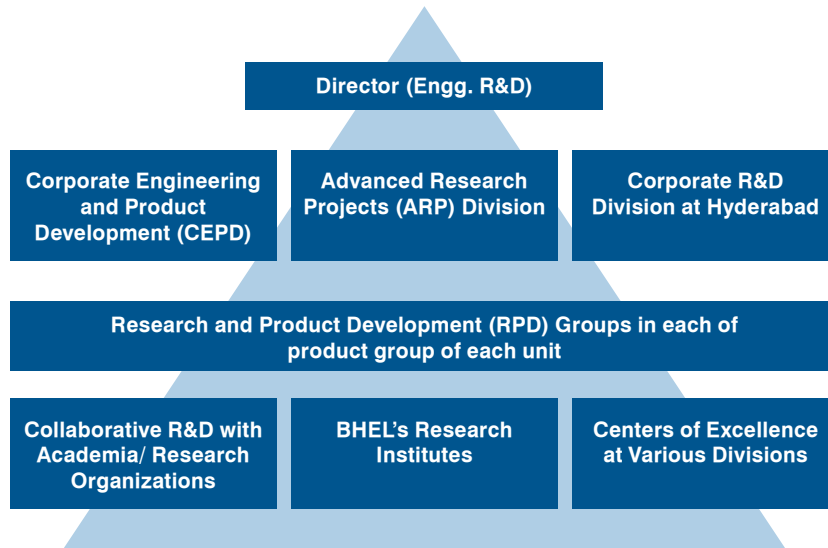
Strategic direction is provided to R&D through a policy framework under the guidance of R&D Advisory Council comprising of reputed Indian scientists, captains of industry and academia. A portfolio of 15 missions leading to 146 technology initiatives further cascaded down to 1500+ projects help the company to build and consolidate capabilities in emerging and existing areas. All these projects are executed and monitored for successful completion within the plan period ending in 2017.

### Major Mission Projects

1. Establish 800 MW Advanced Ultra supercritical Power plants with parameters 710 °C/310 ata covering design, engineering, manufacturing installation & commissioning.
2. In-house capability to establish grid connected Solar Power plant with matching BOS (Both Solar PV & Solar Thermal).
3. Develop in house capability for transmission HVDC ( $\pm$  800 kV) transmission products/ substations.
4. Develop total capability for transmission products/ substation of GIS up to 765 kV.
5. 3-phase propulsion systems for all railways needs covering electric/ diesel- electric loco, EMU, DEMU, MEMU, Coaches, metro and rolling stock addressing urban transportation.
6. Develop & commercialize applications in the area of Emerging technologies like High temperature Superconducting (HTSC) Motor, Fuel cell up to 2 kW rating, efficiency improvement of crystalline silicon solar cells from 16% to 25 %, etc.

## 5.3 R&D Structure

R&D organizational structure of the Company is headed by Director (E, R&D), supported by Corporate Engineering & Product Development (CEPD) at corporate level. Each product group in the Units has a dedicated Research & Product Development (RPD) group well complemented by a centralized Corporate Research & Development Division at Hyderabad.



### Collaborative R&D with Academia/ Research Organizations

- Indian Institute of Science, Bengaluru
- CSIR, New Delhi
- Central Institute for Plastics Engineering & Technology, Bhubaneswar
- Indian Institute of Technology Madras, Chennai
- Indian Institute of Technology, Kanpur
- Indian Institute of Technology, Delhi
- Indian Institute of Technology, Kharagpur
- Indian Institute of Technology, Guwahati
- Indian Institute of Technology, Bombay
- Indian Institute of Technology, Hyderabad
- BHEL R&D Gateway at IIT Madras Research park
- Joining and Welding Research Institute, Japan (JWRI)
- DVS – German Welding Society
- Leibniz University, Hanover, Germany

### BHEL's Research Institutes:

- Pollution Control & Research Institute (PCRI), Haridwar
- Welding Research Institute (WRI), Trichy
- Ceramic Technological Institute (CTI), Bengaluru
- Centre For Electric Transportation (CET), Bhopal
- Amorphous Silicon solar cell Plant, Gurgaon

### Centers of Excellence

- Intelligent Machines and Robotics
- Machine Dynamics
- Compressors & Pumps
- Nano-technology
- UHV Laboratory
- Simulators
- Computational Fluid Dynamics
- Surface Engineering
- Permanent Magnet Machines
- Advanced Transmission Systems
- Power Electronics and IGBT & Controller Technology
- Centre of Excellence for Control and Instrumentation
- Coal Research Centre
- Advanced Fabrication Technology

The Company has structured approach for strengthening R&D infrastructure, consisting of laboratories at Corporate R&D and manufacturing Units, Centres of Excellence, Specialised Research Institutes, etc., well equipped with state-of-the-art R&D infrastructure and benchmarked with the best in the world.

Infusing innovation in engineering processes including managing its knowledge base is identified

as focus area in these centers of innovation & technology development.

Continuing its focus on Knowledge Based Engineering (KBE) for reducing design cycle time and design optimization in all its products, BHEL has initiated a number of KBE projects and a 'Competence Centre for KBE/PLM' has been set up to build expertise and facilitate KBE/PLM activities.

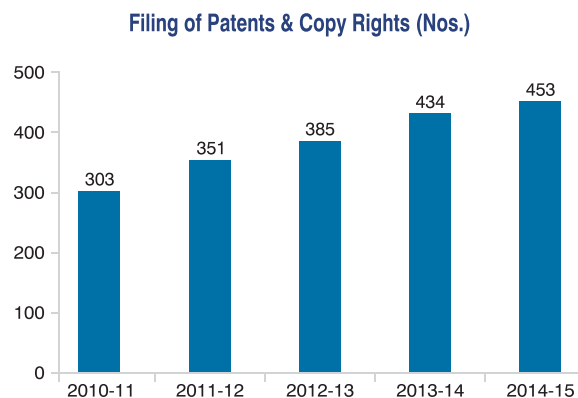
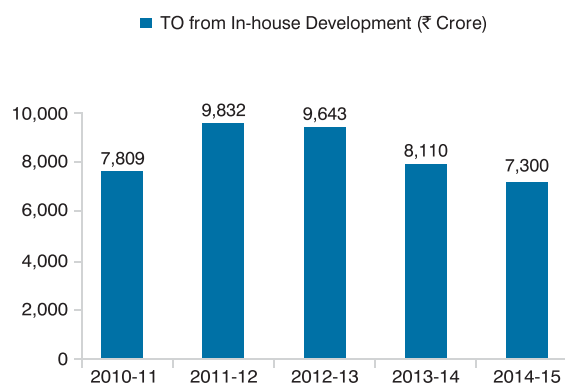
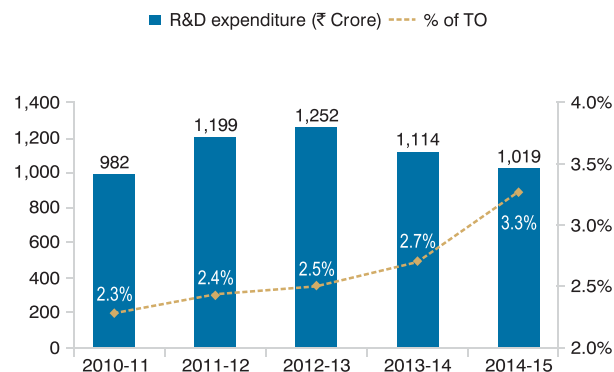
Further, with a view to bridge knowledge gaps BHEL has increased collaboration with academia and R&D Institutes for basic as well as applied research. Currently BHEL has Memorandum of Understanding (MoU) with over 10 leading academic research institutes. Company is also putting in place all enablers like people capabilities, infrastructure, processes and organization support to succeed in its ambitious technology endeavours.

### 5.4 Achievements during the year

BHEL has recorded significant achievements during the year. The R&D expenditure of the company for the current financial year is ₹ 1018.59 Crore which is 3.29% of the turnover. This also includes the expenditure incurred on R&D efforts gone into major modifications/ improvements in product/ designs against customer requirements which are not covered in R&D projects. The company filed 453 patent and copyright applications filed during the year 2014-15, enhancing the company's intellectual capital to 3010. A total of ₹ 7,300 Crore of the company's total turnover has been achieved from its in-house developed products and services.

During the year, there have been significant developments / improvements in engineering, processes and products covering various business verticals like Power, Industry, Transportation and Renewables. Some notable achievements are:

- BHEL has developed Fuel flexible Boiler design that caters to blending & co-firing of imported and indigenous coals
- BHEL has developed Hot Re-Heat (HRH) line safety valve with larger orifice area for Once Through Supercritical (OTSC) application which meets all the requirements of ASME Section-I and IBR. The development has led to reduction in number of valves required for 660 and 800 MW OTSC boilers
- BHEL has developed thermal shock resistant and high temperature wear resistant special refractory liners for cold cyclone CFBC boilers. The newly developed liners are thinner (thickness reduced from 70 mm to 25 mm) and more erosion resistant
- BHEL has indigenously developed a cost effective new product "Smart Wall Blowing System" (SWBS) for supercritical boiler



application, replacing a hitherto imported system, thereby reducing dependence on foreign vendors

- BHEL has developed and successfully type tested (at KEMA, Netherland) 36 kV, 40 kA Gas Insulated Switchgear incorporating new vacuum interrupters to handle higher fault current from present level of 25 kA to 40 kA
- To address the business of Extra High Voltage transmission (EHV), BHEL has developed a 765 kV class, 80 MVAR shunt reactor using

state-of-the-art technologies having low levels of electrical losses and vibration. The developed shunt reactor has been supplied to PGCIL- Wardha substation for 2 years field trial

- To meet market requirement, BHEL has developed and tested successfully a new variant of Indoor Air Insulated Switchgear (AIS) suitable for Arc Fault Rating 12kV, 40 kA for 0.2 Sec
- BHEL has developed and tested a new product 765 kV Class, 275 MVA Rating Generator Transformer (GT) using state-of-the-art technologies resulting in lower electrical and core losses



3x275 MVA 765 kV Transformer Bank, developed by BHEL, commissioned at Lalitpur 2

- BHEL has added a new product variant in its existing product range by indigenously developing a new vertical multistage centrifugal pump for condensate drip pump applications in 800 MW supercritical sets which were outsourced earlier
- In line with its focus on energy efficiency, BHEL has developed, manufactured and successfully type tested an efficient and compact variant of 2 pole induction motor of 400 kW, 6.6 kV for centrifugal pump application
- To address the requirement of industrial application, BHEL has developed low cost, light weight compact modular design of 3 MW and 5 MW, 11 kV Alternators suitable for top as well as side mounted coolers and tested successfully as per IEC 60034-1
- BHEL has developed a new product variant of 4x500 kVAR STATCOM for DC oil rig application. The development has led to improvement in utilization of diesel generator

capacity by compensating reactive power and improving quality of voltage & current



4x500 kVAR STATCOM for DC oil rig application developed by BHEL

- BHEL has optimized “emitter diffusion process” employed in the solar PV panel manufacture to improve solar cell efficiency by optimizing various diffusion parameters such as diffusion temperature, gas flows and exhaust rate. This has led to improvement in average cell efficiency to 18.75% resulting in improvement in the wattage of modules

## 5.5 Future focus areas

It is imperative to focus on newer areas to meet the challenges of a changing business scenario while continuing development in traditional areas of business. To meet this objective, BHEL has taken several technology development initiatives covering various business verticals viz. Power, Transportation, Transmission, Solar, Water, Defence and other areas. Company will continue to pursue various projects undertaken in recent years with focus on low-carbon path technologies including faster assimilation of supercritical technology, development of Advanced Ultra Super Critical Technology, IGCC Technology commercialization, Carbon capture, Solar PV & Thermal, 765/1200 kV Transmission System, GIS up to 765 kV,  $\pm 800$  kV HVDC system, IGBT based Propulsion Systems for higher rating Locos, EMUs, Metro coaches on mission mode. The company is also engaged in development of emerging technologies like Fuel Cells for distributed environment friendly power generation, development of new materials with addition of Nano-/micro-particles for improving characteristics, and superconducting application in Transformers, Generators, Motors, etc.



