Bharat Heavy Electricals Limited

ANNUAL REPORT | 2016-17

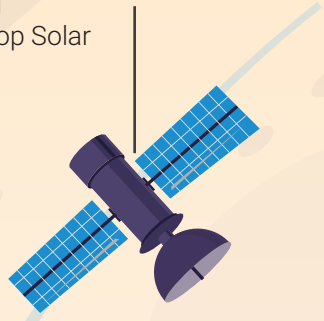


Creating BHEL *of tomorrow*

Making in India...
since 1964

RENEWABLE ENERGY

Solar PV Power Plants including
Ground Mounted Solar & Roof-top Solar
Space-grade PV Panels



POWER

Power Generation plants
including Thermal
(upto 1000MW),
Nuclear, Hydro & Gas.
BoP & Auxiliary systems,
Emission control equipment
(ESP, FGD)

TRANSPORTATION

Transportation systems,
Locomotives, Propulsion
systems & Electrics

TRANSMISSION

HVAC/HVDC systems, GIS
AIS, Substation automation,
FACTS solutions,
Transmission products/systems
upto 1200 kV

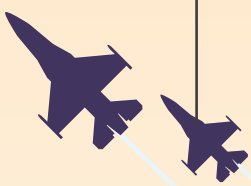


DEFENCE & AEROSPACE

SRGM,
Turret Casting for T72 tanks,
IPMS, ACS,
Compact heat exchangers,
Space grade batteries

OIL & GAS

Oil Rigs & controls.
Well Heads &
Xmas Tree valves,
Compressors

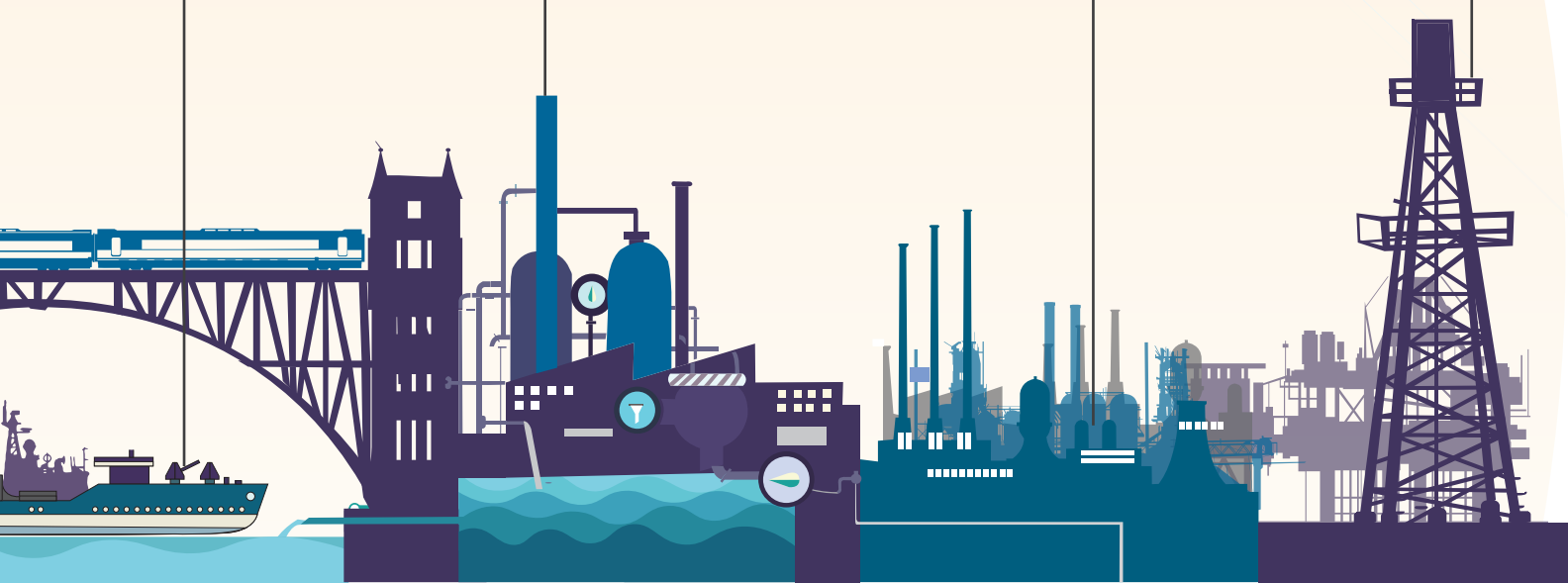


INDUSTRY

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

WATER

Water Management Systems





Despite security concerns and numerous challenges in the movement of men and material through difficult terrain, in the execution of the 3x14 MW Salma hydropower project, BHEL took up the work on war footing, and successfully commissioned all the three units. The project (renamed as Afghan-India friendship Dam) was jointly inaugurated by the Hon'ble Prime Minister of India, Shri Narendra Modi and Dr. Mohammad Ashraf Ghani, Hon'ble President of Afghanistan. BHEL's exemplary contribution in this project was recognised and CMD, BHEL was awarded a shield of appreciation by the Hon'ble Union Minister of External Affairs, and the Hon'ble Union Minister of Water Resources, River Development and Ganga Rejuvenation.



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LETTER TO SHAREHOLDERS



Dear Shareholders,

The Hon'ble Prime Minister of India, Shri Narendra Modi ji while giving the clarion call to create a 'New India' said, "There are 125 Crore people and if each one takes one step, then the country would be 125 Crore steps ahead". These words capture the essence of the fervour of 125 Crore Indians joining hands together to create a 'New India'. This is a journey and your company envisions playing a significant role in this journey. 40,000 employees of your company have together embarked on this journey and see it as an opportunity to create a new BHEL which is more responsive to the environment, has new sources of strength and has new streams of growth that make the company sustainably rising. Our persistent efforts in this journey enabled us to deliver both on growth and profitability in yet another year of challenging business environment. Going forward, our resolute focus will remain on managing the current momentum as well as on building capabilities for charting a higher growth path.

2017 also marks the 25th year of BHEL being a public listed company. This has been a very rewarding journey for the shareholders. On behalf of BHEL, let me first express profound gratitude to you, our shareholders, for continuously reposing faith in BHEL.

The year that was...

Now, let us look at some of the achievements of your company in the year 2016-17:

- BHEL recorded a turnover of ₹ 28,840 Crore, a growth of 10.7% over the previous year—after reversing the declining trend of the last three years. The company also returned to profitability with a Profit Before Tax (PBT) of ₹ 628 Crore, compared to a loss of ₹ 1,164 Crore (IND-AS restated) in the last fiscal. Net Profit (PAT) stood at ₹ 496 Crore, against a net loss of ₹ 710 Crore (IND-AS restated) in the previous year.

> **...'New India'... is a journey... BHEL envisions playing a significant role... 40,000 employees of your company... see it as an opportunity to create a new BHEL...**

- Your company contributed 45,274 MW of power generation capacity during the 12th Five Year Plan

(2012-17), surpassing the government's target for BHEL by 9%, strongly complemented by our sustained focus on expeditious project execution.

- 8,570 MW of power generating equipment was commissioned/synchronised during the year. With this, the worldwide installed base of power generating equipment supplied by BHEL has exceeded 178 GW.
- BHEL secured the largest ever export order on EPC basis – the first-ever overseas contract valued over ₹ 10,000 Crore for setting up the 2x660 MW Maitree Thermal Power Plant (TPP) in Bangladesh, a result of our persistent efforts towards globalization.
- Your company booked orders worth ₹ 23,489 Crore during the year. This includes a major order from Power Grid Corp. of India Ltd. for ±800 kV, 6000 MW HVDC terminals associated with the HVDC Bipole link between the western and southern grid of India, 18x145 MW Palamuru Rangareddy Lift Irrigation Scheme stages 2&3 from Govt. of Telangana—having the largest rating of pump motor sets ordered for supply in India, and 57.6 MLD ultrafiltration water package order from NTECL Vallur TPS.
- With the highest total SPV power plant orders won during the year for 131 MW, your company's total solar portfolio now exceeds 370 MW.
- Despite security concerns and immense logistic barriers, BHEL successfully commissioned all the three units of the prestigious 3x14 MW Salma hydropower project (Afghan India Friendship Dam) in Afghanistan.
- With the commencement of commercial operation of the 2x800 MW Yeramarus TPS of RPCL, a joint venture of KPCL, BHEL and IFCI, your company has forayed into power generation now.
- With 76/62 mm Super Rapid Gun Mount (SRGM) and Auxiliary Control System (ACS) commissioned on INS Chennai, all the three ships of Kolkata-class stealth guided missile destroyers of the Indian Navy are now equipped with BHEL manufactured SRGM and ACS.
- BHEL is developing the first Advanced Ultra Super critical (AUSC) technology for higher efficiency thermal power plants, jointly with NTPC and IGCAR under the aegis of Government of India.
- Your company invested 2.75% of its turnover on R&D and the total intellectual capital of the company has enhanced to 3915 patents and copyrights.
- With an objective of expanding our value chain in the solar power, your company has expanded the manufacturing capacity of solar cells to 105 MW and of solar modules to 226 MW per annum.
- Your company would be paying a total dividend of 79% for the year 2016-17 that includes a final dividend of 39% subject to approval by the shareholders.
- The Board of Directors of your company has also recommended issue of bonus shares in the ratio of 1 bonus share for every 2 existing shares.

The road ahead...

Forces of change like climate change, technology disruptions, fragile geopolitics, newer regulations, suboptimal investment from private sector and changing energy-mix are leading to emergence of newer challenges for your company. Initiatives taken by the government such as Ujwal DISCOM Assurance Yojana (UDAY), Goods and Services Tax (GST), push to 'Make-in-India' and visibility in resolution of stranded projects are very encouraging for sustained growth of the economy.

For sustaining momentum of growth and profitability... focusing on expeditious execution of orders and implementing structural changes...

All the same, we continue to march forward with zeal in our journey of '*Creating BHEL of tomorrow*', a BHEL that is '*Responsive, Robust and Rising*' to the needs of its stakeholders. We have already taken some important steps in this journey and have resolved ourselves for many more with focus on maintaining the current momentum of profitability, protecting the core business while building new capabilities, and diversifying by harnessing the emerging opportunities.

Creating BHEL of Tomorrow: Sustaining momentum of growth

For sustaining momentum of growth and profitability, the company is focusing on expeditious execution of orders and implementing structural changes for making your company agile:

- Efforts are being made to convert stranded/slow-moving orders into executable ones. Around ₹ 12,000 Crore of non-executable orders have been made executable during the year.
- We have created customer focused business groups for nuclear, hydro, defence & aerospace, and transportation for strengthening diversification efforts. We have also consolidated various structures to increase organizational agility. Further initiatives will entail consolidation of smaller and consistently under-performing businesses and establishments.
- A dedicated 'Project Closure Synergy Group' has been created to ensure early closure of project sites, optimize manpower utilization, resolving outstanding issues with various stakeholders, and realizing cash.
- We have revised various company policies with focus on simplification and decentralization to eliminate low-value added activities and multiplicity of works.

Creating BHEL of Tomorrow: Growth in medium term

The key to growth in medium term is to protect leadership in the core business, reorient people strategy and harness digital technologies for higher value proposition:

> **… key to growth in medium term is to protect leadership in the core business, reorient people strategy and harness digital technologies…**

- We are asserting leadership in the core business by enhancing value proposition in the existing portfolio. Developing new products and services such as emission control equipment, lift irrigation systems, enhanced offerings for nuclear power, and expanding spares and services business are complementing the efforts to expand our core business. Foray into power generation as a co-developer of 2x800 MW Yeramarus TPS is one of the strategies for capturing more business in the power value chain.
- We have taken various initiatives in response to changing demography of employees and the business mix which comprehensively cover all aspects of people development. Initiatives towards employee engagement and development in your company have been recognized in the business world by being adjudged as one of the 'Top 25 Best Companies to Work for' in India by the prestigious Business Today magazine—BHEL is the only PSU to figure in this distinguished list.
- 'Corporate Digital Transformation' group has been formed for developing capabilities in diagnostics and predictive maintenance services as a business opportunity and enhance productivity of our operations.

Creating BHEL of Tomorrow: Foundation for long-term sustenance

The foundation for long-term sustenance rests on strengthening the capabilities to innovate and on bringing more diversity in turnover both in business-mix and geographical-mix:

> **…foundation for long-term sustenance rests on strengthening the capabilities to innovate and on bringing more diversity in turnover…**

- We continue to invest more than 2.5% of turnover on R&D and innovation. Current focus areas include the development of Advanced Ultra Supercritical (AUSC) technology which will reinforce your company's leadership towards supply of cleaner thermal power in the country, passive solar trackers, 1200 kV UHVAC transformers and reactors, and IGBT propulsion technology for ACEMU and DEMU.
- We are building a more diversified portfolio capitalizing on emerging opportunities in solar power, transportation, defence, aerospace and water business to increase the share of business from non-coal areas. Continuing with the strategy of building capacity and capability through in-house resources, and collaboration with global technology leaders, we have recently entered into a technology collaboration agreement with Kawasaki Heavy Industries Ltd., Japan for the manufacture of stainless steel coaches and bogies for Metro Rail.
- Export strategies are being aligned with global dynamics with focus on market expansion and market penetration. Execution of 2x660 MW Maitree TPP in Bangladesh, the first overseas power project of this rating and exacting parameters will open a stream of new opportunities in export markets.

The journey continues…

Finally, I would like to express my sincere gratitude to all our stakeholders: business partners including customers and vendors for showing faith in us, employees for their passion and commitment, members of the Board for their wisdom, members of the Management Committee for efficiently managing the company's resources and operations, and above all—you, our shareholders, for evincing trust in our ability to steer forward BHEL in these challenging times. Various ministries of Government of India, particularly the Department of Heavy Industry, have been providing valuable guidance and support to our efforts. Thank you all for your continued support that I greatly appreciate and cherish.

Your company has invested more than 50 years in the nation building endeavours. The current movement towards building a 'New India' also offers us encouraging prospects. Team BHEL believes that we have the technology strength, manufacturing prowess, committed manpower, and innovation ecosystem to contribute in this movement.

With renewed vigour, great confidence and relentless determination, we look forward to an exciting future ahead.