# Annexure-VI

## Corporate Governance

### 6.1 Our Philosophy on Corporate Governance

BHEL has established a sound framework of Corporate Governance which underlines commitment to quality of governance, transparency disclosures, consistent stakeholders' value enhancement and corporate social responsibility. BHEL endeavours to transcend much beyond the regulatory framework and basic requirements of Corporate Governance focusing consistently towards building confidence of its various stakeholders including shareholders, customers, employees, suppliers and the society at large. The Company has developed a framework for ensuring transparency, disclosure and fairness to all, especially minority shareholders.

The Vision of BHEL envisages "being a global engineering enterprise providing solutions for a better tomorrow" and its Mission is "providing sustainable business solutions in the fields of Energy, Industry & Infrastructure".

The Corporate Governance Policy of BHEL rests upon the four pillars of Transparency, Full Disclosure, Independent Monitoring and Fairness to all. To strengthen this, BHEL has signed a MoU with Transparency International to adopt 'Integrity Pact'. Our corporate structure, business procedures and disclosure practices have attained a sound equilibrium with our Corporate Governance Policy resulting in achievement of goals as well as high level of business ethics. BHEL's Corporate Governance policy is based on the following principles:

- i) Independence and versatility of the Board
- ii) Integrity and ethical behaviour of all personnel
- iii) Recognition of obligations towards all

stakeholders – shareholders, customers, employees, suppliers and the society

- iv) High degree of disclosure and transparency levels
- v) Total compliance with laws in all areas in which the company operates
- vi) Achievement of above goals with compassion for people and environment

The Company believes that conducting business in a manner that complies with the Corporate Governance procedures and Code of Conduct, exemplifies each of our core values and positions us to deliver long-term returns to our shareholders, favourable outcomes to our customers, attractive opportunities to our employees and making the suppliers our partners in progress & enriching the society.

### 6.2 Board of Directors

#### i. Composition & Category of Directors

Pursuant to Section 2(45) of the Companies Act, 2013 BHEL is a 'Government Company' as 63.06% of the total paid-up share capital of the Company is held by the President of India.

The composition of Board of Directors of BHEL has an appropriate mix of Executive Directors represented by Functional Directors including CMD and Non-Executive Directors represented by Government Nominees & Independent Directors, to maintain the independence of the Board and to separate the Board functions of management and control. As the Chairman is an Executive Director, Independent Directors comprise half of the strength of the Board.

The composition of the Board of Directors is as

# DIRECTORS' REPORT



follows:

Particulars	Board Structure	Actual Strength as on 31.3.2015
Chairman & Managing Director	1	1
Whole-time Executive (Functional) Directors	5	5
Part-time Official Directors (Government Nominees) representing the Ministry of Heavy Industries & Public Enterprises, Government of India	2	2
Part-time Non-official (Independent) Directors	8	2
<b>Total</b>	<b>16</b>	<b>10</b>

As on 31<sup>st</sup> March, 2015, there existed six vacancies of Part-time Non-official (Independent) Directors on the Board of BHEL. The matter of filling up of these vacancies is under consideration of Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, Government of India.

## ii. Attendance of each Director at the Board Meetings held during 2014-15 and the last AGM

Director's Name S/Shri	No. of Board Meetings		Last AGM (held on 19.09.2014)
	Held	Attended	

### EXECUTIVE DIRECTORS

B. Prasada Rao, Chairman & Managing Director	9	9	Yes
P.K. Bajpai, Director (Finance)	9	9	Yes
R. Krishnan, Director (HR)	9	9	Yes
W.V.K. Krishna Shankar, Director (IS&P)	9	9	Yes
Atul Sobti #, Director (Power)	9	9	Yes
T.N. Veeraraghavan*, Director (E,R&D) (w.e.f. 07.01.2015 A.N.)	1	1	-

### PART-TIME OFFICIAL DIRECTORS – GOVT. NOMINEES

S.K. Bahri, Additional Secretary & Financial Adviser, Department of Industrial Policy and Promotion, Ministry of Commerce & Industry	9	7	Yes
Rajesh Kumar Singh*, Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises (w.e.f. 22.12.2014)	2	1	-
Ambuj Sharma, Additional Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises (up to 21.12.2014)	7	7	Yes

### PART-TIME NON-OFFICIAL (INDEPENDENT) DIRECTORS

Ms. Harinder Hira (w.e.f. 08.05.2014)	8	8	Yes
--	---	---	-----

A.N. Roy (w.e.f. 27.08.2014)	4	3	Yes
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# held additional charge of Director (E,R&D) w.e.f. 01.03.2014 up to 07.01.2015 F.N.

\* denotes the respective person was not a Director of BHEL as on last AGM date.

**iii. Details of Directorships, Committee Memberships and Committee Chairmanship in other companies as on 31<sup>st</sup> March, 2015**

Director's name S/Shri	Details of Directorships in other Companies	Details of Committee Memberships and Committee Chairmanship in other companies
B. Prasada Rao Chairman & Managing Director	-NIL-	-NIL-
P. K. Bajpai Director (Finance)	Latur Power Company Ltd.	-NIL-
R. Krishnan Director (HR)	Dada Dhuniwale Khandwa Power Ltd.	-NIL-
W.V.K. Krishna Shankar Director (IS&P)	Dada Dhuniwale Khandwa Power Ltd.	<b>Audit Committee:</b> Dada Dhuniwale Khandwa Power Ltd. (Chairman)
Atul Sobti Director (Power)	1. NTPC BHEL Power Projects Pvt. Ltd. 2. Raichur Power Corporation Ltd.	-NIL-
T.N. Veeraraghavan Director (E, R&D)	-NIL-	-NIL-
S.K. Bahri Part-time Official Director	1. Heavy Engineering Corporation Ltd. 2. H.M.T. Ltd.	<b>Audit Committee:</b> Heavy Engineering Corporation Ltd. (Member)
Rajesh Kumar Singh Part-time Official Director	1. Engineering Projects (India) Ltd. 2. Scooters India Ltd. 3. Andrew Yule & Co Ltd. 4. Tide Water Oil Co India Ltd.	<b>Audit Committee:</b> 1. Tide Water Oil Co India Ltd. (Member) 2. Engineering Projects (India) Ltd. (Member)
Ms. Harinder Hira Part-time Non-Official Director	-NIL-	-NIL-
A.N. Roy Part-time Non-Official Director	1. India Venture Advisors Pvt. Ltd. 2. HDFC Bank Ltd. 3. Vandana Foundation (Sec 8 Company) 4. GlaxoSmithKline Pharmaceuticals Ltd. 5. Mayar Infrastructure Development Pvt. Ltd. 6. Skills Academy Pvt. Ltd.	<b>Stakeholders' Relationship Committee:</b> HDFC Bank Ltd. (Chairman)

\*Only Chairmanship/ Membership of the Audit Committee and Stakeholders' Relationship Committee has been considered.

No Director of the Company holds office at the same time as Director in more than twenty (20) companies. No Director of the Company is a member in more than ten (10) Committees or is a Chairman of more than five (5) Committees across all companies in which he is a Director.

#### **iv. No. of Board Meetings held, dates on which held**

The meetings of the Board are normally held at the Company's Registered Office in New Delhi and are scheduled well in advance. The Company Secretary, in consultation with the Chairman & Managing Director, sends a written notice of each Board meeting to each Director. The Board agenda is circulated to the Directors in advance.

The members of the Board have access to all information of the Company and are free to recommend inclusion of any matter in agenda for discussion. In case of need, the senior management is invited to attend the Board Meetings to provide additional inputs relating to the items being discussed and/ or to give presentation to the Board. The Board meets at least once in a quarter to review the quarterly results and other items on the agenda. Additional meetings are held, when necessary.

During the year under review, the Board met nine times on the following dates:

- |                           |                        |
|---------------------------|------------------------|
| (i) April 5, 2014         | (ii) May 12, 2014      |
| (iii) May 29, 2014        | (iv) July 14, 2014     |
| (v) August 12, 2014       | (vi) November 14, 2014 |
| (vii) December 11, 2014   | (viii) January 7, 2015 |
| (ix) February 12-14, 2015 |                        |

#### **v. Board's Responsibilities**

The Board's mandate is to oversee the Company's strategic direction, review and monitor corporate performance, ensure regulatory compliance and safeguard the interests of the shareholders.

#### **vi. Role of Independent Directors**

The Independent Directors play an important role in deliberations at the Board and Committee meetings and bring to the Company their expertise in the fields of engineering, finance, management, law and public policy.

The Independent Directors are part of important

Committees constituted by the Board such as the Audit Committee, Nomination & Remuneration Committee and CSR Committee. In terms of Companies Act, 2013 & Clause 49 of the Listing Agreement, the Audit Committee and the Nomination & Remuneration Committee are chaired by an Independent Director and functions within their respective defined terms of references.

Further, in line with DPE OM dated 28<sup>th</sup> December, 2012 on Model Role & Responsibilities of Non-Official Directors for CPSEs, the Board had constituted a Committee of Independent Directors. The said Committee is in compliance with the requirements of Clause 49 of Listing Agreement and the Code of Independent Directors under Companies Act, 2013. The minutes of all the Board Level Committee Meetings are circulated and discussed in the Board Meetings. Details regarding familiarization programme of Independent Directors are available on the website of the Company 'www.bhel.com' at web link : [http://www.bhel.com/investor\\_relations/pdf/familiriazation\\_progrm\\_for\\_IDs.pdf](http://www.bhel.com/investor_relations/pdf/familiriazation_progrm_for_IDs.pdf)

#### **vii. Information placed before the Board of Directors**

The information under the following heads are usually presented to the Board of Directors of BHEL either as part of the agenda papers or are tabled/ presented during the course of Board meetings:

- Annual operating plans and budgets and any updates
- Capital budgets and any updates
- Quarterly results for the company and its operating divisions or business segments
- Minutes of meetings of Audit Committee and other Committees of the Board
- Minutes of Board Meetings of unlisted subsidiary companies
- Statement of all significant transactions and arrangements entered into by unlisted subsidiary companies
- The information on recruitment of senior officers just below the Board level
- Details of any Joint Venture or R&D project or technical collaboration agreement requiring approval of Board of Directors
- Significant labour problems and their proposed

solutions. Any significant development in Human Resources/ Industrial Relations front like signing of wage agreement, implementation of Voluntary Retirement Scheme etc.