Best wishes,



Atul Sobti
Chairman & Managing Director

New Delhi

August 10, 2017

LEADERSHIP AT BHEL

Board of Directors

(As on 15.07.2017)



Sitting from right to left

Ms. Surama Padhy
Independent Director

Shri Rajesh Kishore
Independent Director

Shri Atul Sobti
Chairman & Managing Director

Dr. Subhash Chandra Pandey
AS & FA, DIPP: Part-Time Official Director

Shri A.N. Roy
Independent Director

Standing from right to left

Shri S. Biswas
Director (Engineering, R&D)

Shri T. Chockalingam
Director (Finance)

Shri Bhaskar Jyoti Mahanta
Joint Secretary, DHI : Part-Time Official Director

Shri Akhil Joshi
Director (Power)

Shri D. Bandyopadhyay
Director (Human Resources)

Shri Keshav N. Desiraju
Independent Director

Shri R. Swaminathan
Independent Director

Shri Amitabh Mathur
Director (Industrial Systems & Products)

Shri I.P. Singh
Company Secretary

LEADERSHIP AT BHEL

Management Team

(As on 15.07.2017)



Atul Sobti
Chairman & Managing Director



D. Bandyopadhyay
Director (Human Resources)



Amitabh Mathur
Director (Industrial Systems & Products)



S. Biswas
Director (Engineering, R&D)



T. Chockalingam
Director (Finance)



Akhil Joshi
Director (Power)



M.K. Sharma
ED (CPP, PMG & Contract Closing), New Delhi



R.K. Tiwari
ED (EDN), Bengaluru



N R Edkie
ED (AUSC Project), Noida



V.K. Chohan
ED (IO), New Delhi



Dr. Umakant Choudhury
ED (CTM), New Delhi



Sandeep Narang
ED (PE & SD), Hyderabad



K. Purswani
ED (COM), New Delhi



D.K. Singh
ED (PCSG), Noida



J.C. Sharma
ED (PS-PEM), Noida



S. Vaidyanathan
ED (Corp. Finance), New Delhi



Praveen Bansal
ED (TBSG), New Delhi



Rajeev Chawla
ED (PS-NR), Noida



K.R. Bhardwaj
ED (PS-PMG), New Delhi



Dr. Babu Lal
ED (CLD), Noida



Anjan Mukhopadhyay
ED (PS-ER), Kolkata



D. Guin
ED (CSM), New Delhi



G.S. Rotti
ED (REWB), New Delhi



J. Govindaswamy
ED (HPVP), Visakhapatnam



Tapas Majumdar
ED (PS-TS), Noida



R. Rajamanohar
ED (Tiruchirapalli, PPPU & Piping Centre)



S.S. Wadhawan
ED (CQ & BE), Noida



K. Kalaiselvan
ED (BAP), Ranipet



S.V.N. Jithin Sundar
ED (TBG), Noida



D.K. Thakur
ED (HEP), Bhopal



D.K. Dikshit
ED (TP), Jhansi



A.K. Mukhopadhyay
ED (PS-SR), Chennai



S. Chaturvedi
ED (ISG), Bengaluru



G.K. Hedaoo
ED (PS-MKTG. Thermal & Gas), New Delhi



Dinesh Kumar
ED (HBG), Noida



Atanu Saha
GM-I (Internal Audit), Noida



K.K. Khurana
GM-I (Corp. R&D), Hyderabad



Kamalesh Das
GM-I (ROD), New Delhi



V. Ravindran
GM-I (SSBG), Noida



Ashok M. Dawane
GM-I (CSU & FP), Jagdishpur



S. Balakrishnan
GM-I (HPEP), Hyderabad



P.P. Yadav
GM-I (NBG), Noida



Anil Kapoor
GM-I (HR & CC), New Delhi



S.K. Sahni
GM-I (Corp. Accounts), New Delhi



Yogesh Kumar
GM-I (DABG), New Delhi



Rajiv Mehra
GM-I (CFFP), Haridwar



R. Subramanian
GM-I (PS-WR), Nagpur



M.K. Varma
GM-I (CBU), Bengaluru



Sanjay Gulati
GM-I (HEEP), Haridwar



P. Jagadiswara Reddy
GM-I (CDT), Noida



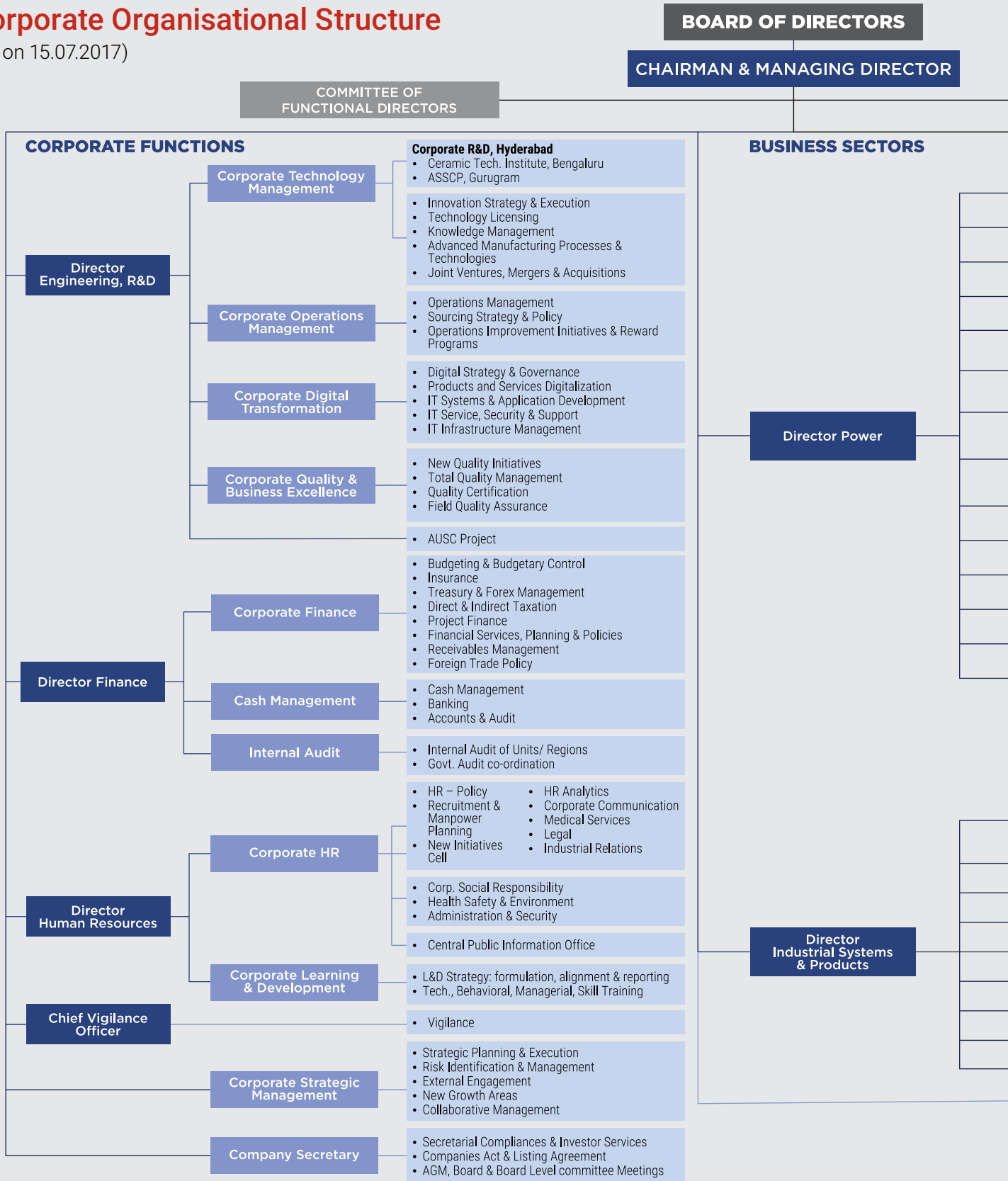
T.S. Murali
GM (CSM), New Delhi
Secretary - Mgmt. Committee

ED: Executive Director | GM-I: General Manager - Incharge | GM: General Manager

LEADERSHIP AT BHEL

Corporate Organisational Structure

(As on 15.07.2017)

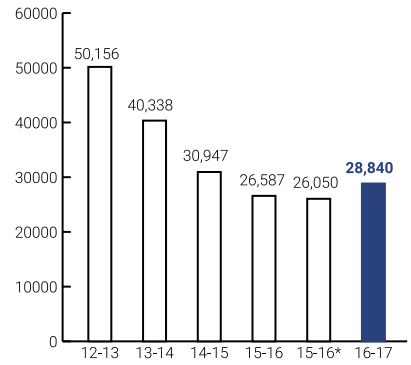




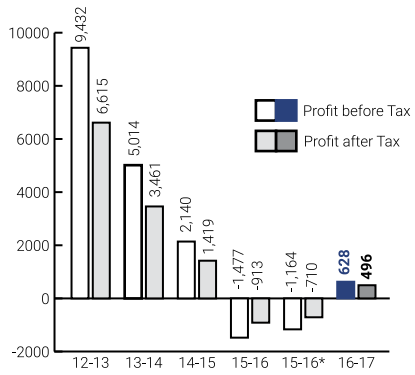
[1]CFFP, [3]CSU & FP – Reports to Director (Engineering, R&D) | [2]EPD & IP – Reports to Director (Industrial Systems & Products)

Year at a glance

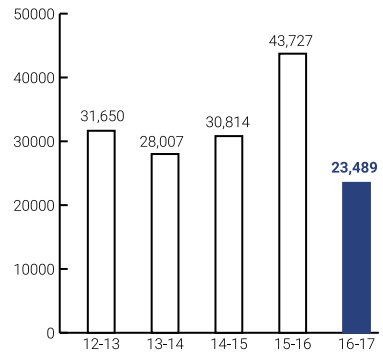
Turnover
₹ in Crore



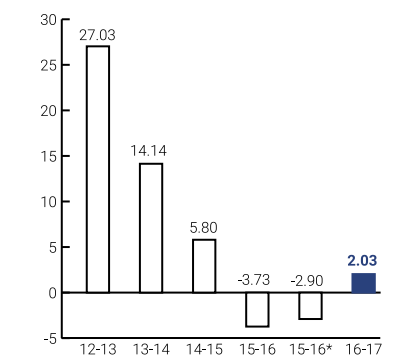
Profit before tax / Profit after tax
₹ in Crore



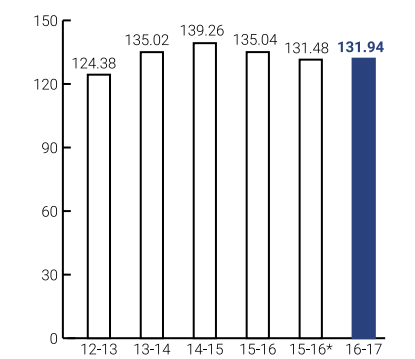
Orders Received
₹ in Crore



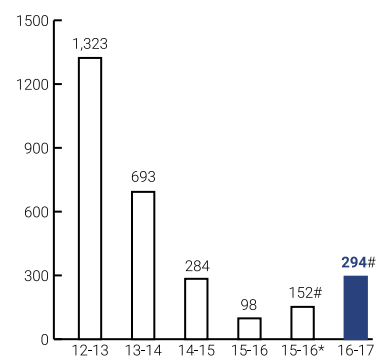
Earnings Per Share
in ₹



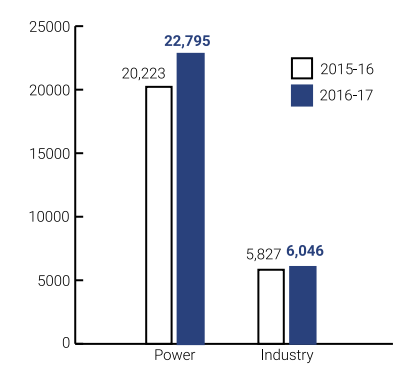
Net Worth Per Share
in ₹



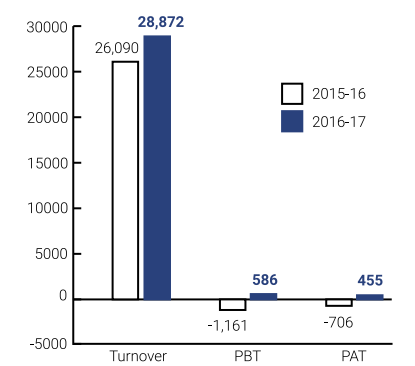
Dividend Distribution
₹ in Crore



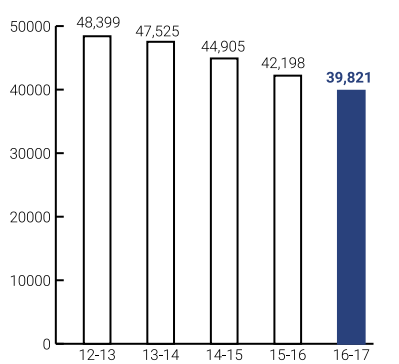
Segment Wise Revenue
₹ in Crore



Consolidated Financial Results
₹ in Crore



Manpower
in Numbers



** Figures are restated as per Ind AS*

 # Dividend for 2015-16 and 2016-17, includes Interim Dividend for the Current Year and Final Dividend for the Previous Year as per IND AS*

8,570 MW of power project commissioned/ synchronized





45,274 MW projects commissioned during 12th Five Year Plan, 2012-17; **9%** more than GoI target

178 GW+ Power Generating Equipment installed till date





Orders in Hand **₹1,05,200 Cr.**

14.82 Million units of power generated through in-house solar power installations





₹10,047 Cr. Largest ever export order from **2x660 MW** Maitree STPP, Bangladesh

508 patents and copyrights filed; Total intellectual capital: 3915; **₹794Cr.** invested in R&D and innovation





370 MW solar PV portfolio; mfg. capacity enhanced to **226 MW** solar modules **105 MW** solar cells

18,282 vocational trainees & **4,728** act-apprentices trained





3.9 Training Man-days per employee

₹294 Cr. invested in company's assets for capability building/productivity enhancement/indigenization





39,821 no. of human capital base; **8** Vishwakarma & **7** Shram awardees

ABOUT BHEL

BHEL is a celebration of India's spectacular success in achieving self-sufficiency in the indigenous manufacture of heavy electrical equipment. The original mandate given to the company by the founding fathers of the Nation has been more than realized. BHEL is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing companies of its kind in India. The company is engaged in the design, engineering, manufacture, construction, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Oil & Gas and Defence with over 180 product offerings to meet the needs of these sectors. Since its inception in 1964, BHEL has been the solid bedrock of evolution of India's Heavy Electrical Equipment industry.

BHEL has a mammoth 20,000 MW per annum capability for manufacturing of power generation equipment. A widespread network of 17 manufacturing units, 2 repair units, 4 regional offices, 8 service centres, 1 subsidiary, 4 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. With key focus on project execution, the worldwide installed base of power generating equipment supplied by BHEL has exceeded 178 GW. BHEL's 54% share in India's total installed capacity and 58% share in the country's total generation from thermal utility sets (coal based) as of March 31, 2017 stand a testimony to its valuable contribution towards nation building.



New turbine blade shop facility at BHEL, Haridwar

BHEL's global competitiveness has established its footprint in all the inhabited continents with references in 82 countries including Malaysia, Oman, Iraq, Syria Sudan, Libya, Cyprus, Malta, Afghanistan, Bangladesh, Bhutan, New Zealand etc. with cumulative overseas installed capacity of BHEL manufactured power plants nearing 10,000 MW.

The high level of quality & reliability of BHEL products is a testimony to its adherence to international standards by acquiring and adapting some of the best technologies from leading companies in the world including General Electric, Siemens AG, Mitsubishi Heavy Industries Ltd. etc., together with technologies developed in its own R&D centres. While all the manufacturing units and other entities of the company



Transformer shop at BHEL, Jhansi

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 sector of the company comprises thermal, gas, hydro and nuclear power plants. BHEL:

- Has the capability to supply steam turbines, generators, boilers and their auxiliaries upto 800 MW with capability to supply upto 1000 MW. Currently executing projects on EPC basis including supercritical sets of 660/700/800 MW ratings
- Has the capability to supply hydro turbines and generators upto 400 MW
- Has the capability to supply nuclear turbine generator sets including 220/235/540/550/700MWe
- Has proven expertise in plant performance improvement through renovation, modernization and uprating of a variety of power plant equipment
- Has special knowhow of residual life assessment, health diagnostics and life extension of plants
- Has supplied thermal sets that have consistently exceeded national average availability and efficiency parameters.



Stator manufacturing under progress at BHEL, Haridwar

have been accredited to Quality Management Systems (ISO 9001:2008), major manufacturing units have also been accredited to 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 time to time slowdown in the economic environment, BHEL has evolved by transforming its strategies from product manufacturing to market orientation, business excellence through portfolio restructuring and the current focus on sustaining growth through diversification.