- Sale of material, nature of investments, subsidiaries, assets, which is not in normal course of business
- Quarterly details of foreign exchange exposures and the steps taken by management to limit the issues of adverse exchange rate movement, if material
- Action Taken Report on matters desired by the Board
- Disclosure of Interest by Directors about directorships and Committee positions occupied by them in other companies
- Quarterly report on compliance of various laws
- Information relating to major legal disputes
- Status of Arbitration cases
- Short term investment of surplus funds
- Any contract(s) in which Director(s) are deemed to be interested
- Status of shareholders' grievances on quarterly basis
- Significant Capital Investment proposals
- Changes in significant accounting policies & practices and reasons for the same
- Performance of various units/ functions
- Any other information required to be presented to the Board either for information or approval

#### viii. Selection of New Directors

As per Articles of Association of BHEL, the President of India through Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, appoints the Chairman & Managing Director, Functional Directors and Part-time Official Directors on the Board of BHEL and also nominates Part-time Non-official (Independent) Directors on the Board of BHEL.

The Independent Directors are selected by the Department of Heavy Industry in consultation with the Search Committee of the Department of Public Enterprises which maintains a panel of eminent personalities having wide experience in the field of Management, Finance, Engineering, Administration and Industry.

#### ix. Membership term & Retirement policy

The appointment of Chairman & Managing Director and Functional Directors shall be on such terms and conditions, remuneration and tenure as the President of India may from time to time determine.

Two Part-time Official Directors viz. Additional Secretary/ Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises and Additional Secretary & Financial Adviser, Ministry of Commerce and Industry are nominated by the Government of India on the Board of BHEL. They continue to be on the Board of BHEL at the discretion of the Government of India.

The tenure of Part-time Non-official (Independent) Directors is decided by the Department of Heavy Industry. Normally, an Independent Director is appointed for a period of three years.

#### x. Code of Conduct

As part of BHEL's persisting endeavour to set a high standard of conduct for its employees, a 'Code of Business Conduct and Ethics' was laid down for all Board Members and Senior Management personnel and the same was revised in line with changes in the regulatory framework & changing business dynamics and to incorporate other relevant provisions to strengthen the Code. Pursuant to revised Clause 49(II)(E) of the Listing Agreement with the Stock Exchanges, the Board of Directors of BHEL in its 465<sup>th</sup> meeting held on 14<sup>th</sup> November, 2014 revised and approved the "Code of Business Conduct & Ethics for Board Members and Senior Management Personnel" of the Company. The Code encompasses:

- General Moral Imperatives;
- Specific Professional Responsibilities; and
- Specific Additional Provisions for Board Members and Senior Management Personnel.

A copy of the said revised Code has been placed on the Company's website '[www.bhel.com](http://www.bhel.com)'. Additional suggestions/ ideas to improve the said Code are gladly invited.

#### xi. Charter of the Board of Directors

For the purpose of clearly defining the roles and responsibilities of the Board and individual Directors, the Board has laid down a Charter of the Board of Directors. The Charter also articulates our

corporate governance objectives and approach.

## xii. CEO/CFO certification

CEO / CFO certification pursuant to Clause 49(IX) of the Listing Agreement is enclosed at Annexure-II of the Directors Report.

## 6.3 Board Level Audit Committee

### i. Terms of reference

The terms of reference of the Board Level Audit Committee specified by the Board are in conformity with the requirements of Section 177 of the Companies Act, 2013 as well as Clause 49 of the Listing Agreement and are as follows:

1. 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;
2. Recommendation for appointment, remuneration and terms of appointment of auditors of the company;
3. Approval of payment to statutory auditors for any other services rendered by the statutory auditors;
4. Reviewing, with the management, the annual financial statements and auditor's report thereon before submission to the board for approval, with particular reference to:
  - i. 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;
  - ii. Changes, if any, in accounting policies and practices and reasons for the same;
  - iii. Major accounting entries involving estimates based on the exercise of judgment by management;
  - iv. Significant adjustments made in the financial statements arising out of audit findings;
  - v. Compliance with listing and other legal requirements relating to financial statements;
  - vi. Disclosure of any related party transactions;
5. Reviewing, with the management, the quarterly financial statements and auditor's report thereon before submission to the board for approval;
6. Reviewing, with the management, the statement of uses/ application of funds raised through an issue (public issue, rights issue, preferential issue, etc.), the statement of funds utilized for purposes other than those stated in the offer document/ prospectus/ notice and the report submitted by the monitoring agency monitoring the utilization of proceeds of a public or rights issue, and making appropriate recommendations to the Board to take up steps in this matter;
7. Review and monitor the auditor's independence and performance, and effectiveness of audit process;
8. Approval or any subsequent modification of transactions of the company with related parties;
9. Scrutiny of inter-corporate loans and investments;
10. Valuation of undertakings or assets of the company, wherever it is necessary;
11. Evaluation of internal financial controls and risk management systems;
12. Reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems;
13. 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;
14. Discussion with internal auditors of any significant findings and follow up there on;
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. Discussion with statutory auditors before the audit commences, about the nature and scope

of audit as well as post-audit discussion to ascertain any area of concern;

17. 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;
18. To review the functioning of the Whistle Blower/ Vigil mechanism;
19. To review the Audit paras referred to BLAC by the Internal Audit / Board and / or Govt. of India and to provide its suggestions / guidance/ comments on the issues referred to it.
20. Discussion with Statutory Auditors/ Internal Auditors periodically about internal control systems.
21. To seek professional advice from external sources in appropriate cases, wherever required;
22. The Audit Committee shall also review the following information:
  - a. Management discussion and analysis of financial condition and results of operations;
  - b. Statement of significant related party transactions;
  - c. Management letters / letters of internal control weaknesses issued by the statutory auditors; and
  - d. Internal audit reports relating to internal control weaknesses;
23. Carrying out any other function as is mentioned in the terms of reference of the Audit Committee.

#### ii. Composition of Committee, name of Members & Chairperson

The Audit Committee comprises of 2/3<sup>rd</sup> members as Independent Directors as mandated by the Listing Agreement. Further, the Committee is chaired by an Independent Director. The member directors comprise of professionals of repute and standing with background in commerce, finance, administration and governance, both national and international.

The Audit Committee was last reconstituted w.e.f. 30<sup>th</sup> December, 2014. The Committee comprises of the following directors:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
A.N. Roy (Part-time Non-Official Director)	Chairperson (w.e.f. 30.12.2014)	1	1
	Member (w.e.f. 24.09.2014)	1	1
Rajesh Kumar Singh (Part-time Official Director)	Member (w.e.f. 30.12.2014)	1	1
S.K. Bahri (Part-time Official Director)	Member (up to 23.09.2014)	3	3
Ambuj Sharma (Part-time Official Director)	Member (up to 21.12.2014)	4	4
Ms. Harinder Hira (Part-time Non-Official Director)	Chairperson (w.e.f. 12.05.2014) (up to 29.12.2014)	4	4
	Member (w.e.f. 30.12.2014)	1	1

Director (Finance) will be permanent invitee in the meeting. Company Secretary shall act as Secretary to the Committee.

Head of Internal Audit and a representative of the Statutory Auditor may be present as invitees for the meetings of the Audit Committee. The Auditors of the Company and the Key Managerial Personnel shall have a right to be heard in the meetings of the Audit Committee when it considers the Auditor's Report but shall not have the right to vote.

#### iii. Meetings and Attendance

The Audit Committee met five times on 29<sup>th</sup> May, 2014, 14<sup>th</sup> July, 2014, 12<sup>th</sup> August, 2014, 14<sup>th</sup> November, 2014, and 12<sup>th</sup> February, 2015 during the year 2014-15. The detail of attendance of each member is given in the above table.

## 6.4 Remuneration Committee

### i. Remuneration policy

BHEL being a Public Sector Undertaking, the appointment and remuneration of CMD & Functional Directors are decided by the Govt. of India. The

part-time non-executive directors are not paid any remuneration except sitting fees are paid to Independent Directors for attending meetings of the Board or Committee thereof. Moreover, the terms of appointment of CMD & Directors, as approved by the President of India, provide for fixation of certain perks and benefits like leased accommodation, payment of HRA, furnished accommodation, productivity linked incentive etc., as per rules of BHEL.

## ii. Terms of reference

The Board in its meeting held on 2<sup>nd</sup> January, 2014, decided to merge the erstwhile Remuneration Committee and Remuneration Committee on PRP and constituted a single “Remuneration Committee” with the following terms of reference.

- (a) Oversight of the company’s policy on specific remuneration packages, perquisites for Whole-time Directors including pension rights and any compensation payment, which are not fixed by the President of India.
- (b) Approve certain perquisites for Whole-time Directors which are within the powers of Board. Review of the elements of remuneration package of individual directors summarized under major groups, such as incentives/ benefits, bonus, stock options, pension etc.
- (c) Finalization of policies on perks and benefits and other related matters which are not fixed by the President of India but within the powers of Board.
- (d) Approval of fixed component and performance linked incentives based on the performance criteria.
- (e) Finalization of the criteria of making payments to Non-Executive Directors.
- (f) Recommendation of fees/ compensation/ stock options, if any, to be paid/ granted, to non-executive directors, including independent directors, to the Board of Directors/ Shareholders.
- (g) To decide the bonus/ variable pay pool and policy for its distribution across the executives and non-unionised supervisors.
- (h) Carrying out any other function related to the terms of reference of the Remuneration Committee.

## iii. Composition of Committee, names of members & Chairperson

The Remuneration Committee was last reconstituted w.e.f. 30<sup>th</sup> December, 2014. Up to 29<sup>th</sup> March, 2015, the Remuneration Committee comprised of the following directors:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
Ms. Harinder Hira (Part-time Non-Official Director)	Chairperson (w.e.f. 05.08.2014)	1	1
S.K. Bahri (Part-time Official Director)	Member (w.e.f. 05.08.2014)	1	1
Rajesh Kumar Singh (Part-time Official Director)	Member (w.e.f. 30.12.2014)	-	-
Ambuj Sharma (Part-time Official Director)	Member (up to 21.12.2014)	1	1
Shri A.N. Roy (Part-time Non-Official Director)	Member (w.e.f. 24.09.2014)	1	1

Director (HR) will be permanent invitee to the meeting. Company Secretary shall act as Secretary to the Committee.



#### iv. Meetings and Attendance

The Committee met once on 13<sup>th</sup> November, 2014. The detail of attendance of each member is given in the above table.

In line with the requirements of Companies Act, 2013 and revised Clause 49 of the Listing Agreement, the Board of Directors w.e.f. 30<sup>th</sup> March, 2015, merged the Board Level Nomination Committee & the Remuneration Committee and renamed the merged committee as the Nomination & Remuneration Committee. The terms of reference and other details of the “Nomination & Remuneration Committee” are given at Point 6.5 of this Report.

### 6.5 Nomination and Remuneration Committee

#### i. Terms of Reference

In line with the requirements of Section 178 of the Companies Act, 2013 and revised Clause 49 of the Listing Agreement, the Board constituted the Nomination & Remuneration Committee (NRC) w.e.f. 30<sup>th</sup> March, 2015 having the following terms of reference:

- a) To identify persons who are qualified to become directors and who may be appointed in senior management in accordance with the criteria laid down and recommend to the Board for their appointment and removal and to carry out evaluation of every director's performance. Senior Management means personnel of the company who are members of its core management team excluding Board of Directors comprising all members of management one level below the executive directors, including the functional heads.
- b) To formulate the criteria for determining qualifications, positive attributes and independence of a director and recommend to the Board a policy, relating to the remuneration of the directors, key managerial personnel and other employees in compliance with the provisions of Act/ LA/ DPE guidelines.
- c) Formulation of criteria for evaluation of Independent Directors and the Board.
- d) Devising a policy on Board diversity.
- e) To recommend to the Board nomination of BHEL officials in the Boards of its subsidiaries and other government organizations which are required to be approved by the Board of BHEL before further submission to DHI.
- f) Oversight of the company's policy on specific remuneration packages, perquisites for Whole-time Directors including pension rights and any compensation payment, which are not fixed by the President of India.
- g) Approve certain perquisites for Whole-time Directors which are within the powers of Board. Review of the elements of remuneration package of individual directors summarized under major groups, such as incentives/benefits, bonus, stock options, pension etc.
- h) Finalization of policies on perks and benefits and other related matters which are not fixed by the President of India but within the powers of Board.
- i) Approval of fixed component and performance linked incentives based on the performance criteria.
- j) Finalization of the criteria of making payments to Non-Executive Directors.
- k) Recommendation of fees/compensation/stock options, if any, to be paid/granted, to non-executive directors, including independent directors, to the Board of Directors/ Shareholders.
- l) To decide the bonus/ variable pay pool and policy for its distribution across the executives and non-unionised supervisors.
- m) Carrying out any other function related to the terms of reference of the NRC.

## ii. Composition of Committee, name of Members & Chairperson

The Committee comprises of the following directors:

Name of the Director S/Shri	Position
<b>Ms. Harinder Hira</b> (Part-time Non-Official Director)	Chairperson
<b>S.K. Bahri</b> (Part-time Official Director)	Member
<b>Rajesh Kumar Singh</b> (Part-time Official Director)	Member
<b>A.N. Roy</b> (Part-time Non-Official Director)	Member

Director (HR) will be permanent invitee to the meeting. Company Secretary shall act as Secretary to the Committee.

## iii. Meetings and Attendance

No meeting of the Nomination & Remuneration Committee took place during the year.

## iv. Details of remuneration of Functional Directors during the year 2014-15 are given below:-

(In ₹)

Sl. No.	Name of the Director S/ shri	Salary	Benefits	Performance Linked Incentives	Total	Service Contract/ Notice Period Severance Fee
1.	B. Prasada Rao	2703650	1083240	785506	4572397	--
2.	P.K. Bajpai	2425883	1047943	502206	3976032	Liable to retire by rotation
3.	R. Krishnan	2289061	1030884	479060	3799005	Liable to retire by rotation
4.	W.V.K. Krishna Shankar	2363516	1722741	346291	4432548	Liable to retire by rotation
5.	Atul Sobti	2616373	360558	163709	3140640	Liable to retire by rotation
6.	T.N. Veeraraghavan (w.e.f. 07.01.2015)	546627	121544	0	668171	Liable to retire by rotation

## v. Details of payments made to Independent Directors during the year 2014-15 are given below:-

(In ₹)

Name of the Independent Directors	Sitting Fees		Total
	Board Meeting	Committee Meeting	
Ms. Harinder Hira	1,60,000/-	1,95,000/-	3,55,000/-
Shri A.N. Roy	60,000/-	60,000/-	1,20,000/-

Independent Directors were entitled for sitting fee @ ₹ 20,000/- per Board Meeting and ₹ 15,000/- per Board Level Committee Meeting attended by them. They are not entitled to Stock Option.

## vi. Equity Shares held by Directors

Except as stated hereunder, none of the Directors, hold any Equity Shares in BHEL (as on 31<sup>st</sup> March, 2015):

Name of the Director S/Shri	No. of shares held
B. Prasada Rao	2000
W.V.K. Krishna Shankar	100
Atul Sobti	1500
T.N. Veeraraghavan	500

The Company has not issued any stock options during the year 2014-15.

## 6.6 Shareholders' Committees

### 6.6.1 Share Transfer Committee

The Board constituted a Share Transfer Committee on 25<sup>th</sup> March, 1992, which comprises Chairman & Managing Director, Director (Power) and Director (Finance) of the Company. The Board of Directors revised the terms of reference of the Committee w.e.f. 1<sup>st</sup> August, 2014. The Share Transfer Committee will consider and approve all share related issues, other than transfer of shares viz. transposition, sub-division, consolidation, issue of duplicate share certificate etc. in physical mode.

#### Meetings during 2014-15

The Share Transfer Committee met 16 times during the year. The minutes of the Share Transfer Committee meetings are periodically placed before the Board of Directors.

### 6.6.2 Stakeholders Relationship Committee

#### i. Terms of Reference

The Board of Directors on 12<sup>th</sup> May, 2014 reconstituted the Shareholders'/Investors' Grievance Committee as the Stakeholders Relationship Committee in line with the requirements of Companies Act, 2013 and revised Clause 49 of the Listing Agreement. The Committee shall specifically look into the redressal of grievances of shareholders, debenture holders and other security holders including complaints related to transfer of shares, non-receipt of balance sheet, non-receipt of declared dividends etc.

## ii. Composition of Committee, name of Members & Chairperson

The Stakeholders Relationship Committee was last reconstituted w.e.f. 30<sup>th</sup> December, 2014. The Committee comprises of the following directors:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
Rajesh Kumar Singh (Part-time Official Director)	Chairperson (w.e.f. 30.12.2014)	1	1
Ambuj Sharma (Part-time Official Director)	Chairperson (up to 21.12.2014)	3	3
Director (Finance)	Member	4	4
Director (HR)	Member	4	4

Company Secretary shall act as Secretary to the Committee.

Company Secretary is the Compliance Officer in terms of Clause 47 of the Listing Agreement with the Stock Exchanges.

#### iii. Meetings and Attendance

The Committee met four times on 29<sup>th</sup> May, 2014, 15<sup>th</sup> July, 2014, 13<sup>th</sup> November, 2014 and 28<sup>th</sup> January, 2015 during the year under review. The detail of attendance of each member is given in the above table.

#### Detail of shareholders' complaints

As reported by Karvy Computershare Private Limited (RTA) to SEBI, 759 complaints were received from the shareholders during the year under review and all complaints were redressed up to 31<sup>st</sup> March, 2015. No complaint was pending at the end of the period under report.

## 6.7 Board Level Committee for Corporate Social Responsibility

#### i. Terms of Reference

Pursuant to the DPE Guidelines on Corporate Social Responsibility for CPSEs, the Board constituted the Board Level Apex Committee for CSR on 25<sup>th</sup> November, 2010 for proper & periodic monitoring of CSR activities. The

Committee is presently christened as the Board Level Committee for Corporate Social Responsibility. The Board of Directors in its meeting held on 12<sup>th</sup> May, 2014 reconstituted the Committee in line with requirements of Companies Act, 2013. The terms of reference of the Committee are as under:

1. Formulation and recommendation to the Board the Corporate Social Responsibility Policy which shall indicate the activities to be undertaken by the company as specified in Schedule VII to the Companies Act, 2013;
2. Recommendation of the Projects, Programs and amount of expenditure to be incurred on the activities referred to in clause (1); and
3. Monitoring the Corporate Social Responsibility activities of the company from time to time.
4. Ensuring compliance with guidelines on Corporate Social Responsibility and Sustainable Development issued by the Government of India from time to time.

## ii. Composition of Committee, name of Members & Chairperson

The Committee was last reconstituted w.e.f. 30<sup>th</sup> December, 2014. The Committee comprises of the following directors:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
Ms. Harinder Hira (Part-time Non-official Director)	Chairperson (w.e.f. 12.05.2014)	6	6
Rajesh Kumar Singh (Part-time Official Director)	Member (w.e.f. 30.12.2014)	1	1
Ambuj Sharma (Part-time Official Director)	Member (up to 21.12.2014)	5	5
Director (Finance)	Member	6	6
Director (HR)	Member	6	6

Head (CSR)-ED/GM In-charge, Corporate Office would be Permanent Invitee. Company Secretary

shall act as Secretary to the Committee.

## iii. Meetings and Attendance

The Committee met six times during the year on 15<sup>th</sup> July, 2014, 11<sup>th</sup> August, 2014, 18<sup>th</sup> September, 2014, 13<sup>th</sup> November, 2014, 11<sup>th</sup> December, 2014 and 28<sup>th</sup> January, 2015. The detail of attendance of each member is given in the above table.

## 6.8 HR Committee

### i. Terms of Reference

The Board constituted the HR Committee on 31<sup>st</sup> May, 2006 specifically to look into the following matters:

- a. Review of present policies with respect to promotion and reward/ incentive to the Executives.
- b. Suggest both short term and long term changes in the policies to prepare BHEL for the changed/ emerging business environment.

### ii. Composition of Committee, name of Members & Chairperson

The HR Committee was last reconstituted on 16<sup>th</sup> July, 2012. The Committee comprises of the following directors:

Name of the Director S/ Shri	Position
Ambuj Sharma (Part-time Official Director)	Member (up to 21.12.2014)
Director (Finance)	Member
Director (HR)	Member

Company Secretary shall act as its Secretary.

### iii. Meetings and Attendance

No meeting of the HR Committee took place during the year.

## 6.9 Committee of Independent Directors

### i. Terms of Reference

The Board, in line with DPE OM dated 28<sup>th</sup> December, 2012 on Model Role & Responsibilities of Non-Official Directors for CPSEs, constituted a Committee of Independent Directors, which is also in compliance with the requirements of Schedule

IV of the Companies Act, 2013 and Clause 49(II)(B)(6) of the Listing Agreement.

**ii. Composition of Committee, name of members & Chairperson**

The Committee comprises of the following Independent Directors:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
Ms. Harinder Hira (Part-time Non-official Director)	Chairperson & Lead Independent Director	1	1
Shri A.N. Roy (Part-time Non-official Director)	Member	1	1

**iii. Meetings and Attendance**

The Committee met once during the year on 25<sup>th</sup> March, 2015. The detail of attendance of each member is given in the above table.

**6.10 Board Level Nomination Committee**

**i. Terms of Reference**

The Board constituted the Nomination Committee on 22<sup>nd</sup> March, 2013 to recommend to the Board nomination of BHEL officials in the Boards of its subsidiaries and other government organizations which are required to be approved by the Board of BHEL before further submission to DHI.

**ii. Composition of Committee, name of members & Chairperson**

Up to 29<sup>th</sup> March, 2015, the Committee comprised of the following Directors:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
Director (E,R&D)	Chairperson (w.e.f. 12.02.2015)	1	1
Director (Finance)	Member	1	1
Director (HR)	Member	1	-

Head/ (HR) shall be a Permanent Invitee. Company

Secretary shall act as Secretary to the Committee.