Turbine hall of 700 MW supercritical unit at Bellary STPS, Karnataka



World's first 800 kV pre-engineered Indoor DC hall at NE-Agra HVDC terminal

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 superconducting applications for electrical equipment. BHEL is one of the highest spenders on R&D in the Indian engineering field

Industry sector

BHEL is a leading manufacturer of a variety of Industrial Systems & Products and meets the growing demand for major industries like oil and gas, metallurgical & mining, sugar, fertilizers, refineries, paper & petro-chemicals etc. Besides this, Industry Sector operations also provide complete solutions for captive power generation, transmission, transportation, renewable energy, water management, defence and other industrial products. 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 ±800 kV, power transformers, shunt reactors, vacuum & SF_6 switchgear, gas insulated switchgears, ceramic insulators, etc.
- Transportation: Manufactures IGBT based propulsion equipment (traction converter/ auxiliary converter/VCU), 25 kV AC locos, Control gear equipment for Electric Locomotives, EMUs, DEMU, DETC and Diesel-Electric shunting locomotives for industry & power plants
- Renewables: EPC solutions from concept to commissioning for grid connected and standalone PV applications ranging from kW to MW sized plants, space grade solar panels and space grade batteries
- Water: Turnkey solutions for water treatment systems including Pre Treatment plants (PT), Seawater Reverse Osmosis (SWRO) plants, Demineralization (DM) plants, RO plants for industrial applications, Waste Water/ Effluent Treatment plants (WWTP)/ (ETP), Sewage Treatment plants (STP) and Zero Liquid Discharge (ZLD) systems
- Industrial products (Electrical & Mechanical): Range of industrial products including oil rigs, wellheads & Xmas trees valves, fabricated equipment & mechanical packages, boiler feed pumps, compressors, AC machines etc.
- Defence: Supplier of strategic equipment including Super Rapid Gun Mount & Integrated Platform Management System for naval Ships, Thermo pressed components , Heat exchangers for LCA, Turret castings for T72 tanks, castings for ships and simulators etc. to Indian defence forces



4x200 MW Koldam HEP commissioned by BHEL



10 MW grid connected solar power plant at NLC township, Neyveli commissioned by BHEL

and has been consistently spending more than 2.5% of its turnover on R&D and innovation.

BHEL's greatest strength is its highly skilled and committed workforce of about 40,000 employees who have been the cornerstones of BHEL's journey of excellence.



BHEL engineers at work on site

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, Talent upgradation/ Skill development etc.



Sh. Anant Geete, Hon'ble Union Minister for HI&PE, Sh. Babul Supriyo, Hon'ble MoS for HI&PE and Sh. Girish Shankar, Secretary, DHI with CMD, BHEL at the BHEL Day 2017 celebrations

The company is transforming in line with the market realities and embracing change to capitalize on the upcoming opportunities. Sustaining its leadership in existing businesses, building new capabilities, creating new sources of growth and responsible utilization of infrastructure will be the key to future growth and stakeholders' wealth enhancement. ●

Vision

A global engineering enterprise providing solutions for a better tomorrow



Mission

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



Global Footprints

Reference in 82 countries in all six inhabited continents

Contracted power plant equipment of around 17,000 MW

First overseas turnkey project commissioned by an Indian company - executed by BHEL at Tripoli, Libya in 1980

Secured the largest ever export order for 2X660MW Maitree TPP from Bangladesh, BHEL's first highest rating power plant outside India



World of BHEL

A National Champion

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

- Power Generation & transmission
- Transportation/ Renewables / Defence/ Water management/ Oil & Gas/ Industrial Products-Elec. & Mech.

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

Built India's capability in heavy electrical equipment manufacturing with world-class environment-friendly technology

Sustainable Performance

Zero debt company

Consistent dividend paying company since 1976-77

First listed its equity shares on stock exchanges in 1992

Did you know?

BHEL is the single largest contributor to the country's total installed electric utilities

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

World's largest ±800 kV, 6000 MW multi-terminal HVDC NE-Agra transmission project under execution by BHEL

All the three ships of the Kolkata-class stealth guided missile destroyers equipped with BHEL's 76/ 62 mm Super Rapid Gun Mount (SRGM) and Auxiliary Control System.

95% of hydroelectric generating capacity in Bhutan installed by BHEL

BHEL's first power generating set was the 30 MW thermal power station installed at Basin bridge in Tamil Nadu, way back in 1969

All the states & six union territories of the country have power generating equipment installed by BHEL.









Innovation

R&D Expenditure >2.5% of Turnover-highest in Indian engineering field

Five research institutes

14 Centres of Excellence

Total intellectual capital: 3915

In-house R&D Centres of 12 Manufacturing units/Divisions recognized by DSIR



Energizing India

Major integrated power plant equipment manufacturer in the world with 20,000 MW pa manufacturing capacity

178+ GW power generating equipment installed till date

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

Commissioned country's first 660 MW indigenously manufactured supercritical set at NTPC Barh-5, in 2013

Forayed into electricity generation with commencement of commercial operation at 800 MW Yeramarus TPS

16,500+ MW Captive Power Plant installed

350+ MW- cumulative shipments of PV cells, modules, and systems

Technology to mitigate climate change

Developing Advanced Ultra Supercritical (AUSC) technology for coal based power plants with NTPC and IGCAR

Indigenized Super-critical technology resulting in ~11% reduction in CO_2 emissions, higher efficiency & lower cost to customers

Offering emission control solutions for power plants

Highest number of eco-friendly supercritical sets commissioned in the country till date

Developed more efficient EHV Transmission systems and products (including ±800kV HVDC)

Achieved carbon footprint avoidance of 14,378 MT CO_2-e during 2016-17 by generating 14.82 MU energy through in-house solar power installations



Social onus

Committed to Principles of UN Global Compact

Signatory to Integrity Pact of Transparency International

Supporting construction of 25 Clusters of Bio-Digester toilets in Haridwar and Rishikesh under Namami Gange & Swachh Bharat Abhiyan

Bio diversity

In-house green coverage of 4.7 million Square meters

Plantation of more than 3 million trees

Supporting more than 10 Mobile Medical Units (MMUs) benefitting more than one lakh patients during the year.





Valuing people

Among 'Top 25 best companies to work for' in 2016-17, awarded by Business Today

Third largest employer among non-financial CPSEs in Capital Goods sector

Participative management culture through Joint Council, Plant Council, Shop Council since 1973

~80% engineers amongst executives

2200+ female employees

Less than 1% attrition rate



Unparalleled experience

530,000+ MVA transmission equipment supplied

30,000+ AC machines- supplied, largest Indian manufacturer

15,000+ MW Captive Power Plant installed

190+ MW- cumulative shipments of PV cells, modules, and systems

360 electric locos supplied to Indian Railways & other industries

380+ compressors & 90 oil drilling rigs- supplied

42+ oil rigs- refurbishment & upgradation completed

34 SRGMs supplied

RECOGNITION OF EXCELLENCE



- The Hon'ble Prime Minister, Sh. Narendra Modi, presented a cheque of the highest amount of ₹ 1.79 Crores to Sh. Atul Sobti, CMD-BHEL, as a mark of appreciation for BHEL's active participation by engaging a large number of apprentices across the country under the **National Apprenticeship Promotion Scheme (NAPS)**, representing the organization's contribution to the Prime Minister's 'Skill India' initiative
- Prime Minister's Shram Awards (7 Nos) to 12 BHEL employees in recognition of their distinguished performances
- Vishwakarma Rashtriya Puraskars (8 numbers) to 36 BHEL employees for their innovative suggestion leading to cost reduction, improvement in quality, productivity and working conditions, etc.



- Top PSU Award 2016 under 'Heavy Engineering Sector' from Dun & Bradstreet.
- National Safety Awards (5 Nos) for longest accident-free and lowest accident frequency rate by Ministry of Labour, GoI
- CBIP Award 2016 for Best Power Equipment Manufacturing Organization for Outstanding contribution in manufacturing wide range of equipment for the core sectors of economy, including Power Generation, transmission and renewable energy for the development of power sector



- PSE Excellence Award 2015 for Human Resource Management Excellence & R&D, Technology Development & Innovation in the Maharatna & Navratna CPSEs category by Indian chamber of Commerce (ICC)
- Significantly for the 26th year in succession, BHEL has been recognized by EEPC for excellence in

exports and has been conferred the 'Star Performer in 2014-15 in the category of Large Enterprise

- Power Grid Excellence Award for supply of quality Insulators by Power Grid Corporation of India Limited (POWERGRID)



- SKOCH Awards
- SKOCH BSE Award 2016 for Technology Deployment & Innovation to WRI, Trichy & HEEP Haridwar
- SKOCH Order of Merit - SKOCH Blue Economy Award in CSR for Holistic approach in Health Care Services Sector for Good Health & Well Being of Society
- SKOCH Order of Merit - SKOCH Smart Technology Award for Technologies for Growth
- NHRDN trophy 2016 for 5A learning (Anytime, Anywhere, Anybody, Any device, Any content) by National HRD Network
- Top 25 Best Companies to Work for in India by Business Today magazine in partnership with PeopleStrong



- Ms. Magu Manchala Yaragorla, of BHEL, Tiruchirappalli secured the First Prize for Best Woman Employee in the Non-Executive Category at the WIPS National Meet
- Golden Peacock HR Excellence Award for 2016 for exemplary contribution to HR function, initiatives taken towards enhancing the engagement and satisfaction of employees and best practices



- BHEL has been conferred the 'ICAI National Award for Excellence in Cost Management 2016'. Significantly, this is the tenth time BHEL has won this prestigious recognition. An independent jury unanimously selected BHEL for the First Award in the PSU Manufacturing Organisation - Large category, for the Award for 2016



- CMD, BHEL was conferred the Industry honour for Visionary Leadership in Heavy Engineering at the 6th EPC World Awards for his exceptional contribution in the infrastructure and engineering sector
- CMD, BHEL was honoured as one of the country's Eminent Engineering Personalities by Institute of Engineers(India) for his notable achievements and contribution to the engineering profession
- Ms. A. Santhakumari of WRI at BHEL, Tiruchirappalli, received the SCOPE Award for Best Woman Executive 2016 in PSEs
- Six Executives from BHEL – Sh. N.P. Sanodia, Ms. Deepa Prabhakar, Sh. Satish Asnani, and Ms. Megha Rastogi from HEP Bhopal, and Sh. Gaurav Saxena, and Sh. Bharat Panwar from CDT, New Delhi were bestowed with the prestigious NEXT 100 CIO Award by IT Next magazine for their techno-commercial, management and leadership skills



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DIRECTORS' REPORT



To the Members,

The Directors are pleased to present the 53rd Annual Report on the business and operations of the company and the audited Ind AS financial statements for the year ended March 31, 2017 alongwith comparative Financial Statements of 2015-16 and opening Ind AS Transition Balance Sheet as on 01.04.2015.

During the year, the company regained growth and profitability by recording a turnover of ₹ 28,840 Crore, a growth of 10.7% over 2015-16 and profit of ₹ 496 Crore as against loss of ₹ 710 Crore in previous year. The Company achieved a capacity addition of 45,274 MW of power projects during 12th plan (2012-17), 9% higher than the target of 41,661 MW set by Government of India for BHEL.

Financial Performance

Figures (in ₹ Crore except per share data)		Financial Year	
		2016-17	2015-16
(a)	**Turnover**	**28,840**	**26,050**
(b)	**Other Operational Income**	**635**	588
(c)	**Revenue from operations**	**29,475**	26,638
(d)	Operating Expenses	(28,643)	(28,005)
(e)	**Operating Profit/(Loss)**	**832**	**(1,367)**
(f)	Other Income	996	1498
(g)	**Profit/ (Loss) before Depreciation, Finance cost & Tax expense**	**1,828**	**131**
(h)	Depreciation & amortisation expenses	(849)	(936)
(i)	Finance Cost	(351)	(359)
(j)	**Profit/ (Loss) before tax**	**628**	**(1,164)**
(k)	Tax expense	(132)	454
(l)	**Profit/ (Loss) for the period from continuing operations**	**496**	**(710)**
(m)	**Other Comprehensive Income**	**(29)**	(76)
(n)	**Total Comprehensive Income for the period**	**467**	**(786)**
(o)	Dividend (including interim dividend)#	294	152
(p)	Corporate Dividend tax (incl. CDT on interim dividend)	60	31
(q)	**NAV per share (in ₹)**	**131.94**	**131.48**

Figures in brackets denote expenses or losses
 # Dividend includes final dividend for the previous year and interim dividend for the current year.

Dividend

The Company has paid interim dividend for 2016-17 @ 40% (₹ 0.80 per share) amounting to ₹ 195.81 Crore on paid up share of capital of ₹ 489.52 Crore and corporate dividend tax of ₹ 39.86 Crore, out of profit for the year. With this, the total payout was at ₹ 235.67 Crore. The company has also paid final dividend of 2015-16 in 2016-17 of ₹ 97.90 Crore (₹ 0.40 per share) on paid up share capital of ₹ 489.52 Crore, alongwith corporate dividend tax of ₹ 19.93 Crore.

The Board has recommended a final dividend for 2016-17 @ 39% (₹ 0.78 per share) amounting to ₹ 190.91 Crore on paid up share capital of ₹ 489.52 Crore and corporate dividend tax of ₹ 38.87 Crore, out of profit for the year. With this, the total payout shall amount to ₹ 229.78 Crore.



CMD, BHEL presenting the Interim Dividend cheque for FY 2016-17 to Shri Anant Geete, Hon'ble Union Minister for HI&PE

The Dividend Distribution Policy of the company is provided separately in the Annual Report (under Additional Information) and is available on BHEL website (www.bhel.com).

Orders Received

BHEL secured orders worth ₹ 23,489 Crore during 2016-17. This was achieved despite subdued business conditions in the power and infrastructure sectors coupled with intense competition in domestic and overseas markets. Sectorwise orders booked are as follows:

(₹ in Crore)

	2016-17	2015-16
Power Sector	**7,261**	38,529
Industry Sector	**6,181**	5,125
International Operations	**10,047**	73
Total Orders Booked	**23,489**	43,727
Order Book outstanding at the end of the year	**1,05,200**	1,10,730

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, 2017, the applicable accounting standards (Ind AS) have been followed and proper explanation relating to material departures has been provided;

(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

Domestic economy is experiencing a turnaround but is still reeling under the impact of uncertainties. RBI has projected Gross Value Added (GVA) growth of 7.3 % in 2017-18 as compared to 6.6% in 2016-17. Over the medium run, the roll out of the Goods and Services Tax (GST) and enacting other structural reforms should push the economy towards a higher growth path. However, capacity underutilization and delayed revival of capital investment still pose major challenge to the growth of Indian industry.

BHEL recorded a turnover of ₹ 28,840 Crore, up 10.7% over the previous year, reversing the trend of negative topline growth prevailing for the last three years. Company returned to profitability with a Profit Before Tax of ₹ 628 Crore, compared to a loss before tax of ₹ 1,164 Crore in the last year. Profit After Tax stood at ₹ 496 Crore, against a net loss of ₹ 710 Crore in the previous year. BHEL secured orders

worth ₹ 23,489 Crore during 2016-17. This was achieved despite subdued business environment coupled with intense competition in domestic and overseas markets. Enhanced focus on project execution has resulted in BHEL achieving a capacity addition of 45,274 MW during the 12th Five Year Plan period (2012-17), surpassing the target of 41,661 MW set by the government for BHEL, by 9%. Company's strategy is to maintain leadership in existing businesses and focus on diversification to drive the next wave of growth which includes harnessing opportunities in the areas of solar power, transmission, transportation, defence and water.