**iii. Meetings and Attendance**

The Committee met once during the year on 13<sup>th</sup> March, 2015. The detail of attendance of each member is given in the above table.

In line with the requirements of Section 178 of the Companies Act, 2013 and revised Clause 49 of the Listing Agreement, the Board of Directors w.e.f. 30<sup>th</sup> March, 2015, merged the Board Level Nomination Committee with the Remuneration Committee and renamed the merged committee as the Nomination & Remuneration Committee.

**6.11 Board Level Risk Management Committee**

**i. Terms of Reference**

In line with revised Clause 49 of the Listing Agreement, the Board of Directors on 14<sup>th</sup> November, 2014 constituted the Board Level Risk Management Committee. The terms of reference of the Committee are as under:

- (i) To review the Company's risk governance structure, risk assessment and risk management frame work, guidelines, policies and processes for risk assessment and risk management.
- (ii) To review Company's risk mitigation strategies relating to identified key risks as well as the processes for monitoring and mitigating such risks.
- (iii) Report to the Board on the Committee's activities for information and recommend proposed changes, if any, to the Board for approval.

**ii. Composition of Committee, name of Members & Chairperson**

The Committee comprises of the following members:

Name of the Director S/ Shri	Position	No. of Meetings held during their tenure	No. of Meetings Attended
AS & FA, DIPP (Part-time Official Director)	Chairperson	1	1
Director (Finance)	Member	1	1

Director (IS&P)	Member	1	1
Director (Power)	Member	1	1
Chairman, Risk Management Steering Committee	Member	1	-
Chief Risk Officer	Member & Convener	1	1

### iii. Meetings and Attendance

The Committee met once during the year on 22<sup>nd</sup> January, 2015. The detail of attendance of each member is given in the above table.

## 6.12 General Meetings

### i. Location and time of last three AGMs:

Year	Location	Date	Time
<b>FY 2011- 12 (48<sup>th</sup> AGM)</b>	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	19 <sup>th</sup> September, 2012	10.00 a.m.
<b>FY 2012- 13 (EGM)</b>	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	27 <sup>th</sup> June, 2013	11.00 a.m.
<b>FY 2012- 13 (49<sup>th</sup> AGM)</b>	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	20 <sup>th</sup> September, 2013	10.00 a.m.
<b>FY 2013- 14 (50<sup>th</sup> AGM)</b>	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	19 <sup>th</sup> September, 2014	10.00 a.m.

### ii. Details of Special resolutions passed in previous three AGMs and EGM

Special Resolutions in respect of approval of Modified Draft Rehabilitation Scheme (MDRS) incorporating amalgamation between Bharat Heavy Plate and Vessels Limited (BHPVL), the wholly owned subsidiary of Bharat Heavy Electricals Limited (BHEL) and BHEL were passed in the Extraordinary General Meeting held on 27<sup>th</sup> June, 2013. Consequently, Board for Industrial and Financial Reconstruction (BIFR) has sanctioned the MDRS envisaging merger of Bharat Heavy Plate and Vessels Limited (BHPVL) with BHEL on 29<sup>th</sup> August, 2013. BHPVL stands merged with BHEL from 30<sup>th</sup> August, 2013 (Effective date).

### iii. Postal Ballot

No special resolutions were passed through postal ballot in the previous year. No such resolutions are proposed through postal ballot during the year.

## 6.13 Disclosures

### i. Disclosures on materially significant related party transactions that may have potential conflict with the interests of Company at large

The Company has not entered into any materially significant related party transactions that may have potential conflict with the interests of the Company at large. Nonetheless, transactions with related parties have been disclosed in Point No. 17 of Note 31 - Other Notes on Financial Statement in the Annual Report.

### ii. Non-compliances/ penalties & strictures imposed on the Company related to capital markets during the last three years

No such non-compliance has occurred nor any penalty or stricture been imposed on the Company in the last three years. The company has set the highest standards with respect to observance and conformity with laws and all compliances are made before the deadlines, stipulated by statute.

### iii. Whistle Blower policy

In pursuance of the DPE Guidelines on Corporate Governance for Central Public Sector Enterprises and clause 49 of the Listing Agreement between listed Companies & the Stock Exchanges and section 177 of the Companies Act, 2013, a Whistle Blower Policy for BHEL has been approved by the Board of Directors in its 464<sup>th</sup> meeting held on 12.8.2014.

Accordingly, the detailed Whistle Blower Policy of the Company was formulated and it was issued by Corporate HR and the Competent Authorities in this regard have been specified therein. A copy of the Whistle Blower Policy has also been placed on the website of the Company '[www.bhel.com](http://www.bhel.com)'.

The complaints received under the Policy are being processed as per the guidelines in this regard.

**iv. Details of compliance with the requirements of DPE Guidelines on Corporate Governance, compliance with mandatory requirements and adoption of the non-mandatory requirements of Clause 49**

All mandatory requirements of the DPE Guidelines on Corporate Governance for CPSEs & revised Clause 49 of the Listing Agreement have been duly complied with by the Company except those relating to required number of Independent Directors on the Board.

With regard to non-mandatory requirements under revised Clause 49, BHEL is already in the regime of unqualified financial statements. Other non-mandatory requirements will be gradually complied with on need basis by the company.

In line with the DPE guidelines, listing agreement and with the objective of providing the Directors a) insight into guidelines and procedures for successful discharge of their statutory duties, b) better understanding of the business environment to envision the future and develop strategies and c) need based training to meet the Specific requirements of the board members, BHEL Board has approved a policy for Training of Directors. It covers both general and specific trainings more tuned towards company specific areas.

No expenditure has been debited in books of accounts which is not for the purpose of business and no expenses incurred and accounted which are personal in nature and incurred for the Board of Directors and Top Management.

**v. Presidential Directives**

No Presidential Directive was received during the last three years i.e. 2012-13, 2013-14 & 2014-15.

**vi. Risk Management**

In pursuance with Clause 49 (IV) (C) of the Listing Agreement and Clause 7.3 of the DPE Guidelines on Corporate Governance for CPSEs, BHEL has in place a Board approved Risk Management Charter & Policy (RMCP), laying down procedures to inform Board members about the risk assessment and minimization. The RMCP provides the overall

framework for risk management (RM) of the company. The RM process includes Risk identification, Risk assessment, Risk evaluation, Risk categorisation, Risk mitigation and escalation/ reporting of the risks as per defined process and periodicity and RM governance structure. RMCP also includes mechanism for review of risks and its periodicity.

In line with revised Clause 49 of Listing Agreement, a Board Level Risk Management Committee (BLRMC) was constituted in Nov'14 with assigned responsibility of reviewing, monitoring, guiding & approving risk policy and Risk Management System/Plan. Besides this, Risk Management Steering Committee (RMSC), having Executive Directors/ Functional Heads from Corporate Functions and Business Sectors as members is responsible for adopting and getting implemented the RM framework across the organization. Chief Risk Officer (CRO) is the convener of RMSC and is responsible for reporting to BLRMC/Board based on deliberation in RMSC.

In addition, 35 Risk Management Committees (RMC) have been formed at the Business Sectors/ Regions/ Plants/ Corporate Functions level, in the RM Organization structure comprising key decision makers within the respective areas. RMC is responsible for adopting and implementing the RM framework at the respective Units/ Regions and Plants.

During 2014-15, the Company level Top 10 risks were cascaded into further 24 nos. of measureable risk-parameters and their Likelihood & Impact scale identified. These measurable risks were pilot assessed based on past data so as to capture the organization risk level including prioritisation. The suitable Risk Responses are being taken to mitigate/ minimize these top risks.

**vii. Auditor's certificate on Corporate Governance**

Auditor's certificate on Corporate Governance is enclosed.

**6.14 Communication of financial and other information**

As required under Clause 41, Company issues a notice of at least 7 days in advance to the Stock Exchanges of the Board Meetings in which

the unaudited/ audited financial results are due for consideration. Further, the said results are intimated immediately after they are taken on record/ approved to the Stock Exchanges. These financial results are published within 48 hours of conclusion of the Board or Committee meeting at which the financial results were approved in at least one English daily newspaper circulating in the whole or substantially the whole of India and in one daily newspaper published in the language of the region, where the registered office of the Company is situated and also uploaded on the Company's website (www.bhel.com).

Other information pertaining to shareholders viz. details of unpaid dividend, Annual Reports etc., are also displayed on the Company's website. Official news releases including important events like receipt of major orders, major project commissioning are posted on the website of the Company and simultaneously sent to the Stock Exchanges. The transcripts of investors' conferences and presentations made to institutional investors/ analysts, if any, are also uploaded on the website of the Company.

In compliance with Clause 54 of the Listing Agreement, the Company's website also contains additional updated information like shareholding pattern, compliance with corporate governance, contact information of the designated officials of the Company responsible for assisting and handling investor grievances etc.

## 6.15 General Shareholder Information

### i. AGM

Date	Time	Venue
22 <sup>nd</sup> September, 2015	10.00 AM	FICCI AUDITORIUM, Barakhamba Road, (Tansen Marg), New Delhi-110 001

- ii. **Financial year** : 1<sup>st</sup> April, 2014 to 31<sup>st</sup> March, 2015
- iii. **Dates of Book Closure** : 16<sup>th</sup> September, 2015 to 22<sup>nd</sup> September, 2015 (Both days inclusive)
- iv. **Dividend payment date** : On or before 21<sup>st</sup> October, 2015

### v. Dividend History:

BHEL has been following “**Stability cum Growth**” policy with regard to dividend payment. The details of dividend paid by BHEL and the amount of unclaimed dividend as on 31.03.2015 are summarized as under:

Year	Rate of Dividend	Total Amount of Dividend Paid (₹ in Crore)	Date on which Dividend was Declared	Unclaimed Dividend as on 31.03.2015 (in ₹)
2007-2008 (Interim)	90%	440.57	25.01.2008*	Already transferred to Investor Education & Protection Fund
2007-2008 (Final)	62.50%	305.95	17.09.2008	1796284 <sup>#</sup>
2008-2009 (Interim)	90%	440.57	29.01.2009*	26342824 <sup>\$</sup>
2008-2009 (Final)	80%	391.62	17.09.2009	1723176
2009-2010 (Interim)	110%	538.47	21.01.2010*	2887125



<b>2009-2010 (Final)</b>	123%	602.11	17.09.2010	2678148
<b>2010-2011 (Interim)</b>	132.50%	648.62	15.03.2011*	2405487
<b>2010-2011 (Final)</b>	179%	876.24	20.09.2011	3207293
<b>2011-2012 (Interim)</b>	136%	665.75	02.03.2012*	2890275
<b>2011-2012 (Final)</b>	184%	900.72	19.09.2012	4824565
<b>2012-2013 (Interim)</b>	106%	518.89	01.02.2013*	3288300
<b>2012-2013 (Final)</b>	164.5%	805.26	20.09.2013	4281153
<b>2013-2014 (Interim)</b>	65.5%	320.64	05.02.2014*	1679431
<b>2013-2014 (Final)</b>	76%	372.04	19.09.2014	1784998
<b>2014-2015 (Interim)</b>	27%	132.17	12.02.2015*	1075575

\* Date of meeting of Board of Directors in which interim dividend was declared

# proposed to be transferred to Investor Education and Protection Fund (IEPF) on 23.10.2015

\$ proposed to be transferred to Investor Education and Protection Fund (IEPF) on 06.03.2016

Number of shares of BHEL were 48.952 Crores of ₹ 10/- each, which became 244.76 Crore shares of ₹ 2/- each post-split w.e.f. 04.10.2011.