BHEL too is transforming and has embarked upon a transformation journey with a vision of 'Creating BHEL of Tomorrow' – creating an organization which will be Rising, Robust and Responsive to the needs of customers, employees, shareholders and society. With several initiatives taken under Execution, Consolidation & Simplification as a part of this transformation process, the company is also putting a series of efforts focused on sustaining growth and profit; asserting leadership in core business and developing people & digital capabilities; and finally, building capabilities in new businesses and technology for sustained growth.

Further details are given in **Annexure-I.**

Board of Directors

Details of changes in Directors & Key Managerial Personnel

Appointment

Shri Anshu Prakash, Additional Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises was appointed as Part-time Official Director w.e.f. 31.10.2016.

Shri Bhaskar Jyoti Mahanta, Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises has been appointed as Part-time Official Director w.e.f. 03.01.2017.

Ms. Surama Padhy has been appointed as Part-time Non-official Director (Independent Director) w.e.f. 02.02.2017.

In accordance with Section 161 of the Companies Act, 2013 and Article 67(iv) of the Articles of Association of the Company, Shri Bhaskar Jyoti Mahanta and Ms. Surama Padhy, being appointed as additional directors, shall hold directorship upto the 53rd Annual General Meeting of the Company and are eligible for appointment as Directors at the Meeting.

Cessation

Shri Rajesh Kumar Singh, the then Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, who was appointed as Part-time Official Director w.e.f. 22.12.2014, relinquished his charge of the post of Part-time Official Director on the Board of BHEL w.e.f. 06.10.2016 on his transfer to UIDAI, Ministry of Electronics & IT.

Shri Anshu Prakash, the then Additional Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, who was appointed as Part-time Official Director w.e.f. 31.10.2016, relinquished his charge of the post of Part-time Official Director on the Board of BHEL w.e.f. 03.01.2017 on his transfer to Department of Rural Development.

Ms. Harinder Hira who was appointed as Part-time Non-official Director (Independent Director) w.e.f. 08.05.2014 ceased to be a Director of the Company on completion of her tenure on 01.05.2017.

The Board of Directors place on record their deep appreciation of the valuable services rendered as well as the advice and guidance provided by S/Shri Rajesh Kumar Singh, Anshu Prakash and Ms. Harinder Hira 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, S/Shri Subrata Biswas and T. Chockalingam will retire by rotation at the Annual General Meeting and being eligible, offered themselves for re-appointment.

In compliance with Regulation 36(3) of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, brief resume of the Directors proposed for appointment and re-appointment alongwith the nature of their expertise in specific functional areas and names of companies in which the person also holds directorship alongwith the membership of the Committees of the Board are given in the explanatory statement/ annexure to the Notice.

No Director has given resignation during the year.

Audit committee details

Details of Board Level Audit Committee are given at Point 6.3 of the Corporate Governance Report. Further, there has been no instance where the Board of Directors has not accepted recommendation of the Audit Committee.

CEO/CFO Certificate

CEO/CFO certificate (as per Regulation 17(8) of Listing Regulations) is placed at **Annexure-II.**

Sustainable Development

BHEL's strong belief in Sustainable Development resonates in its mission statement – "Providing Sustainable Business Solutions in the fields of Energy, Industry & Infrastructure". Sustainability is integral to our business processes. Thrust

on reducing environmental footprint throughout our value chain to enhance environmental sustainability continued during the reporting period. To promote inclusive growth, the focus on CSR initiatives continued which resulted in the creation of additional social infrastructure benefitting the society. During 2016-17, an amount of ₹ 37.50 Crore was allocated for various CSR initiatives by the company. The details of various initiatives related to Sustainable Development undertaken during 2016-17 is provided in **Annexure-III**.

Business Responsibility Report

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



SPV manufacturing facility at BHEL, Bengaluru

R&D and Technological Achievements

BHEL's R&D strategy, structure and infrastructure are aligned to meet the challenges of present & future business environment. The R&D expenditure of the company for 2016-17 is ₹ 793.62 Crore which is 2.75 % of the turnover. This includes the expenditure incurred on R&D efforts made at manufacturing units for major modifications/ improvements in products/designs against customer requirements which are not covered in R&D projects. The company filed 508 patents and copyright applications during the year 2016-17, enhancing the company's intellectual property in terms of number of such rights to 3,915. Further details have been provided 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 Language appreciated the efforts being made in this area during the inspection of PS-NR, ROD-Mumbai & Corporate R&D on 12.04.16, 20.10.2016 & 20.01.2017 respectively.

A special session on Rajbhasha was held in Management Committee Meeting on 12.05.2016. For this session, Shri S.N. Singh, Director, Central Translation Bureau was invited to deliver a lecture on 'Rajbhasha Implementation-Our Responsibility'.

Second meeting of Hindi Advisory Committee of Ministry of Heavy Industries and Public Enterprises was organized by BHEL Hyderabad under Chairmanship of Shri Anant G. Geete, Union Minister of Heavy Industries and Public Enterprises on 29.12.2016.



CMD, BHEL inaugurating Hindi Diwas Samaroh organised at BHEL Corporate Office, Delhi on 14th September, 2016

Under Inter-Unit Rajbhasha Shield Scheme, 10 units/ divisions were presented the shield by CMD for excellent Rajbhasha Implementation. In addition, 380 employees who perform exemplary work in Hindi were also awarded with cash awards.

Our Company is playing an active role in Town Official Language Implementation Committees (TOLICs), constituted in various cities. Many interesting competitions, Seminars and programs are conducted under auspices of these committees. This year 9 units/ divisions of BHEL were awarded by the TOLICs for their various achievements in this area.

Vigilance

Vigilance Department of BHEL is headed by the Chief Vigilance Officer (CVO) appointed by Department of Heavy Industry (DHI), Ministry of Heavy Industries & Public Enterprises, Govt. of India. Major manufacturing units / Power Sector Regions of BHEL have a vigilance set up headed by a senior vigilance executive reporting to the CVO.

Preventive Vigilance has always remained the focus area of BHEL Vigilance. Additional impetus was also given for systemic improvements during 2016-17. Some of the preventive measures initiated are as under:

- Revision of Works Policy, 2016
- Revision of Supplier Evaluation, Approval and Review Procedure (SEARP), 2016

- Revision of Guidelines for Reverse Auction
- Revision of Guidelines for Suspension of Business Dealings with Suppliers / Contractors
- Utilization of Unused Material
- Review of Material Estimation Procedure
- Implementation of Sequential Material Supply System by units
- Revision of NIT conditions to check Cartelization in Transport and Fabrication contracts
- Review of Corruption Mitigation Action Plan for Potential areas
- Emphasis of Open Tendering and Transparency in Tendering value for money
- Online Vigilance Clearance System
- Review of Township Revenue Collection System



CMD, BHEL administering the pledge to employees during the 'Vigilance Awareness Week' observed in BHEL

During the year, various training programmes were conducted in different units/divisions for the employees as part of preventive vigilance. In all the General Management Programme/Strategic Management Programmes organised by Corporate Learning & Development (CLD) department, a session on vigilance administration is being included on a regular basis.

With a view to create awareness about procurement policy, rules and procedures etc., to disseminate the instructions/ guidelines issued by CVC and Government of India from time to time, to share best practices and case studies, Vigilance Department publishes Quarterly e-Newsletter 'DISHA'. Sixteen issues have already been published.

The Vigilance Awareness Week was observed from 31st October to 5th November, 2016. To spread awareness about ill effects of corruption amongst cross section of society, various programmes i.e. quizzes, debates, essay writing competition, elocution, panel discussions, lectures, training programmes, Poster competition, slogan competition, walkathon etc. were organized for students of various schools / colleges (30 colleges / 39 schools) and employees of the organization.

Routine / Surprise inspections were carried out by Vigilance. The learnings from inspections and surprise checks were shared with the management. Based on these feedbacks, various system improvements have been initiated by the management. In addition, various circulars for systemic improvements were also issued.

BHEL signed the Integrity Pact with Transparency International on 16.12.2008 and the same was adopted in Feb. 2009. Structured meetings are held with the Independent External Monitors (IEMs) every quarter wherein the procurement related issues and complaints thereupon are discussed.

With a view to ensure efficient Vigilance Clearance of officers who are applying for senior level posts in various CPSEs, Department of Personnel & Training (DoPT), Ministry of Personnel, Public Grievances and Pensions has launched a web portal for Vigilance status of Board Level and below Board level officials. Data in respect of officials of one level below the Board of BHEL has been updated in the system.

Safety & Security

BHEL is fully committed to providing a safe and healthy work environment in all its manufacturing units and project sites. It is our firm belief that safe and healthy workplace not only boosts people's morale but is also a precondition for greater productivity at workplace. It has always been our endeavour to consolidate good safety practices and make them a part of our work culture. Due to various initiatives taken to improve safety performance at project sites, the number of fatal accidents and man-days lost due to reportable accidents have decreased. In manufacturing units, the number of reportable accidents has reduced by almost 8% with respect to 2015-16.

Occupational Health Services (OHS) centres are being run in the factory premises providing preventive as well as curative occupational health services to employees. Health monitoring of employees is carried out at these centres as a preventive health management measure.

Some of the initiatives taken in our units/divisions to build and maintain safety and health culture at workplace during 2016-17 included:

- Awareness training on Material Safety Data Sheet (MSDS) and Safe Operating Procedures (SOP) to ensure safety in handling and use of hazardous chemicals.
- Health & Safety related training sessions for Regular Employees, Contract Workers & Trade Apprentices.

- Training at workplace for Crane Operators, Riggers, and Helpers for ensuring safety in Material Handling.
- Demonstration of Rescue operation in the event of fall from height and awareness creation on appropriate use of Personal Protective Equipment (PPEs) at project sites.
- Providing sponsorship to company officials/ supervisors for 1-year Advanced Diploma Course in Industrial Safety conducted by Central/Regional Labour Institute at Mumbai, Kanpur, Kolkata, Chennai and Faridabad.
- Hazard Identification and Risk Assessment exercise for all new activities/process modification/ equipment installation.
- Tool box talk/pep talks at workplace covering area specific safety issues.
- Conducting periodic maintenance & testing of material handling equipments (cranes, lifting tackles, hoists, forklifts, pallets etc.), pressure vessels/air receivers, power presses etc.
- Celebration of Road Safety Week to create awareness amongst employees and drivers associated with transportation of our products.
- Celebration of National Safety Day/week to create awareness about safety topics amongst the employees, contract workers and other stakeholders in our society. The theme of the Safety Day-2017 was "Leadership in Safety and Health Enhances Business Sustainability". Employees took safety pledge and several competitions were organised to promote safety.
- Sharing of good practices through publication of in-house magazines and handbooks on various safety related topics.

Data and Cyber Security

An organizational Crisis Management Group (CMG) is in place in BHEL for countering cyber-attacks and cyber terrorism, in pursuance of priorities and directives from Ministry of Heavy Industries & Public Enterprises, Govt. of India. Crisis Management Plan for BHEL is also in place. All database administrators across various locations of company are notified.

BHEL has created a total workforce of 225 Information Security professionals including 50 in 2016-17, through training and certification courses, meeting one of the key objectives of national cyber security policy of Govt. of India to protect Indian cyber space.

All units, regions and divisions of BHEL have been certified for ISO/IEC 27001:2013 for Information Security Management System (ISMS).

Enterprise Risk Management (ERM) system exists in BHEL and Cyber Security is identified as one of the top risks.

Corporate Governance

As per the requirements of the Listing Regulations, 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 under Listing Regulations & 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.

Loans and Investments

Details of loans and investments covered under the provisions of Section 186 of the Companies Act, 2013 forms part of financial statement, attached as a separate section in the Annual report FY 2016-17. Loan of ₹ 3 Crore towards working capital was given during 2015-16 to M/s BHEL EML, BHEL's subsidiary company. The repayment timeline of the loan is extended to March 2018.

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 the 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 the Directors etc. in the Directors' Report. However as per Notification No. GSR 463(E) dated 5th June, 2015 issued by the Ministry of Corporate Affairs, Government Companies are exempted from complying with provisions of section 197 of the Companies Act, 2013. BHEL being a government company, such particulars are not included as part of Directors' Report.

Statement pursuant to Section 129 of the Companies Act, 2013 (Form 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/investor.php

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

Auditors

The auditors of BHEL are appointed by the Comptroller and Auditor General of India. The names of auditors appointed for the year 2016-17 are printed separately in the Annual Report.

The detail of cost auditors appointed for the year 2016-17 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 Govt. of India, particularly the Department of Heavy Industry, in the company's operations and developmental plans. The Directors also express their gratitude to the Comptroller and Auditor General of India, Chairman and Members of Audit Board, Statutory Auditors, Branch Auditors, Secretarial Auditor and Cost Auditors. The Directors also wish to place on record their appreciation for the continued cooperation received from all the technology collaborators and suppliers and for the support provided by the financial institutions, bankers, stock exchanges and various stakeholders. Last but not the least, the Board wishes to place on record its deep gratitude to all BHELites whose enthusiasm, team effort, devotion and sense of belongingness have made this great company proud.

For and on behalf of the Board of Directors of

BHARAT HEAVY ELECTRICALS LTD.



Atul Sobti
Chairman & Managing Director

Place: New Delhi

Dated: July 19, 2017

Annexure–I

Management Discussion and Analysis

1.1 Economic & Business Overview

Global economy gained momentum in 2016. As investment across the economies improved, global demand for goods & services has risen leading to improvements in manufacturing and trade. Alongside the pickup in economic activity, prices of commodities like crude oil and metals have also strengthened leading to renewed investments in extraction industry. Performance across emerging economies has remained mixed. Overall economic activity in fuel and non-fuel commodity exporter countries remained weak as price realization was still lower.

India continues to shine bright in global economy in the midst of domestic structural reforms like GST and others with a backing of strong political will. New revised series of Index of industrial production (IIP) is showing 4.94% growth in production activity during 2016-17 with capital goods growing at 3.07%. All three contributing sectors, viz. Mining, Manufacturing and Electricity are reflecting growth in 2016-17 against previous years. Country registered GDP growth of 7.1% in 2016-17 compared to 8.0% in previous year. Both, private and government consumption held up the aggregate demand in domestic economy. However, growth in gross fixed capital formation remained at lower levels vis-à-vis past, reflecting fall in investment demand. Declining inflation, improvement in Current Account Deficit as well as Government's fiscal position and resumption of capital inflows which has allowed a significant build up in foreign reserves are signs of domestic economy preparing ground for next phase of growth.

BHEL's mainstay business arena of Power sector is under transition with the emergence of prospective growth in Nuclear and Transmission & Distribution (T&D) in the coming years. Government focus is clearly on diversifying the fuel mix in electricity generation but thermal power will continue to be the work horse of India's electricity needs for some time to come. Capacity addition in renewable sector, particularly solar, in the country remains impressive and is expected to continue. However, domestic capability to cater to the complete value chain of Solar PV market has scope for growing further. ●



800 MW LP rotor under assembly at BHEL, Haridwar

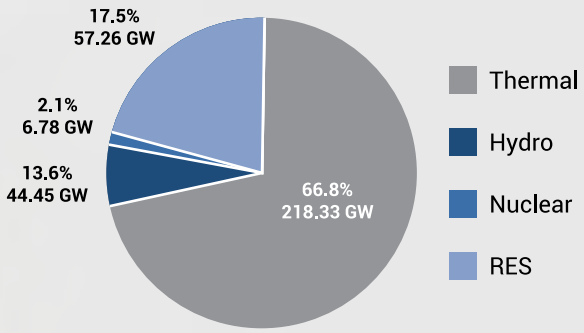


1.2 Profile and Performance of Business Segments

1.2.1 Power Sector

Opportunities

The economy of India continues to grow at a promising pace, largely driven by factors like rapid urbanization, demographic expansion, favorable policy environment, etc. and energy security is vital for its stable economic growth. With current installed capacity base of over 326 GW, India has come a long way in development of the power sector.