In case a shareholder has not been able to receive dividend for any of the last seven years and the same has not yet been transferred to the Investor Education & Protection Fund (IEPF), he/she can claim this unpaid dividend by following the procedure uploaded on the company's website ([www.bhel.com](http://www.bhel.com))

#### vi (a) Listing on Stock Exchanges and Stock Code

BHEL's shares are listed on the following Stock Exchanges for which listing fees for 2014-15 has been paid:

Name of the Stock Exchange	Stock Code
1. Bombay Stock Exchange Limited Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai - 400 001	500103
2. National Stock Exchange of India Limited Exchange Plaza, Plot no. C/1, Block - G, Bandra Kurla Complex, Bandra (East), Mumbai - 400 051	BHEL

#### (b) Payment of Annual Custodian Fee to Depositories

The Annual Custodian fee has been paid to NSDL and CDSL for the financial year 2014-15.

#### vii. Delisting of Equity Shares

BHEL filed necessary application with Calcutta Stock Exchange Association Limited (CSE) for delisting. Final approval from CSE is still awaited, however, "BHEL" Scrips has not been appearing in the list of securities listed on the CSE.

**viii. Market Price Data & performance in comparison to broad-based indices such as S&P BSE Sensex, S&P BSE PSU Index and CNX Nifty are as under:-**

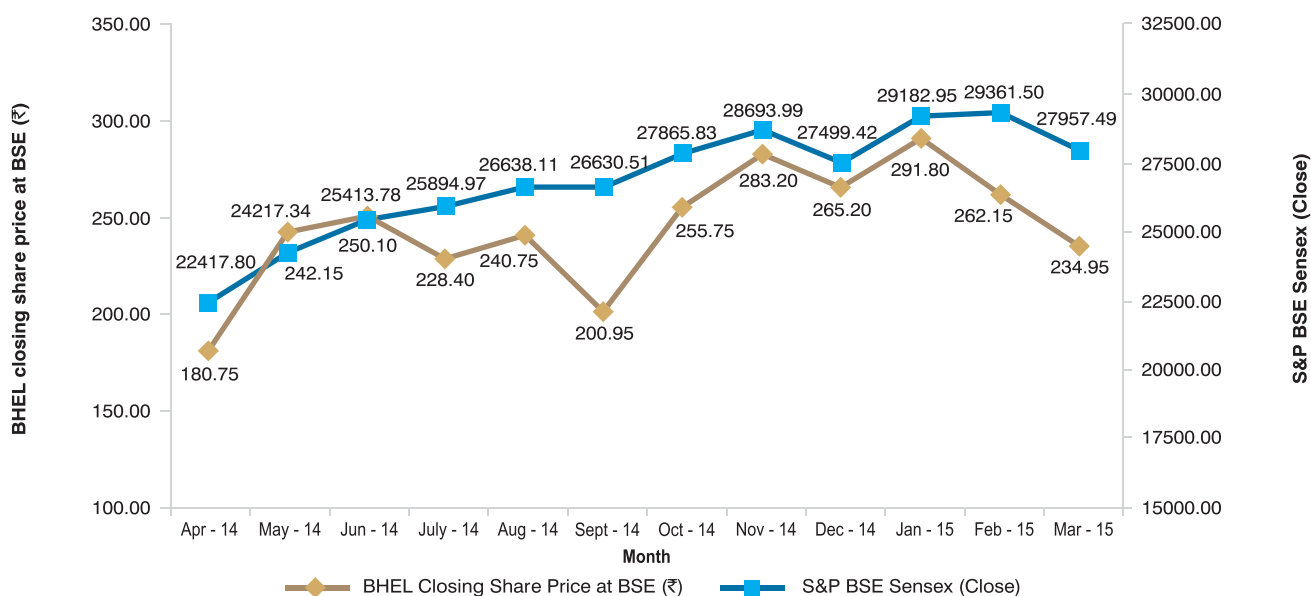
**BHEL Vs. S&P BSE Sensex**

High, Low and Closing market price of BHEL shares on the **Bombay Stock Exchange Ltd. (BSE)** vis-à-vis **S&P BSE Sensex**, No. of shares traded and Turnover during each month in last financial year ended March 31, 2015 are summarized as under:

Month	BHEL share price at BSE (₹)			S&P BSE Sensex			No. of shares traded	Turnover (₹ in Lakh)
	High	Low	Close	High	Low	Close		
Apr-14	198.15	173.00	180.75	22939.31	22197.51	22417.80	8660687	16026.59
May-14	291.50	176.90	242.15	25375.63	22277.04	24217.34	27676879	67157.96
Jun-14	266.55	232.35	250.10	25725.12	24270.20	25413.78	16857812	42201.68
Jul-14	266.40	220.10	228.40	26300.17	24892.00	25894.97	14006654	33842.05
Aug-14	243.80	205.00	240.75	26674.38	25232.82	26638.11	11420980	25671.02
Sep-14	243.45	199.00	200.95	27354.99	26220.49	26630.51	11468087	25357.45
Oct-14	258.40	195.10	255.75	27894.32	25910.77	27865.83	12658011	29035.21
Nov-14	287.00	236.25	283.20	28822.37	27739.56	28693.99	10735675	27699.96
Dec-14	282.95	240.55	265.20	28809.64	26469.42	27499.42	10537475	27385.69
Jan-15	297.35	250.25	291.80	29844.16	26776.12	29182.95	8322596	22785.73
Feb-15	299.50	251.00	262.15	29560.32	28044.49	29361.50	11117755	29820.37
Mar-15	278.20	227.95	234.95	30024.74	27868.21	27957.49	7960011	20235.71

Source: www.bseindia.com

**Performance of BHEL Closing Share Price at BSE (₹) vs. S&P BSE Sensex (Close) during 2014-15**



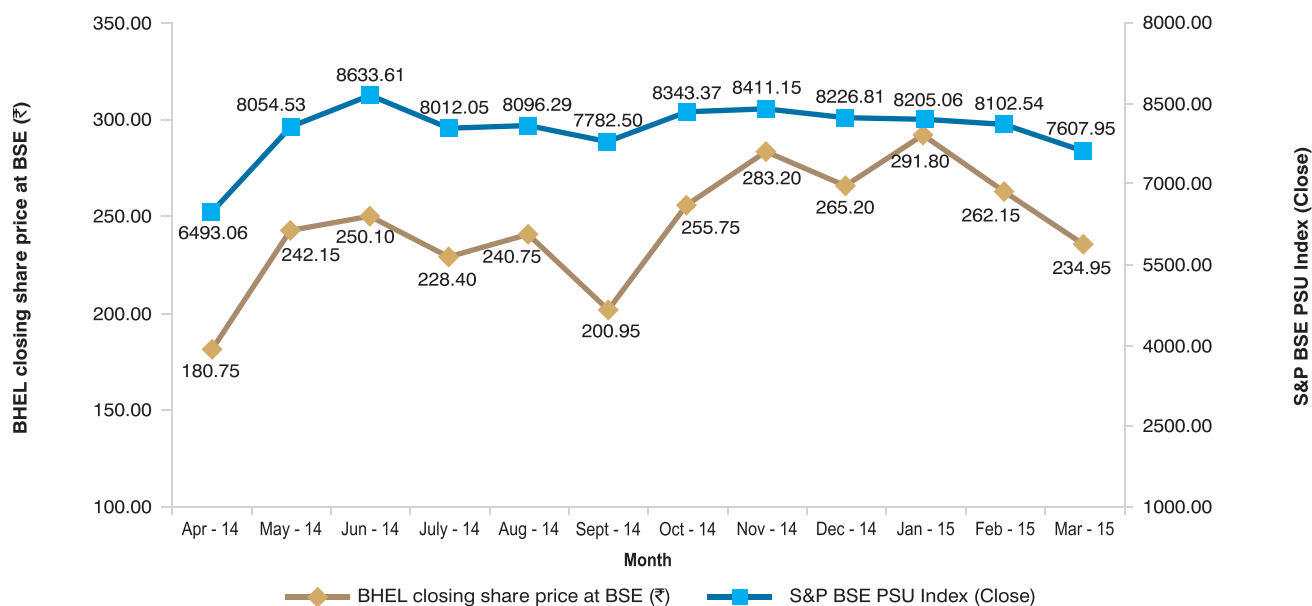
### BHEL Vs. S&P BSE PSU Index

High, Low and Closing market price of BHEL shares on the **Bombay Stock Exchange Limited (BSE)** vis-à-vis **S&P BSE PSU Index**, during each month in last financial year ended March 31, 2015 are summarized as under:

Month	BHEL share price at BSE (₹)			S&P BSE PSU Index		
	High	Low	Close	High	Low	Close
Apr-14	198.15	173.00	180.75	6635.61	6275.68	6493.06
May-14	291.50	176.90	242.15	8919.18	6490.76	8054.53
Jun-14	266.55	232.35	250.10	9091.04	8079.08	8633.61
Jul-14	266.40	220.10	228.40	8791.48	7876.14	8012.05
Aug-14	243.80	205.00	240.75	8261.21	7765.96	8096.29
Sep-14	243.45	199.00	200.95	8442.63	7596.64	7782.50
Oct-14	258.40	195.10	255.75	8350.43	7642.51	8343.37
Nov-14	287.00	236.25	283.20	8440.62	8065.60	8411.15
Dec-14	282.95	240.55	265.20	8449.26	7650.53	8226.81
Jan-15	297.35	250.25	291.80	8440.43	7957.29	8205.06
Feb-15	299.50	251.00	262.15	8267.44	7770.28	8102.54
Mar-15	278.20	227.95	234.95	8263.33	7353.61	7607.95

Source: www.bseindia.com

Performance of BHEL Closing Share Price at BSE (₹) vs. S&P BSE PSU Index (Close) during 2014-15



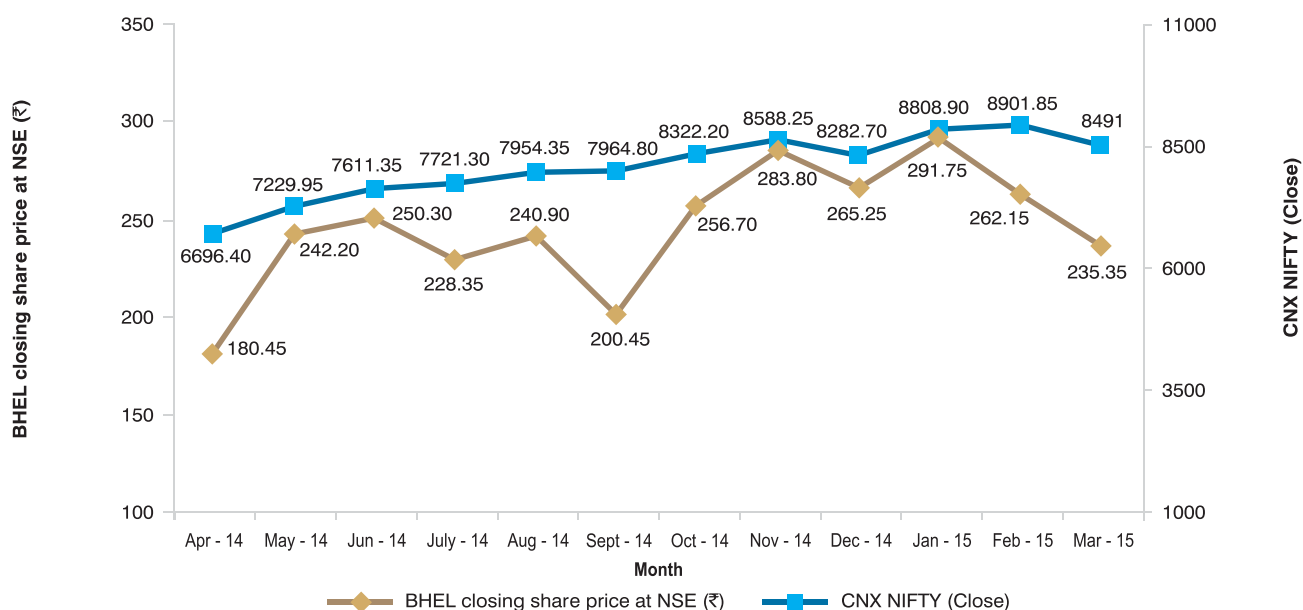
## BHEL Vs. CNX Nifty

High, Low and Closing market price of BHEL shares on the **National Stock Exchange of India Limited (NSE)** vis-à-vis **CNX Nifty**, No. of shares traded and Turnover, during each month in the last financial year ended March 31, 2015 are summarized as under:

Month	BHEL share price at NSE (₹)			CNX NIFTY			No. of shares traded	Turnover (₹ in Lakh)
	High	Low	Close	High	Low	Close		
Apr-14	198.25	172.70	180.45	6869.85	6650.40	6696.40	80687332	149687.54
May-14	291.50	176.65	242.20	7563.50	6638.55	7229.95	218731900	528862.75
Jun-14	266.25	232.10	250.30	7700.05	7239.50	7611.35	151277676	378998.23
Jul-14	266.60	219.10	228.35	7840.95	7422.15	7721.30	125110496	303558.09
Aug-14	243.95	204.50	240.90	7968.25	7540.10	7954.35	109700151	246652.61
Sep-14	243.50	198.70	200.45	8180.20	7841.80	7964.80	111164416	245879.82
Oct-14	258.65	194.20	256.70	8330.75	7723.85	8322.20	115184665	263571.03
Nov-14	287.75	236.15	283.80	8617.00	8290.25	8588.25	91829347	238198.68
Dec-14	283.45	240.50	265.25	8626.95	7961.35	8282.70	92621490	241529.23
Jan-15	297.80	250.00	291.75	8996.60	8065.45	8808.90	84160173	230526.94
Feb-15	300.00	250.75	262.15	8941.10	8470.50	8901.85	87257095	234957.79
Mar-15	278.70	228.00	235.35	9119.20	8269.15	8491.00	65080146	165124.71

Source: [www.nseindia.com](http://www.nseindia.com)

**Performance of BHEL Closing Share Price at NSE (₹) vs. CNX NIFTY (Close) during 2014-15**



**ix. Policy on Insider Trading**

BHEL endeavors to preserve the confidentiality of unpublished price sensitive information and to prevent misuse of such information. For this purpose and in line with the SEBI (Prohibition of Insider Trading) Regulations, 1992, the Company had adopted “Code of Conduct for Prevention of Insider Trading” on 26<sup>th</sup> August, 2002. The Board has appointed Director (Finance) as the Compliance Officer under the Code. Pursuant to SEBI (Prohibition of Insider Trading) (Amendment) Regulations, 2008 issued in November, 2008, BHEL had revised its “Code of Conduct for Prevention of Insider Trading” w.e.f. 29<sup>th</sup> January, 2009.

SEBI vide notification dated 15.01.2015, introduced the SEBI (Prohibition of Insider Trading) Regulations, 2015, replacing the existing SEBI (Prohibition of Insider Trading) Regulations, 1992 to become effective on 120<sup>th</sup> day from the date of its publication in the Official Gazette i.e. w.e.f. 15<sup>th</sup> May, 2015. In line with SEBI (Prohibition of Insider Trading) Regulations, 2015, the Board, in its, 469<sup>th</sup> meeting held on 6<sup>th</sup> April, 2015, approved the ‘**Code of Conduct for Regulating & Reporting Trading by Insiders and for Fair Disclosure, 2015**’ to be effective from 15<sup>th</sup> May, 2015. The objective of the Code is to regulate, monitor and report trading by Designated Employees and other Connected Persons towards achieving compliance with SEBI (Prohibition of Insider Trading) Regulations, 2015. The Code also provides for practices and procedures for fair disclosure of unpublished price sensitive information.

**x. Registrar & Share Transfer Agent (RTA)**

**M/s Karvy Computershare Private Ltd.**

Delhi Address	Hyderabad Address
UNIT: <b>BHEL</b> 105-108, Arunachal Building, 19, Barakhamba Road, New Delhi – 110 001  Tel. : 011-23324401 43681700/01/02/21 Fax: 011-23730743 Email: ksbdelhi@karvy.com	UNIT: <b>BHEL</b> Karvy Selenium Tower B, Plot 31-32, Gachibowli, Financial District, Nanakramguda, Hyderabad – 500 032  Tel.: 040-67162222 Fax : 040-23001153 Email: madhusudhan.ms@karvy.com einward.ris@karvy.com Website: www.karvycomputershare.com

RTA’s performance in servicing shareholders has been satisfactory. All the investor grievances have been promptly attended to.

**xi. Share Transfer System**

The share transfer system with respect to physical shares consists of activities like receipt of shares along with transfer deed from transferees, its verification, approval and dispatch of duly endorsed share certificates to the respective transferees within the prescribed time as per the Listing Agreement. In line with Listing Agreement, share certificates are being issued within 15 days of date of lodgment for transfer, sub-division and consolidation. All share transfer activities under physical segment like receipt/dispatch of documents and their verification are being carried out by M/s. Karvy Computershare Private Limited.

## xii. Distribution of Shareholding

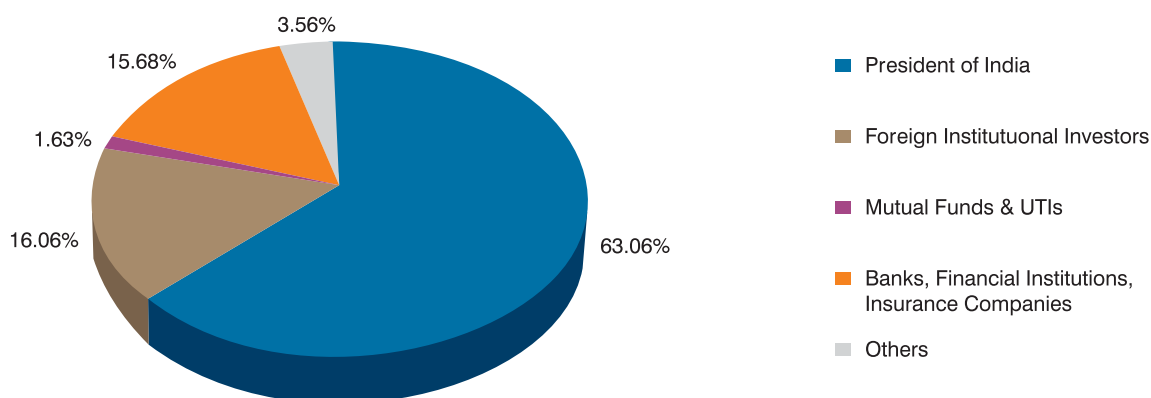
### (i) Distribution of shares according to size of holding as on 31<sup>st</sup> March 2015

No. of equity share(s) held	No. of Shareholders	% of Shareholders	No. of Shares	% of Shareholding
1-500	315460	93.64	28819076	1.18
501-1000	12448	3.69	9939492	0.41
1001-2000	5268	1.56	8069681	0.33
2001-3000	1374	0.41	3492392	0.14
3001-4000	508	0.15	1819524	0.07
4001-5000	403	0.12	1921224	0.08
5001-10000	586	0.17	4283976	0.17
10001 & Above	844	0.25	2389254635	97.62
<b>Total</b>	<b>336891</b>	<b>100%</b>	<b>2447600000</b>	<b>100%</b>

### (ii) Shareholding Pattern as on 31<sup>st</sup> March 2015

Category	2015		2014	
	Voting strength (%)	No. of shares held	Voting strength (%)	No. of shares held
<b>Promoters Holding</b>				
Indian Promoters-				
- President of India (POI)	63.06	1543452000	63.06	1543452000
<b>Total Promoter holding</b>	<b>63.06</b>	<b>1543452000</b>	<b>63.06</b>	<b>1543452000</b>
<b>Non-promoters Holding</b>				
Mutual Funds and UTI	1.63	39809147	0.30	7347397
Banks, Financial Institutions, Insurance Companies	15.68	383843326	16.17	395844109
Foreign Institutional Investors (including Foreign Portfolio Investors)	16.06	393190119	16.14	395053774
<b>Others</b>				
Directors & Relatives	0.00	4100	0.00	3600
Bodies Corporate	0.99	24218590	0.96	23591005
Individuals	2.26	55323057	2.89	70549138
Foreign Nationals	0.00	750	0.00	1090
NRIs	0.16	3937931	0.22	5338381
Trust	0.08	2017962	0.05	1199678
Clearing Members	0.07	1803018	0.21	5219828
<b>Total Non-promoter holding</b>	<b>36.94</b>	<b>904148000</b>	<b>36.94</b>	<b>904148000</b>
<b>Grand Total</b>	<b>100.00</b>	<b>2447600000</b>	<b>100.00</b>	<b>2447600000</b>

Shareholding Patterns as on 31<sup>st</sup> March, 2015



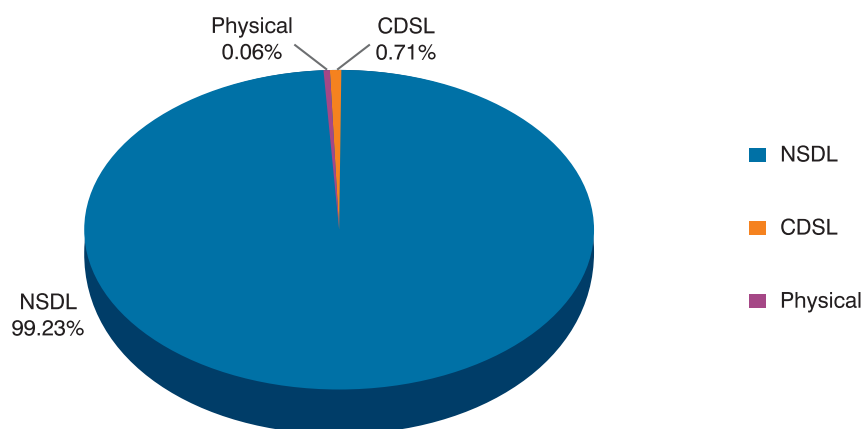
(iii) List of shareholders who are holding more than 1% of the shares of the Company as on 31<sup>st</sup> March 2015

Category & Shareholder's Name	2015	
	Voting strength (%)	No. of shares held
<b>Promoters</b>		
1. President of India (POI)	63.06	1543452000
<b>Non-promoters</b>		
1. Life Insurance Corporation of India	9.42	230516784
2. Comgest Growth PLC A/C Comgest Growth Emerging Markets	1.18	28801590
3. Lazard Asset Management LLC A/c Lazard Emerging Markets Portfolio	1.16	28408477
4. Magellan	1.10	26802105
5. LIC of India Market Plus 1 Growth Fund	1.02	24939880

**xiii. Dematerialisation of shares and liquidity**

In accordance with the directions of the Securities & Exchange Board of India (SEBI), trading in BHEL shares by all categories of investors in demat form has been made compulsory w.e.f. 5<sup>th</sup> April, 1999. BHEL has executed agreement with both the depositories of the country i.e. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) for admission of its securities under demat mode. As on 31<sup>st</sup> March, 2015, 99.94% of the total equity share capital of BHEL is being held in demat mode by the shareholders. Shareholding of Hon'ble President of India (being the Promoter of the company holding 63.06% of the paid-up share capital of the company) is also held in dematerialized form. The International Securities Identification Number (ISIN) allotted to Company is INE257A01026.