Installed Generation Capacity (326 GW)
as on 31st March 2017
Source: CEA, Ministry of Power

Today, about 67% of the country's installed capacity is based on fossil fuels. With a capacity addition from conventional sources of 99,209 MW during the 12th Plan, the country has not only exceeded the achievement of 54,964 MW capacity added during the entire 11th Plan (2007-12) through conventional sources by 80%, but also achieved ~112% of the 12th plan target of 88,527 MW.

The recent initiatives of Govt. of India, like '24x7 Power for All', '100% village electrification by 2018', 'Make in India', 'Smart Cities', 'UDAY', etc. are likely to enhance the demand for power in the country. Further, to deliver a sustained economic growth rate of 8.0% up to 2035, India needs to increase its primary energy supply by three to four times based on current levels. This represents a need for substantial augmentation of power generation, transmission and distribution capacity from the current levels.

Renewable Energy Sources (RES) are expected to play a greater role in the future capacity addition. However, coal based power plants are expected to continue to remain the backbone of country's power generating capacity in the next few decades, in view of their suitability for continuous, round-the-year operation and the large domestic reserves of coal in the country. The rapid capacity addition in RES would also call for capacity addition in hydro power plants,

especially in Pumped Storage Schemes, and in Gas based power plants to meet the ramping up and balancing requirements of the grid. Also, significant improvement in efficiency & emission levels through technology up-gradation shall enable coal based power plants in meeting the requirements of cleaner energy.

Current Business Environment

The Govt. of India has notified the new emission norms for existing and upcoming thermal power plants, which necessitate the incorporation of emission control equipment in coal based power plants. This shall open up an opportunity of retrofitting emission control equipment in the existing plants, besides increasing the scope in the new plants being setup in the country. In order to address the emission concerns from old plants, Govt. of India is encouraging replacement of old and inefficient subcritical plants with new, more efficient, supercritical plants. This shall bring forth an additional business opportunity, over and above the requirement for meeting the growth in demand for power. Development of specific eco-friendly solutions, optimized to the needs of the developers, so as to provide them higher value, is a vital step in this direction.

Significant opportunities are also expected to arise in Renovation & Modernization (R&M) Business, as CEA has identified 4,800 MW for R&M for next 5 years, where replacement is not planned in near future. Further, 27% of India's hydropower plants have completed 35 years, thus necessitating increasing requirement of life extension and performance & efficiency upgrades.

Developers of power plants had been facing numerous constraints like coal block de-allocation, delays in environment clearance, land acquisition, financing & funds tie ups etc. for the last few years. Govt. of India has taken various initiatives to resolve these issues, which have resulted in the sector showing green shoots in recent years.

Introduction of 'Ujwal Discom Assurance Yojana (UDAY)', a major initiative of the Govt. of India for the improvement of financial health of DISCOMs, is another encouraging initiative and is a positive indicator in both short-term and long-term for all the stakeholders. In particular, distribution segment, which has been the bottleneck for the Power sector for a long time, is expected to become de-stressed, which in turn can potentially improve the demand for power in the coming years.

Steps have been taken to attract investments into the hydro sector and utilize India's huge hydropower potential of 148 GW. Hydropower generation shall play a significant role in the balancing of generation, which is likely to be a major challenge with the advent of increased share of renewable power. This is likely to result in a major thrust to hydro projects.

Nuclear power forms an integral part of Govt. of India's strategy for clean and green energy. The Govt. of India has recently accorded approval for 10 nos. 700 MWe PHWR based Nuclear Power Projects in addition to the 2X700 MWe Gorakhpur- Harayana Nuclear Power Project (GHAVP 1 & 2). Nuclear Power is poised for a quantum leap in the coming years from the current installed capacity of 6.8 GW to 63 GW by 2032.

Offerings

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 thermal, gas, hydro and nuclear power projects from concept to commissioning.

BHEL has the capability from concept to commissioning services for thermal power plants encompassing steam turbines, generators, boilers and matching auxiliaries up to 1000 MW ratings. The company has undertaken numerous prestigious projects on EPC basis, including supercritical sets of 660/700/800 MW ratings.

BHEL also supplies and executes Circulating Fluidized Bed Combustion (CFBC) boilers for thermal plants, suitable for wide range of low-calorific fuels like pet-coke, lignite, etc.

BHEL offers gas turbines and matching generators ranging upto 299 MW (ISO) rating, tailored to meet specific needs, for both open and combined cycle operation. In Nuclear Segment, BHEL is closely associated in all the 3 Stages of Indigenous Nuclear Power Programme of the country. BHEL supplies equipment for both primary and secondary side of Nuclear Reactors. BHEL supplied 220/235/500/540 MWe Nuclear Turbine Generator sets are already under operation and BHEL is currently executing 700 MWe sets. BHEL is also developing secondary cycle for 300 MW Advanced Heavy Water Reactor (AHWR) based Nuclear Power Plants, ushering the nation to the third stage of Nuclear Power Programme.



440 MW Kakrapar Atomic Power Station equipped with BHEL sets

BHEL has the capability for engineering and manufacturig custom-made conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators and pump turbines with matching motor generators upto 400 MW.

BHEL also offers customized equipment for emission control. BHEL has supplied equipment for control of particulate matter, not only for boilers supplied/ manufactured by BHEL, but also for boilers of other manufacturers. BHEL is also offering Particulate Matter, NOx and SOx control systems as per customer requirements.

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 Control & Instrumentation (C&I) with state of the art technologies are also being offered by BHEL.

Achievements during the Year

Order Booking

Over the years, BHEL has been able to maintain its leadership in Power Sector despite intense competition, with a market share of ~60% during last five years. BHEL's Power Sector secured orders worth ₹ 7,261 Crore, for 3,622 MW of power projects in 2016-17. This includes orders for ₹ 2,686 Crore (a growth of 48% over the 2015-16) from Spares and Services Business, including R&M.

BHEL received the largest-ever Lift Irrigation Scheme (LIS) orders for Palamuru Rangareddy LIS Stage 2 & 3 (9x145 MW + 9x145 MW pump motor sets) for ₹ 1,051 Crore and ₹ 1,050 Crore respectively. This is the largest rating of pump motor sets ordered for supply in India. With these orders, BHEL has secured a market share of 78% in the LIS segment during 2016-17.

BHEL also secured the highest ever order of ₹ 428 Crore in Hydro R&M, including the ICB order of ₹ 295 Crore for OHPC Balimela HEP 6X60 MW (non-BHEL make sets).

Major Orders Received

Significant utility orders received in the Power sector:

THERMAL

- 1x250 MW NSPCL / Rourkela PP-II Expn (EPC)
- APPDCL / Krishnapatnam (Boiler Modification)
- APGENCO / Vijaywada (Boiler Modification)
- TANGEDCO / North Chennai Stg III (Boiler Modification)
- Korba West TPS (4 X 210 MW) ESP R&M

HYDRO

- 9x145 MW MEIL/Palamaru Rangareddy Stg. II Pkg5 (LIS)
- 9x145 MW MEIL/Palamaru Rangareddy Stg. III Pkg 8 (LIS)
- MEIL/Pranhita Chevella Pkg. 8 Scope Enhancement (LIS)
- MEIL/Pranhita Chevella Pkg.10 Scope Enhancement (LIS)
- MEIL/Pranhita Chevella Pkg.11 Scope Enhancement (LIS)
- Navayuga Engineering Company Ltd. / Pranhita Chevella Pkg. 6 Scope Enhancement (LIS)
- Balimela HEP (6X60 MW) Hydro R&M
- Baraisiul HEP (3 X 60 MW) Hydro R&M

NUCLEAR

- NPCIL / RAPP-7&8 Scope Enhancement
- NPCIL / KAPP-3&4 Scope Enhancement



4x40 MW Teesta Low Dam HEP commissioned by BHEL

Other developments expected to impact future business

Test protocol (Memorandum of Agreement) was also signed with NTPC for carrying out pilot test of BHEL developed Selective Catalytic Reduction (SCR) at 500 MW Simhadri Stage-I Unit-1.

Supercritical Experience

BHEL has been at the forefront to install environment friendly supercritical coal fired power plants within the country and has secured orders for 48 steam generators (SGs) & 41 turbine-generators (TGs), out of which 14 SGs and 12 TGs have been commissioned till 31.03.2017.

Projects Commissioned- Setting the Benchmark

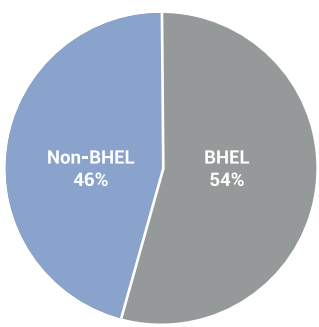
- Surpassed its capacity addition target of 12th Five Year Plan of Government of India with 45,274 MW capacity addition against the target of 41,661 MW. This achievement is 78% higher than 25,385 MW capacity addition of 11th Plan.

- 6,317 MW Capacity Addition achieved in 2016-17 against CEA target of 5,847 MW. In addition, 660 MW sets synchronised and ready for capacity addition. In all, 8,570 MW sets commissioned/ synchronised, including 1,515 MW Industrial sets and 78 MW overseas sets.



BHEL forayed into power generation with its JV project, 2x800 MW Yeramarus TPS

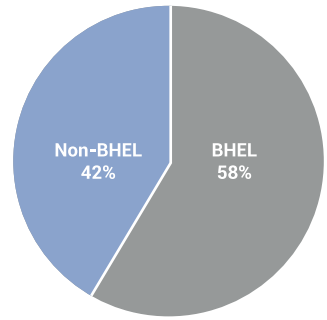
- Forayed into power generation as a co-developer, with the commencement of commercial operation of the first 800 MW unit at Yeramarus TPS (2x800 MW) of RPCL - a joint venture with equity contribution from KPCL, BHEL and IFCI.
- BHEL's First 700 MW Unit started commercial operation at Bellary Unit 3.
- Trial Operation of Nation's first & highest rating 250 MW CFBC Boiler based Power Plant completed at NLC's Neyveli Unit 2.
- Installed capacity of BHEL supplied utility sets in India amounts to 1,51,476 MW, including 1,20,115 MW coal based and 20,199 MW hydro based equipment.
- Maintained its lion's share of 54% in the country's total installed capacity of 2,79,613 MW comprising coal, gas, diesel, hydro and nuclear sets (excludes Renewables; based on rating at the time of installation).



Installed capacity-Utility*- 2,79,613 MW
(as on 31.03.17)

**Coal, Gas & CCP, Diesel, Nuclear & Hydro*
Note: Excludes Renewables; Based on rating at the time of installation

- 58% of the country's total generation of 945 BUs from thermal utility sets (coal based) contributed by BHEL supplied sets, testifying superior performance of BHEL sets.



Generation-Utility (Coal & Lignite)
945 Billion Units (2016-17)

Utility Sets Commissioned during the year

19 utility sets commissioned in 2016-17: expanding BHEL footprints to 436 coal based sets, 408 hydro utility sets and 102 gas based utility sets installed in India, showcasing experience and execution capabilities.



Unit 2 of 600 MW Singareni Power Station achieved 100% PLF in February 2017

Performance of Equipment

Power plants with BHEL supplied equipment continue to exhibit above par performance in respect of Plant Load Factor (PLF), Operating Availability (OA) and outages. Major achievements of performance of BHEL sets include:

» 153 thermal sets achieved PLF of above 70% out of which 18 thermal sets achieved PLF above 90% and 60 thermal sets achieved PLF between 80% and 90%.

» Thermal sets registered overall OA of 86.7%. 222 thermal sets registered OA above 90%.

» Generation from sets of 195 MW and above (which form the backbone of country's power generation) went up to 5,30,811 MUs with PLF of 60.6% and OA of 87.3 %.

» Barh Unit 4 (660 MW), the first supercritical unit commissioned by BHEL, clocked more than 100 days of uninterrupted operation.

» Singareni Unit 2 (600 MW) achieved 100% plant load factor (PLF) in February 2017. Average PLF of Singareni Power Station was 95% during month of February 2017.

» Nuclear sets registered an OA of 90.6 % and PLF of 88.8% in 2016–17.

Renovation & Modernization (R&M)

During the year, BHEL carried out the renovation & modernization and up-rating of 310 MW of Coal sets, 50 MW of Hydro sets and 7 ESP sets. This has led to achievement of initial designed capacity/up-rated capacity, which is a testimony to BHEL's product & service excellence.



R&M of Barauni Unit 7 (110 MW) undertaken by BHEL

Acknowledgement & Recognition of Excellence

Efforts made by BHEL for timely completion, improvement in equipment performance and Service After Sales (SAS) support have been appreciated by various customers. Few of such appreciation/ recognition received are:

- Prayagraj Power Generation Company Limited (PPGCL) appreciated BHEL Team Work for completing the steam blowing activities at Bara Unit 3 (3X660 MW) in record time of 18 days.
- 350 MW Yelahanka gas based project, under execution by BHEL on EPC basis, has won the 'Best Construction Project' award for Safety from Karnataka Government, Factory Inspectorate.
- Appreciation letter received from APGENCO for bringing Vijaywada (210 MW) unit into service successfully after carrying out the capital overhaul of Seized turbine in very short duration.
- NTPC appreciated BHEL for safe and successful execution of Unchahar TPS ESP R&M works for Unit 1 & 2.



350 MW Yelahanka gas-based project for which BHEL won the 'Best Construction Project' award for safety from Karnataka Government

Preparing for Growth

BHEL has already established itself as a market leader in the field of supercritical technology. BHEL has developed the capabilities to indigenously manufacture supercritical sets, in-line with Government's initiative of 'Make in India'.

The company is geared up to address new opportunities arising from the revised emission norms, by offering customized emission control solutions. Besides providing the equipment for upcoming projects, BHEL has the capability to provide emission control solutions for various sets already in operation.

Company is also enlarging its scope of offer with inclusion of new products viz. Water Management system, Air Cooled Condenser, BoP system, emission control equipment like Flue Gas Desulphurization (FGD), Selective Catalytic Reduction (SCR), Selective Non-Catalytic Reduction (SNCR), etc. in its power sector portfolio.

With the increased focus on power from the variable Renewable Energy Sources, especially given the fact that Energy Storage technology is in the nascent stage of development, it is expected that there will be increased impetus on flexible operation of thermal power plants, so as to maintain grid stability. The organization is geared up to address the forthcoming opportunities of providing flexible operation for thermal plants.

The company is continuously focusing on achieving higher efficiencies through technological enhancements. Under a (recently approved) development project with grant from the Govt. of India, the company is working for indigenous development of nation's first Advanced Ultra Supercritical Technology based plant, which is a pioneer R&D project undertaken jointly with NTPC and Indira Gandhi Centre for Atomic Research (IGCAR). Development of this technology

shall not only help in achieving higher efficiencies but also reduce the coal consumption as well as CO_2 emission levels.



5x30 MW Mahatma Gandhi Kalwakurthy Lift Irrigation Project, Telangana, set up by BHEL

In hydropower segment, the organization has enhanced its capabilities to manufacture up to 400 MW hydro sets. Development of efficient runner profiles and reduction of hydro turbine weights have been instrumental in BHEL's recent successes in the segment. BHEL has also emerged as a leading player in large size Pump-Motors required in Lift Irrigation Scheme projects being implemented by state governments. BHEL is also targeting emerging opportunities for R&M and spares business in hydropower plants.

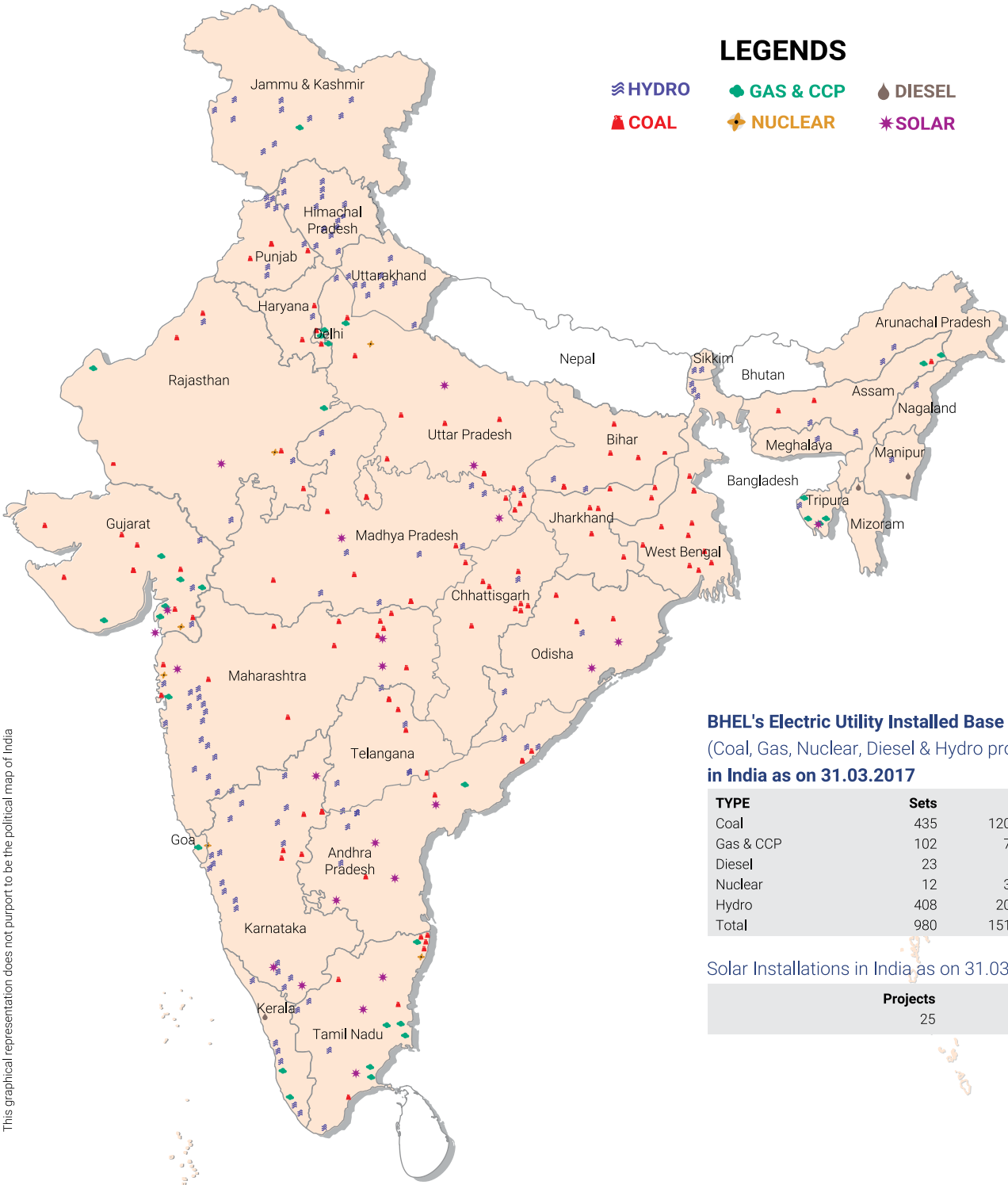
To harness emerging opportunities in Nuclear power, the company is working towards increasing its offerings in nuclear plants with focus on indigenization and taking up the complete 'TG Island' on 'EPC basis'. With its strong manufacturing prowess, BHEL is well positioned to enhance its contribution in the Nuclear projects which are likely to come up, both, with foreign collaboration and as a part of the indigenous Nuclear Power programme. ●



3x660 MW Lalitpur Supercritical TPP commissioned by BHEL in Uttar Pradesh

BHEL Make Electric Utility Installations

Commissioned as on 31.03.2017



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

BHEL's Electric Utility Installed Base
(Coal, Gas, Nuclear, Diesel & Hydro projects)
in India as on 31.03.2017

TYPE	Sets	MW
Coal	435	120115.00
Gas & CCP	102	7622.38
Diesel	23	199.42
Nuclear	12	3340.00
Hydro	408	20199.41
Total	980	151476.21

Solar Installations in India as on 31.03.2017

Projects	MW
25	220.00



1.2.2 Industry Sector

Industry Sector segment provides comprehensive solutions for Captive Power Generation, Transmission, Transportation, Renewable Energy, Energy Storage, Water Management, Defence & Aerospace, Industrial Products (Oil & Gas) and Electrical machines.

Design, manufacture, supply and services are offered for a broad range of systems and individual products, such as coal and gas-based captive power plants (including co-generating and combined cycle plants), industrial boilers and auxiliaries, waste heat recovery boilers, gas turbines, heat recovery steam generators, steam turbines and auxiliaries, pumps, HT motors, centrifugal compressors, drive turbines, oil rigs, well heads and X-mas trees, valves, transformers, reactors, switch gear, insulators, photo voltaic modules, Ground mounted and roof top solar PV plants, Solar PV powered pumps for drinking water, energy storage system, space grade solar batteries for satellite application, water treatment plants, cryogenic systems, electric locomotives, electrical propulsion systems, e-mobility, strategic equipment for defence forces.

During the year, BHEL's Industry Sector secured orders worth ₹ 6,181 Crore for variety of products. This includes segment's highest ever order booking in Transmission, Solar and Defence & Aerospace business groups, considerably enhancing the overall order booking of Industry Sector by 21% over the previous year. On capacity addition front, 1,454 MW of captive power projects and 61.4 MW of Solar PV Projects were synchronized during the year.

Transportation

Business Environment & Opportunities

Railways is the lifeline of the nation. Currently, the railway infrastructure in India is overstretched with more than 60% of the routes being more than 100% utilized. During 2017-18, the total capital and development expenditure of IR has been pegged at ₹ 1.31 lakh Crore towards passenger safety, capital and development works, cleanliness and other projects. High speed rail corridor is being established between Mumbai and Ahmedabad. Indian Railways is also looking to adopt the latest technologies in transportation like 3-Φ IGBT based drives.

Due to growing urbanization, metro rail is fast emerging as an important mode of urban transportation. The Govt. is formulating a new metro rail policy and under the 'Make in India' initiative, it is now mandatory that minimum 75% of the metro cars and 25% of the critical components be manufactured indigenously.

As per National Electric Mobility Mission Plan (NEMMP) 2020 projections, Electric Vehicle market is expected to grow to 5-7 million units by 2020. Government of India has

committed support to the sector through Faster Adoption and Manufacturing of Hybrid and Electric vehicles in India (FAME-India) Scheme launched in April 2015.

Offerings

- **Rolling Stock**
  - » Electric locomotives up to 5000 HP
  - » Diesel-Electric shunting locomotives for industry and power plants
- **Traction Machines**
  - » Traction motors – Both AC & DC motors (including gears) for Locomotives & Electrical Multiple Units
  - » Traction alternators – for Locomotives & Electrical Multiple Units
- **Traction Drive System & Controls**
  - » GTO/IGBT based Traction Power convertor systems for Electric Locomotives & Electrical Multiple Unit. BHEL supplied & installed IGBT propulsion equipment (Traction Converter/ Auxiliary Converter/VCU) account for more than 35% of IGBT based electric locomotives in operation by Indian Railways.
  - » Control gear equipment for Electric Locomotives, EMUs, DEMU, DETC
  - » Hotel Load Converter for Electric Locomotives
- **Traction Transformer**
  - » Transformers - single phase & three phase for Electric Locomotives & EMU's

Achievements during the year

Order Receipts:

- Highest value order in transportation business received from CLW for:
  - » 128 nos. 3 Phase Traction Motor type 6FRA6068
  - » 118 sets of IGBT based Traction Converter
  - » 32 sets of IGBT based Hotel Load Converter
- Highest value order received from Diesel Locomotive Works (DLW), Varanasi for 326 nos. of Traction motor type IM4507 and 199 nos. Traction Alternator TA 9901 from DLW
- Highest value order received from Rail Coach Factory (RCF), Kapurthala for 94 sets Traction equipment for MEMU (without traction motor)
- Maiden developmental order in transportation business secured from following customers:
  - » DLW, Varanasi for 10 sets of IGBT based AC-AC Traction Systems for 4500 HP DE locomotives
  - » ICF, Chennai for 2 sets of IGBT based 3-Phase Propulsion system for 1600 HP DEMU
  - » CLW for 5 sets of IGBT based Composite Converter with Traction Converter & Hotel Load Converter for 3-Phase Bo-Bo WAP-5 locomotive
  - » DMW, Patiala for 2 nos. energy efficient propulsion equipment for Multi Gen Set 1600 BHP 2GS BG Diesel Electric Locomotive



Air-conditioned AC EMU, equipped with BHEL electrics, under trial at Mumbai

Other achievements:

- Static trials / oscillation trials of Air Conditioned EMUs with IGBT based three phase drive propulsion system has been successfully conducted in presence of RDSO by April 2017 and dynamic trials are in progress.

Preparing for Growth

- **Collaborative and Indigenous development** - Joint development of IGBT based propulsion system including TCMS for Air-conditioned AC EMUs has been carried out to meet requirements of Indian Railways. Further, indigenous development of IGBT based propulsion equipment for DE locomotives and DEMU's is being carried out. Development of IGBT based Composite Converter for 3-Phase electric locomotives and energy efficient propulsion equipment for Multi Gen Set 1600 BHP Diesel Electric Locomotive is being undertaken by BHEL. Propulsion system for electric mobility is also under development at our R&D centre.
- **Capacity Planning** - BHEL is gearing itself for manufacture and supply of IGBT based WAG-9 locomotives from Jhansi works in view of requirement from Indian Railways.
- **Upcoming Opportunities** - BHEL participated in EOI's for various upcoming opportunities including propulsion equipment for 9000 HP Electric Locomotives and MAGLEV Systems. BHEL is also preparing itself to address the Metro segment.



Combined System Testing for IGBT-based AC EMUs at Centre for Electric Transportation at BHEL, Bhopal

Transmission

Business Environment & Opportunities

The Govt. of India has a plan to add substation capacity of 2,92,000 MVA during the period 2017-2022. This promises enormous opportunities in Indian transmission & distribution sector. Govt. of India's ambitious plan to develop 100 smart cities will be a key enabler for Smart Grid projects in India and hence will generate new opportunities in this segment. Further initiatives like `Make in India' is attracting the investors across nations for making investment in India and this will further boost the growth of transmission and distribution market in India.

India's natural resources for power generation are unevenly located. Therefore, country needs robust transmission system in Inter-State as well Intra-State to synchronize Load with Power Generation. India over the years has developed an extensive network of Power Transmission system. High Capacity Corridors for bulk transmission of Power over long distances are being planned and executed on Tariff Based Competitive Bidding (TBCB) in tandem with Government schemes for strengthening of Power Distribution Sector, IPDS and DDUGJY to meet the "POWER for All" objective of Government of India.

Also, with a strong emphasis on Renewable Energy sources for Power Generation, the integration of RE Power with already established Grid is a challenge. Many new technologies and power systems like Reactive Power Compensation, FACTS, ESS, and Pumped Storage Systems etc., are being planned and executed to address the challenges of RE Power integration with National Grid. This provides opportunities for business in these areas.

Offerings

- BHEL undertakes turnkey transmission projects from concept to commissioning on EPC basis which includes EHV & UHV Substations/ Switchyard of both AIS and GIS types ranging from 33kV to 765 kV, HVDC converter stations up to ± 800 kV, FACTS and Power System Studies.
- Products manufactured by BHEL include Power transformers, Instrument transformers, Dry type transformers, Shunt reactors, Vacuum and SF6 switchgear, Gas Insulated Switchgears, Ceramic and composite insulators, etc. Other Major critical equipment such as capacitor banks, circuit breakers, control & protection equipment, thyristor valves are also in BHEL's manufacturing range.
- BHEL has indigenously developed and commercialized Gas Insulated Switchgear (GIS) up to 420 kV, transformers and shunt reactors up to 765 kV. Company has also developed & supplied 1200 kV CVT and 1200 kV Auto transformer for the first 1200 kV test station in country way back in 2012. BHEL has developed & tested 420 kN and 530 kN disc insulators for 1200 kV transmission lines. BHEL has a range of disc insulators for EHV and UHV AC/ DC applications up to 1200 kV AC, ±800 kV DC, solid

core insulators up to 400 kV and hollow porcelain insulators up to 765 kV AC.



500 MVA 765/400/33 kV auto transformer at 765 kV Greater Noida substation

- BHEL has indigenously developed and executed schemes using FACTS devices like Fixed Series Compensation for 400 kV lines and Controlled Shunt Reactor (CSR) for dynamic reactive power compensation of long 400 kV transmission lines. BHEL has indigenously developed and supplied Phase Shifting Transformer (PST) for controlling and balancing power flow between 400 kV and 220 kV systems. BHEL is in a position to offer indigenous PST solutions up to 765 kV applications.

Achievements during the year

Major Orders received

- ± 800 KV, 6000 MW HVDC terminals associated with HVDC Bipole link between Western region (Raigarh, Chhattisgarh) and Southern region (Pugalur, Tamil Nadu) - North Trichur (Kerala) from POWERGRID.
- Two major orders for Green Energy Corridor projects from POWERGRID:
  - » Substation package for extension of 400kV Tumkur pooling station (Pavagada), extension of 400/220kV Mysore substation and extension of 400/220kV Tumkur (Vasantnarsapur) comprising of 10 nos. 400kV and 3 nos. 220kV bays.
  - » 765/400kV Bhuj new substation & 765kV Banaskantha substation extension (Part-II).
- Order received for 765/400kV Ariyalur Substation in Villupuram District, Tamil Nadu. The project is to be completed within 24 months. Significantly, this Turnkey project is the highest value EHV AIS substation ever awarded by TANTRANSCO.
- More than 100 nos. High Voltage Power Transformers (approx. 13000 MVA) and 3400 nos. Medium Voltage Switchgears from various customers.

Milestone achievement

- BHEL has remained one of the key player in Power Transmission segment. During the year, apart from manufacturing and supplying Power Transmission equipment for 765 kV and ± 800 kV voltage class equipment, BHEL has also consolidated its place in the EPC solution for UHV transmission segment of 765 kV.
  - » Bipole-1 of POWERGRID's NE-Agra HVDC project has been successfully commissioned and in operation since Sep'16.
- BHEL has commissioned 2 Nos of 36 kV GIS substations in Odisha during 2016-17.