Shares held by depositories as on 31<sup>st</sup> March, 2015



xiv. Outstanding GDRs / ADRs / Warrants or any convertible instruments, conversion date and likely impact on equity:

Nil

xv. Plant locations

<b>BHEL Manufacturing Units</b>	Bengaluru	1. Electronics Division 2. Electronics Systems Division 3. Electro Porcelain Division	
	Bhopal	4. Heavy Electrical Plant	
	Goindwal	5. Industrial Valves Plant	
	Haridwar	6. Heavy Electrical Equipment Plant 7. Central Foundry Forge Plant	
	Hyderabad	8. Heavy Power Equipment Plant	
	Jagdishpur	9. Insulator Plant 10. Centralised Stamping Unit	
	Jhansi	11. Transformer Plant	
	Rudrapur	12. Component Fabrication Plant	
	Ranipet	13. Boiler Auxiliaries Plant	
	Tiruchirappalli	14. High Pressure Boiler Plant 15. Seamless Steel Tube Plant	
	Thirumayam	16. Power Plant Piping Unit	
	Visakhapatnam	17. Heavy Plates & Vessels Plant	
	<b>BHEL Repair Units</b>	Mumbai	1. Electrical Machine Repair Plant
		Varanasi	2. Heavy Equipment Repair Plant
	<b>BHEL Subsidiary</b>	Kasaragod	1. BHEL Electrical Machines Ltd.



**xvi. Address for correspondence**

Shareholders can send their queries regarding Transfer of shares, Non-receipt of dividend, Revalidation of Dividend Warrants and any other correspondence relating to the shares of the Company either to:

**KARVY COMPUTERSHARE PVT. LTD.**

**UNIT: BHEL**

**Delhi:** 105-108, Arunachal Building  
19, Barakhamba Road  
New Delhi – 110 001

Phone: 011-23324401  
43681700/01/02/21  
Fax: 011-23730743  
Email: ksbl Delhi@karvy.com

**Hyderabad:** Karvy Selenium Tower B,  
Plot 31-32, Gachibowli, Financial  
District, Nanakramguda,  
Hyderabad – 500 032

Phone: 040-67162222  
Fax: 040-23001153  
Email: madhusudhan.ms@karvy.com  
einward.ris@karvy.com

OR

**Shri I.P. Singh**

Company Secretary  
BHEL

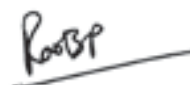
Regd. Office: BHEL House, Siri Fort,  
New Delhi – 110 049

Phone: 011-26001046  
Fax: 011-66337533  
Email: shareholderquery@bhel.in

**Note:** Shareholders holding shares in electronic mode should address all correspondence to their respective depository participants.

**Declaration:** Pursuant to Clause 49(IIE) of the Listing Agreement with Stock Exchanges, it is hereby declared that all Board members and Senior Management personnel have affirmed compliance with BHEL's "Code of Business Conduct and Ethics" for the financial year 2014-15.

For and on behalf of the Board of Directors of  
**BHARAT HEAVY ELECTRICALS LTD**



Place : New Delhi  
Dated : July 24, 2015

**(B. Prasada Rao)**  
Chairman & Managing Director

## Auditors' Certificate on Corporate Governance

The Members

### **Bharat Heavy Electricals Ltd.**

We have examined the compliance of conditions of Corporate Governance by Bharat Heavy Electricals Ltd. for the year ended on 31.03.2015 as stipulated in Clause 49 of the Listing Agreement of the said company with the Stock Exchanges and the DPE Guidelines on Corporate Governance for Central Public Sector Enterprises (DPE Guidelines).

The compliance of conditions of Corporate Governance is the responsibility of the management. Our examination was limited to procedures and implementation thereof, adopted by the company for ensuring the compliance of the conditions of the Corporate Governance. It is neither an audit nor an expression of the opinion on the financial statements of the company.

In our opinion and to the best of our information and according to the explanations given to us, we certify that as on 31.03.2015, the company has complied with all the conditions of Corporate Governance as stipulated in the above mentioned Listing Agreement and DPE Guidelines except Clause 49(II)(A)(1) & 49(II)(A)(2) of Listing Agreement (Clause 3.1.2 & 3.1.4 of the DPE Guidelines) relating to conditions of not less than fifty percent of board of directors to comprise of non-executive directors and at least half of the Board to comprise of independent directors, respectively.

We further 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 and on behalf of  
M/s Wahi & Gupta  
Chartered Accountants  
FRN 002263N



**(Anuj Gupta)**  
Partner

M. No. 076560

Place : New Delhi  
Dated : July 24, 2015

## Secretarial Audit Report

For the Financial Year ended 31<sup>st</sup> March, 2015

{Pursuant to Section 204(1) of the Companies Act, 2013 and rule 9 of the Companies (Appointment and Remuneration of Managerial Personnel) Rules, 2014}

To,  
The Members,

### **Bharat Heavy Electricals Limited**

I have conducted the Secretarial Audit of the compliance of applicable statutory provisions and the adherence to good corporate practices by **Bharat Heavy Electricals Limited** (hereinafter called BHEL/the Company). Secretarial Audit was conducted in a manner that provided me a reasonable basis for evaluating the corporate conducts/statutory compliances and expressing my opinion thereon.

Based on my verification of the BHEL's books, papers, Minute books, forms and returns filed and other records maintained by the Company and also the informations provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, I hereby report that in my opinion, the Company has, during the audit period covering the financial period ended on 31<sup>st</sup> March, 2015 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:

I have examined the books, papers, minute books, forms and returns filed and other records maintained by BHEL ("the Company") for the financial year ended on 31<sup>st</sup> March, 2015 according to the provisions of:

- (i) The Companies Act, 2013 (the Act) and the rules made thereunder;
- (ii) The Securities Contracts (Regulation) Act, 1956 ('SCRA') and the rules made thereunder;
- (iii) The Depositories Act, 1996 and the Regulations and Bye-laws framed thereunder;
- (iv) 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;

- (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) Regulation, 2011;
  - (b) The Securities and Exchange Board of India (Prohibition of Insider Trading) Regulations, 1992;
  - (c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2009;
  - (d) The Securities and Exchange Board of India (Employee Stock Option Scheme and Employee Stock Purchase Scheme) Guidelines, 1999;
  - (e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008;
  - (f) The Securities and Exchange Board of India (Registrars to an Issue and Share Transfer Agents) Regulations, 1993 regarding the Companies Act and dealing with client;
  - (g) The Securities and Exchange Board of India (Delisting of Equity Shares) Regulations, 2009; and
  - (h) The Securities and Exchange Board of India (Buyback of Securities) Regulations, 1998;
- (vi) Compliances/ processes/ systems under following specifically applicable Laws to the Company are being verified on the basis of periodic certificate submitted to the Board of Directors of the Company:-
  - (a) Atomic Energy (Radiation Protection) Rules, 2004.
  - (b) Batteries (Management and Handling) Rules, 2001.
  - (c) Factories Act, 1948.
  - (d) The Indian Boilers Act, 1923.

I have also examined compliance with the applicable

clauses of the following:

- (i) Secretarial Standards issued by the Institute of Company Secretaries of India. (Not applicable for the Audit period).
- (ii) The Listing Agreements entered into by the Company with National Stock Exchange of India Limited and BSE Limited.

During the period under review the Company has complied with the provisions of the Acts, Rules, Regulations, Guidelines, Standards, etc. mentioned above subject to the following observation:

**Observation:** *In terms of Clause 49 (II) (A) of the Listing Agreement and para 3.1.2 & 3.1.4 of the Guidelines on Corporate Governance for Central Public Sector Enterprises, BHEL, having an Executive Chairman, is required to have at least fifty percent Independent directors.*

*At Present, the number of Independent Directors is less than 50% of the composition of the Board. Clarifications in this regard has also been sought by the Stock Exchanges from the Company. Since BHEL is a Government Company and appointment on the Board of the Company are done by the Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, Government of India, the Company is in constant communication with the Department for the appointment of more Independent Directors on their Board in order to comply with the provisions of the Companies Act, 2013, Clause 49 of the listing agreement & DPE Guidelines.*

**I further report that** in view of the above, the Board of Directors of the Company is not 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.

Generally, 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.

Majority decision is carried through while the dissenting members' views are captured and recorded as part of the minutes, wherever required.

**I further report that** as per Section 178(2) of the Companies Act, 2013, the Nomination and Remuneration Committee of the Board was required to carry out evaluation of every director's performance. Further, Clause 49 of the Listing Agreement and the Code for Independent Directors pursuant to Section 149 (8) of the Companies Act, 2013 requires the performance evaluation of Independent Directors to decide their continuance or otherwise. However, MCA has vide its notification dated 5<sup>th</sup> June, 2015 notified the Exemptions to Government Companies from the provisions of the Companies Act, 2013 which inter-alia provides that Sub-Sections (2), (3) & (4) of Sec. 178 regarding appointment, performance evaluation and remuneration shall not apply to Directors of Government Companies. The Company has explained that the appointment of Functional Directors, Part Time Official Directors as well as Part Time Non-Official Directors (Independent Directors) on the Board of BHEL is made by Government of India (GOI). Further, terms & conditions of appointment as well as tenure of all directors are also decided by GOI and there is a well laid down procedure for evaluation of Functional Directors & CMD by Administrative Ministry.

**I 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.

**I further report that** during the audit period, the company has duly complied with the clauses/provisions of various Foreign Technical Collaboration Agreements as entered by the Company.

For Agarwal S. & Associates  
Company Secretaries



**Sachin Agarwal**  
FCS No.: 5774  
C.P. No.: 5910

Place: New Delhi  
Date: 15<sup>th</sup> June, 2015

*This report is to be read with our letter of even date which is annexed as "Annexure A" and forms an integral part of this report.*