Central control room at Agra converter station of the world's largest ± 800 kV, 6000 MW UHVDC multiterminal North-East Agra transmission link, being executed by BHEL on turnkey basis

Preparing for Growth

UHVAC & UHVDC Systems:

BHEL has successfully designed, manufactured, supplied and commissioned 765kV Class Transformer and Reactor and has also augmented its manufacturing facilities for manufacturing UHVDC equipment (i.e. Converter Transformer, Thyristor valves, Filter Capacitors etc). 1200kV Transformer, CVT, 420kN & 530kN Disc Insulator for UHV AC & DC application have also been successfully commissioned and are under operation. BHEL is currently executing world's largest ± 800kV multi-terminal HVDC project (North-East to Agra). BHEL is now fully geared up to address future market requirements in UHVAC and UHVDC segments.

Gas Insulated Switchgear (GIS):

BHEL has been successful in securing first commercial order for own make 420kV, 40kA GIS and has secured the first commercial order for 420kV GIS which is under

execution at NHPC- Chamera-I HEP. BHEL is now ready to address the forthcoming GIS requirements up to 420kV. Also, BHEL make 132/33 kV GIS is under commissioning at TSTRANSCO's Vithalwadi site at Hyderabad.

FACTS Solutions:

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

ESS Solutions:

With more and more integration of RE Power to the National Grid, demand from battery based Energy Storage Solution (ESS) is expected. BHEL is gearing up to address opportunities in this segment.

Renewable Energy

Business Environment & Opportunities

Government of India is targeting 100 GW cumulative capacity of SPV (Solar Photo-voltaic) by 2022 out of which 12,389 MW has already been installed as on 31.03.2017. Out of the 100 GW, the share of Ultra Mega Solar Parks has been increased from 20 GW to 40 GW with the share of grid connected solar rooftops and Utility scale grid as 40 GW and 20 GW respectively. Today, Solar is the fastest growing power generation segment in India. There is also an increased focus on Integration of Battery Energy Storage System (BESS) with the Solar PV plants. This growth is further aided by continuous technological improvements and declining module prices.

Offerings

- EPC solutions from Concept to Commissioning of Solar PV Power Plants:
  - » Grid Interactive systems with & without BESS (Battery Energy Storage System)
  - » Standalone systems
  - » Roof Top systems
  - » Hybrid systems
  - » Canal Top systems
  - » Floating Solar power plants
  - » Solar based Irrigation Pumps

Achievements during the year

- During the year company has provided 176 MW of SPV modules making a significant contribution to Country's Green Initiatives.



160 kW rooftop Solar PV plant commissioned by BHEL at Hyderabad, Telangana

Major Orders received

- SPV Power plant orders for 131 MW including highest ever single order of 65 MW from NLC.
- BHEL made its presence felt in Roof Top Solar Business by securing orders for 7 MW including:
  - » 3.6 MW from Surat Municipal Corporation: The project includes installations in the Surat Smart City project buildings.
  - » 2 MW from Indian Railways Organisation for Alternative Fuels (IROAF): The project will supply power to Diesel Loco Modernisation plant of Indian Railways at Patiala.
- Solar Pumps from Gujarat Water Supply & Sewerage Board: This is BHEL's re-entry into Solar Water Pump for drinking water applications after more than 10 years. It is BHEL's largest value order in this segment till date.



50 MW Solar Power Plant commissioned by BHEL at Kadiri (Ananthapur), Andhra Pradesh

Projects commissioned

- 61.4 MW SPV plants commissioned during 2016-17 which includes:

» Single Largest Project Commissioned: NTPC Kadiri, Ananthapur, 50 MW SPV

» India's first seasonal-tilt canal top SPV plant, 1 MW at NREDCAP, Bhimavaram, Andhra Pradesh

Preparing for Growth

- Enhanced its cell and module manufacturing capacity to 105 MW and 226 MW per annum respectively
- Developed In-house BoS: PCU (630kVA,1250 kVA), Power Transformers, SCADA, HT Switchgear Panel

Water Business

Business Environment & Opportunities

Scarcity of water is forcing many industries to go for water recycling to meet their growing water requirements. Also enforcement of water discharge regulations and higher industrial tariff will lead to Reuse and Effluent Treatment plants (ETPs). The Govt. is also emphasizing to bridge the shortage of treated water, implementing policies for water & waste water, clean up rivers (NAMAMI GANGE), accelerate urbanization (Smart cities) and develop industrial corridors.

Offerings

Complete Water Management Solutions for Power Plants, Industrial applications and Municipal Applications with different treatment technologies include: -



Clariflocculator for Pre-treatment plant commissioned by BHEL at Bellary STPS, Karnataka

- Pre Treatment Plants (PT)
- Sea Water Reverse Osmosis (SWRO) Plants
- Demineralization (DM) Plants
- Membrane Based treatment for industrial applications
- Effluent Treatment Plants (ETP)
- Sewage Treatment Plants (STP) for Municipal applications
- Zero Liquid Discharge (ZLD) System

Achievements during the year

- Received 57.6 MLD Ultrafiltration package order from NTECL Vallur TPS (3X500 MW)
- Received an appreciation letter from CEO OPaL for Raw Water Treatment plant project executed by BHEL at OPaL Dahej Petrochemical Complex.



96 MLD Raw Water Treatment plant set up by BHEL at OPaL Dahej Petrochemical complex, Gujarat

Preparing for Growth

BHEL has identified water segment as a high potential business area and has geared itself to address water segment business comprehensively for Power, industries & Municipal Sector. BHEL is positioned to tap business from Municipal Sector and NAMAMI GANGE programme of Govt. of India. BHEL has signed a MoU with National Environmental Engineering Research Institute (NEERI) for jointly working on identified projects of water and waste water treatment in Municipal Segment. BHEL is also exploring the possibility of in-house development of identified critical equipment.

Defence & Aerospace

Business Environment & Opportunities

Through "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 and aerospace sector. Govt. of India 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:

- Defence Procurement Procedure (DPP)-2016 has been released by Ministry of Defence (MoD) with specific provisions that will act as a growth stimulus to the domestic defence industry. MoD is taking further steps to streamline the Defence procurement process.
- Defence Procurement Procedure (DPP) 2016 has provision for "Strategic Partnership model for creating capacity on a long term basis". MoD is expected to release the modalities for selection of partners and implementation.
- With improvement in bilateral ties with countries which control the defence technology, Indian missile, space and UAV programme are poised for growth.

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 large infrastructure which includes dedicated engineering & manufacturing facilities at various locations. Major products being manufactured by BHEL includes Super Rapid Gun Mount, Strategic equipment for Naval platform, Integrated Platform Management System for Naval ships, Thermo-pressed components, Turret castings for T72 tanks, Simulators and Castings for ships.

For Space applications, BHEL has been a reliable supplier to ISRO of Solar Panels and Batteries for their Satellites. BHEL has established state-of-the-art facility for the assembly and testing of Space Grade Solar Panels using high efficiency Solar Cells and Space Grade Batteries of various capacities.

BHEL is one of select few firms worldwide with capability to Design and manufacture Heat exchangers for military aircraft. We have successfully developed 11 types of Compact Heat Exchangers for Indigenous LIGHT COMBAT AIRCRAFT (LCA) - 'TEJAS'. Present as well as upcoming fleet of TEJAS has 7 types of these Compact Heat Exchangers on board. BHEL is expanding its offering in segment for other aircraft platforms.

Achievements during the year

- **BHEL's Pride:** 76/ 62 mm Super Rapid Gun Mount (SRGM), the most distinctive & noticeable armament, and Auxiliary Control System fitted on INS Chennai (third ship of the Kolkata-class stealth guided missile destroyers of the Indian Navy and is among the largest destroyers, commissioned on 21/11/16) has been supplied by BHEL. BHEL has supplied 36 SRGMs to Indian Navy which are deployed on various naval ships.



Super Rapid Gun Mount (SRGM) for Indian Naval Ships under assembly at BHEL, Haridwar

- BHEL has bagged order for 03 Nos. SRGM for Delhi Class Ships.
- BHEL has supplied Integrated Platform Management System for INS Vikrant, the first Indigenous Aircraft Carrier (IAC) built in India by Cochin Shipyard Limited.

Preparing for Growth

BHEL acknowledges 'Defence and Aerospace' as a potential growth driver and has created a dedicated business vertical to harness the emerging opportunities, to expand BHEL's basket of products in defence & aerospace, and to enhance responsiveness of BHEL to the needs of customers. BHEL is geared up to harness the emerging opportunities with 'Make in India' initiative promoting indigenous equipment, platforms, systems and sub-systems and to meet the growing national requirements of the Indian Space Program along with the civil/military aviation and allied areas. BHEL is associating with DRDO for joint development of products / systems in areas of strategic Equipment and aero derivatives.

In order to expand product portfolio:

- BHEL is taking initiatives in all three areas of Float, Move and Fight categories of Naval Business:
  - » BHEL is expanding its naval gun portfolio, in addition to existing 76/62 SRGM.
  - » BHEL is taking up indigenous manufacturing of Marine Gas turbines for Propulsion and power for Indian Naval Ships.
- In discussion with ISRO and Aircraft manufactures for business expansion in aerospace sector.

Captive Power Plants

Business Environment & Opportunities

The year saw largely subdued demand for Captive Power Plants. However of late, slow revival in demand of captive power plant is being witnessed in view of expansion

plans by state refineries, revival of fertilizer plants and announcement of New Steel Policy which envisages substantial investment in the sector by 2030. Growth in Infrastructure sector would further catalyse the demand.

Offerings

- Steam Turbine based Captive Power Plants
  - » STG/Boilers/BTG/EPC: Unit rating upto 200 MW
  - » Non Reheat upto 120 MW unit rating
  - » Reheat upto 200 MW unit rating
- Gas Turbine based Captive Power Plants
  - » GTG/HRSG/EPC: Fr-5 (26 MW) to Fr-9E (126 MW)
  - » Open, Cogen & Combined Cycle

Achievements during the year

Major orders received

- 2 new customers added in 2016-17 viz.
  - » 1x Fr6 GTG +1x125 TPH HRSG + 1x85 TPH Utility boiler from M/s RFCL.
  - » 1x45 MW STG from M/s Orissa Metalliks Limited.

Major Projects Commissioned:

- Hindalco - Mahan Aluminium Unit-6 (150 MW)
- Hindalco - Aditya Aluminium Unit-6 (150 MW)



Unit-6 (150 MW) of Hindalco Industries Ltd.- Aditya Aluminium commissioned by BHEL

- IPC(H)L, Haldia, Unit-1 (150 MW)
- IOCL, Paradeep Refinery GTG-3 (102 MW)
- RUPPL, Hazira Unit-2, Unit-3 & Unit-4 (each of 93.1 MW)
- RUPPL, Dahej, Unit-2 & 3 (each of 90.3 MW)

Preparing for Growth

As demand for CPP segment has seen a downward trend in recent years, new business opportunities in Municipal Solid Waste based WTE plants & Washery rejects based power plants etc. are being explored.

Industrial Products

(Including Oil & Gas and Electrical Machines)

Business Environment & Opportunities

- In tune with Make in India (MII) campaign in Oil & Gas Sector, the Government has decided to incentivize the growth in local content in goods and services while implementing Oil & Gas projects in India. The Union Cabinet approved the purchase preference local content (PP-LC) policy in April'2017 to provide preference to domestic manufacturers in procurements done by state-owned Oil & Gas companies. This would increase business prospects for Oil field equipment in upstream and for Compressors in downstream in the coming years.
- Under Government of India's target of implementing BS-VI norms across the country by April 1, 2020, the quality upgradation projects needs to be completed across all the refineries on time in order to ensure that BS-VI norm fuel can be made available from April 1, 2020. The up gradation of refineries to BS-VI norms is likely to yield good business for Compressors, Fired Heaters, Columns and Air Separation Units etc in the upcoming years. In addition to Upgradation projects, expansion projects for approx. 60 MMTPA by IOCL, BPCL & HPCL and the proposed Mega Refinery of 60 MMTPPA by 2022 will boost the business for Compressors, Fired Heaters, Columns and Air Separation Units etc.
- Hindustan Urvarak & Rasayan Ltd (HURL) incorporated to execute the revival of Fertilizer Units viz. FCI Sindri, Gorakhpur & HFCL Barauni. New National Steel Policy announced in May'2017 envisages raising crude steel capacity Upto 300MTPA by 2030-31 from 122 MTPA at present. Implementation of these policies will lead to business opportunities for compressors with suitable drives and Air Separation units in the coming years.
- Due to subdued market conditions, HT machines business of the company saw limited opportunities in its traditional markets of Power, Refineries and Cement. Potential has however 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-VFD and AC-SCR 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 mechanical and electrical equipment such as draw works, mast & substructure, AC & DC PCR, Motors etc. Refurbishment and up gradation of aged Oil Rigs is also done by BHEL.

- **Well heads and X-mas Trees -** Up to 10,000 psi. Mud Line Suspension, Choke and Kill manifold, CBM Wellheads, DSPM H- Manifold Assembly, Mud valves, ESP hangers, Block type X-mas Trees & Landing Bases for Casing Heads.
- **Compressors -** Manufacturing and supply of various types of multi stage Centrifugal compressors as per API 617 for application in Fertilizers, Refineries, Petro-chemicals, Pipelines, Gas processing, Steel industries etc. BHEL has the capability to produce Centrifugal Compressors to handle all types of process gases.



Centrifugal compressor under assembly at BHEL works in Hyderabad

- **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 -** AC squirrel cage, slip ring, synchronous motors (415 V to 13,800 V; 50 Hz & 60 Hz frequency; upto 20000 kW; TETV/TEFC/CACW/ CACA/SPDP enclosures) for safe and hazardous area application, variable speed motors, industrial alternators (steam turbine, gas turbine and diesel engine driven – 1,500 kVA to 25,000 kVA) and special purpose machines.

Achievements during the year

Order Received

- 5.5 MW Turbine Driven Recycle Gas Compressor, 4.6 MW, 3 MW & 2.5 MW Motor Driven Recycle Gas Compressor & 4 MW Motor Driven Coker Gas Compressor from IOCL; 2.4 MW Motor Driven Wet Gas from BORL, Bina and 3.5 MW Turbine Driven Wet Gas Compressor from L&T
- 3 Nos fired Heaters of 4.31, 4.87 & 14.61 MM Kcal/hr capacity for Ashwariya Project at IOCL Haldia
- 584 Nos. Well Heads and 313 Nos. X-mas Trees from various ONGC Assets
- 2 Nos. Mast & Substructure for E-2000 and E-1400 Rigs received from ONGC Sivasagar
- 7 nos. 11.65 MW, 11KV, 12 Pole vertical synchronous motors with excitation system from KBL for Yettinahole Lift Irrigation Scheme -2
- 18 nos. 4700-5200 KW, 11KV, 16 Pole vertical synchronous motors with excitation system from MEIL for Purushothapatnam Lift Irrigation scheme

Projects Commissioned

- 2 nos Compressors (VGO & DHDT) with Drive Turbines commissioned at BPCL Kochi Refinery

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 segments in offshore and water drilling rig equipment. ●



Creating BHEL of tomorrow

1.2.3 International Operations

Global Economic Environment

With buoyant financial markets and a long-awaited cyclical recovery in manufacturing and trade under way, world growth is projected to rise from 3.1 percent in 2016 to 3.5 percent in 2017 and 3.6 percent in 2018. However, shifts toward protectionism and zero-sum policy approaches are emerging threats that could undermine international trading relationships along with multilateral cooperation more generally.

The emerging economies, especially, BHEL target markets of South East Asia, Africa and Neighboring countries are expected to be the future growth centers and would contribute a major share of BHEL exports growth in the coming years.

Our Experience in Exports

BHEL has established itself as a global player with footprints in 82 countries across the globe. Starting its journey with the first export order for Malaysia in early seventies, the company has been expanding its references year by year. These references encompass complete power projects on EPC basis (thermal, hydro, gas), substation & rehabilitation projects along with a wide gamut of products including Turbines, Generators, Boilers, DG sets, Control equipment, Transformers, Capacitors, Bushings, Insulators, Switchgears, Solar modules, Motors, Wellheads, Castings, Valves, Locomotives, etc. The company has also been providing after sales support to its overseas customers in the form of spares & services. The cumulative installed capacity of power plants overseas with BHEL supplied equipment stands at close to 11 GW.

Orders Received

During the year, BHEL secured the following overseas orders:

- **Largest ever export order:** BHEL secured its largest ever export order for setting up 2 x 660 MW Maitree Super Thermal Power Project in Bangladesh on turnkey basis from Bangladesh India Friendship Power Company (Pvt.) Limited (BIFPCL), a 50:50 JV company of NTPC, India and BPDB, Bangladesh. BHEL shall also install state-of-the-art FGD plant and dry bottom ash handling system to meet stringent environmental norms.

MAKING IN INDIA, FOR THE WORLD

Established Presence in 82 Countries



AFRICA
ALGERIA
BENIN
COMOROS
DR CONGO
EGYPT
ETHIOPIA
GHANA
KENYA
LIBYA
MALAWI
MAURITIUS
MOZAMBIQUE
NIGERIA
RWANDA
SENEGAL
SOUTH AFRICA
SUDAN
SWAZILAND
TANZANIA
TOGO
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
UNITED ARAB EMIRATES
VIETNAM
YEMEN

EUROPE
BELARUS
BELGIUM
BULGARIA
CYPRUS
ESTONIA
FINLAND
FRANCE
GEORGIA
GERMANY
GREECE
IRELAND
ITALY
MALTA
POLAND
ROMANIA
RUSSIA
SWEDEN
SWITZERLAND
TURKEY
UKRAINE
UNITED KINGDOM

NORTH AMERICA
CANADA
TRINIDAD AND TOBAGO
UNITED STATES OF AMERICA

OCEANIA
AUSTRALIA
NEW CALEDONIA
NEW ZEALAND
SAMOA

SOUTH AMERICA
CHILE
SURINAME

- Entry into 4 new countries: **Benin & Togo** - Maiden orders for motors from SCANCEM International, Norway; **Chile** - Transformer bushing from Niquel Electric Ltda.; **Estonia** - Electronic cards from SCANFIL OY Vana Sauga.

- Entry into new market segment: First ever order for motors from United States.

- Reposing its confidence in BHEL, Mombasa Cement Limited, Kenya has placed another order for supply of 1 no. 750 kW motors & slip rings for 280 kW motor on BHEL. This is the 7th order for motors from Mombasa Cement Ltd. in last five years. Also, one more order for motors (1500 kW HT motor) was received from Akij Cement Company, Bangladesh.

- Continuing its tradition of long-term relationships, BHEL received orders for spares & services from customers in Bangladesh, Belarus, Belgium, Bhutan, Ethiopia, Indonesia, Iraq, Kazakhstan, Myanmar, New Zealand, Oman, Senegal, Sri Lanka, Sudan, United Arab Emirates & Vietnam.

Overseas Project Execution

- **Afghan-India friendship Dam – Commissioned & Inaugurated by Hon'ble Prime Minister of India and Hon'ble President of Afghanistan**



CMD, BHEL receiving an appreciation shield for the company's contribution in Salma HEP project, Afghanistan from Smt. Sushma Swaraj, Hon'ble Union Minister of External Affairs, in the presence of Sushri Uma Bharti, Hon'ble Union Minister for Water Resources, River Development & Ganga Rejuvenation

Despite security concerns and immense logistic barriers, BHEL successfully commissioned all three units of the prestigious 3 x 14 MW Salma hydropower project.



2x14 MW Nyabarongo Hydro Power Project in Rwanda, commissioned by BHEL

- **Indonesia Thermal Power Project Unit Commissioned -** The first two units of 3 x 18 MW PT CKP project, Indonesia were successfully commissioned during the year.



First two units of 3x18 MW PT CKP project at Indonesia commissioned by BHEL

Awards & Appreciations

- **EEPC India National Awards (For years 2015-16 & 2014-15)**

  For the 27th consecutive year, BHEL's contribution in the country's exports have been recognized in the form of 'Star Performer – Project Exports' for the year 2015-16 as well as for the year 2014-15.

- **Exemplary contribution in 3 x 14 MW Salma HEP, Afghanistan appreciated**

  BHEL CMD was awarded an appreciation shield for the company's contribution in the project by Hon'ble

Minister of External Affairs, and Hon'ble Minister of Water Resource, River Development and Ganga Rejuvenation, Govt. of India.

Preparing for Growth

BHEL has been continuously striving to align its export strategies in line with the global changes. Amidst concerns of growing competition, reducing delivery cycles & stringent pricing, BHEL is adopting two-pronged strategy of Market penetration and Market expansion for enhancing its global footprint. Our major initiatives in this direction include:

- Focusing specific segments in identified markets in order to establish the company in core sectors.
- Greater focus on renewables sector with scope enhancement inclining ourselves towards market driven requirements
- Impetus on after sales services segments & loose product markets and enhancing visibility and reach to our customers for ensuring prompt support at all times ●



4x125 MW Kosti TPS, Sudan commissioned by BHEL on EPC basis

1.3 Financial Performance of the Company

1.3.1 Standalone Financial Results

The Company has successfully implemented Ind AS as introduced and notified by Ministry of Corporate Affairs (MCA) in India from 2016-17. Financial statements of 2016-17 alongwith comparative financial statements of 2015-16 and first opening Ind AS transition Balance Sheet as at 01.04.2015 are prepared in line with Ind AS.

1.3.1.1 Balance Sheet

Property, Plant and Equipment (PPE)

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Tangible Assets-Gross Block	5174	4711
Less: Accumulated Depreciation	1683	886
Net Block	3491	3825

The Company has opted for exemption available under Ind AS 101 (First time adoption of Ind AS) and accordingly carrying value (Net Block) of ₹ 3,980 Crore reported earlier under IGAAP has been considered as deemed cost and become Gross Block as per Ind AS as on 01.04.2015, which has been carried in subsequent years.

Capital work-in-progress (CWIP)

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Capital work-in-progress	160	310

The decrease in CWIP is due to capitalization under Property Plant and Equipment.

Intangible Assets

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Intangible assets (Net Block)	105	137
Intangible assets under development	9	9

The Company has opted for exemption available under Ind AS 101 (First time adoption of Ind AS) and accordingly carrying value (Net Block) of ₹ 158 Crore reported earlier under IGAAP has been considered as deemed cost and become Gross Block as per Ind AS as on 01.04.2015, which has been carried in subsequent years.

Financial Assets-Investments (Non-Current)

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Investment in Equity Instrument	4	7
Shares in Joint Venture/ subsidiary Co.	657	657
	661	664

Investment in equity instrument are accounted at fair value through P&L and changes are on account of fair value measurement. No further investment in JV/subsidiary made during the year 2016-17.

Financial Assets- Trade Receivables

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Trade Receivables	15072	27439	42511	15503	27239	42742
Less : Allowances for bad & doubtful debts	4892	5148	10040	3947	4618	8565
Less : Automatic price reduction adjustment	392	215	607	429	191	620
	9788	22076	31864	11127	22430	33557

Trade Receivable (net) declined in absolute term by ₹ 1,693 Crore and in terms of days from 470 days to 403 days in 2016-17. Persistent efforts are being made on to contain it further. Allowances for bad & doubtful debts are made in line with Ind AS.

Financial Assets -Loans

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Loans	78	139	217	66	177	243

Loans represents mainly security deposits for operational requirements.

Financial Assets-Others

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Others	0	217	217	1	158	159

Financial Assets-others are in the nature of interest accrued on bank deposits and investments.

Financial Assets- Cash & Cash Equivalents and Bank Balances (Current)

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Cash & Cash equivalents	1490	1966
Deposits having maturity more than 3 months but not more than 12 months	9002	8120
	10492	10086

Increase in Cash & Bank Balance represents operational efficiency and judicious cash management. This was achieved despite funding of Post Retirement Benefit Liability of ₹ 1,820 Crore during 2016-17.

Deferred Tax Assets (Net)

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Deferred Tax Assets (Net)	3841	3659

Deferred Tax assets (net) represents impact of items of expenses which are in the nature of timing difference and mainly on account of provision for doubtful debts/others and statutory dues.

Other Assets

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Other Assets	203	1725	1928	240	2090	2330

Other Assets represents advances and security deposits for operational requirements.

Inventories

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Inventories	7372	9602

There is a significance improvement in inventory level in terms of days to turnover. It declined from 135 days to 93 days during 2016-17.

Current Tax Assets (Net)

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Current Tax Assets (Net of Provisions)	873	583

This represents Tax deducted at source and advance tax (net of provision for tax)

Share Capital

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Authorised Share Capital	2000	2000
Issued, Subscribed & Paid up Share Capital	490	490

Govt. shareholding remained at same level of 63.06% during 2016-17.

Other Equity

(₹ in Crore)

	As at 31-03-2017	As at 31-03-2016
Opening Balance	31692	32660
Total Comprehensive income for the year	467	(786)
Less : Dividend (including interim dividend)	294	152
Less : Corporate dividend Tax	60	31
Closing Balance	31805	31692

Increase in other equity by ₹ 113 Crore during 2016-17 is on account of profit for the year and adjustment of dividend. Dividend represents final dividend for the previous year and interim dividend for the current year and dividend tax thereon paid during the year.

The transitional impact of Ind AS adjustments has reduced the retained earnings (other equity) as on 01.04.2015 by ₹ 934.90 Crore (from ₹ 33,595.08 Crore as previously reported under IGAAP to ₹ 32,660.18 Crore under Ind AS). Further, Loss of ₹ 913.42 Crore for 2015-16 as previously reported under IGAAP was reduced by ₹ 127.44 Crore to ₹ 785.98 Crore on account of adjustments as per Ind AS. Reconcilation and explainations are given as part of financial statements.

Financial Liabilities

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Maturities of Finance Lease Obligation	90	64	154	126	82	208
Trade Payables	631	8709	9340	746	8698	9444
Other Financial liabilities	105	1467	1572	124	1562	1686
	826	10240	11066	996	10342	11338

Decrease in Financial Liabilities is in line with operational efficiency.

Provisions

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Provision for Contractual Obligation	3244	1984	5228	4177	1630	5807
Provision for Employee Benefits	1520	1490	3010	2989	587	3576
Other Provisions	218	683	901	425	1063	1488
Provision for CSR	19	35	54	33	56	89
	5001	4192	9193	7624	3336	10960

Decrease in total provisions by ₹ 1,767 Crore during 2016-17 is mainly due to funding of Post Retirement Medical Benefits of ₹ 1,820 Crore , contractual obligation (net) by ₹ 579 Crore, other provisions by ₹ 587 Crore which was offset to some extent by provision for wage revision of ₹ 961 Crore created during the year shown in current provision for employee benefits.

Other Liabilities

(₹ in Crore)

	As at 31-03-2017			As at 31-03-2016		
	Non-Current	Current	Total	Non-Current	Current	Total
Other Liabilities	2983	5694	8677	3638	7046	10684

The decrease in other liabilities is mainly on account of decrease in advances received from customers during the year 2016-17.

1.3.1.2 Statement of Profit & Loss

Turnover

(₹ in Crore)

	2016-17	2015-16
Sales less returns	23926	21779
Income from erection & other services	5009	4321
Less : Fair value adjustment A/c	95	50
Net Sales	28840	26050

Turnover of the Company has witnessed a growth of 10.7% during the year 2016-17, which is a significant achievement in terms of regaining growth path of the company and arresting declining trends. The power segment and Industry segment contributed 79% and 21% respectively for the total revenue of the company as against 78% and 22% last year.

Other Operational Income

(₹ in Crore)

	2016-17	2015-16
Export Incentive	38	34
Scrap income	169	159
Freight & insurance income	299	269
Fair Value adjustment (Unwinding) A/c	99	96
Others	30	30
	635	588

Increase in other operational income is in line with growth in operations of the company.

Other Income

(₹ in Crore)

	2016-17	2015-16
Profit from sale of item of PPE	2	6
Exchange Variation (net)	0	403
Dividend on investment (Long term- Trade)	34	34
Interest Income	677	763
Others	283	292
	996	1498

The decrease in other income is mainly due to negative exchange variation impact during the year 2016-17. As compared to exchange variation gain last year, there is loss during this year which has been shown in other expenses of manufacturing.

Cost of Material Consumption, Erection & Engineering Expenses

(₹ in Crore)

	2016-17	2015-16
Consumption of Raw Material & Components	13103	13002
Consumption of Stores & Spares	425	422
Erection & Engineering Expenses	3054	2976
Less : PV Adjustment Material/subcontracting Cost	16	23
	16566	16377

A significant improvement is registered in material consumption during 2016-17 and in terms of percentage to Gross Turnover (net of Excise), it declined from 64.36% to 60.51% in 2016-17. This was possible due to better inventory management and cost efficiency drive undertaken by the company.

Change in Inventories of finished goods and work in progress

(₹ in Crore)

	2016-17	2015-16
Work-in-progress	(719)	42
Finished Goods	(274)	(175)
Inter-division transfer in transit	(1)	(77)
	(994)	(210)

Employee Benefits Expenses

(₹ in Crore)

	2016-17	2015-16
Employees Benefits Expenses	5400	5380

Employee benefits Expenses are in line with operations and are almost at same level.

Depreciation & amortisation expenses

(₹ in Crore)

	2016-17	2015-16
Depreciation & amortisation expenses	849	936

Decrease in depreciation during the year is in line with operations of the company.

Other Expenses of Manufacture, Administration, Selling & Distribution

(₹ in Crore)

	2016-17	2015-16
Other Expenses of Manufacture, Administration, Selling & Distribution	4436	4034

Other expenses are mainly related to operations of the company and in terms of percentage to turnover it decreased from 15.48% to 15.38 % during 2016-17. Excluding ERV Loss, the percentage is 14.45 in 2016-17.

Provisions (Net)

(₹ in Crore)

	2016-17	2015-16
Provisions (Net)	1273	2050

Decrease in provisions for the year is mainly due to vacation of provision of contractual obligation in line with guidelines/policies of the company. Further, withdrawl/ written back of provision for doubtful debts/LD is offset by creation of provision-others mainly wage revision.

Finance Costs

(₹ in Crore)

	2016-17	2015-16
Interest Expense	62	27
Borrowing Cost (on accretion to deferred liabilities)	30	38
Borrowing Cost (Unwinding of Provision)	259	295
	351	360

Interest expenses are in line with operational requirement of the company during the year and borrowing cost represents unwinding of interest/discount impact on long term deferred liabilities and provisions in line with requirement of Ind AS.

Tax Expense

(₹ in Crore)

	2016-17	2015-16
Current Tax - Current Year	610	396
-Earlier Years	(311)	(5)
Deferred Tax -Current Year	(462)	(834)
-Earlier Years	295	(12)
	132	(455)

Tax expense are created in line with provisions of Income Tax Act 1961 after considering deduction and exemption available and disallowances.

Profit /(Loss) for the period from continuing operations

(₹ in Crore)

	2016-17	2015-16
Profit / (Loss) for the period from continuing operations	496	(710)

The company has achieved turnaround in one year itself and as against Loss of ₹ 710 Crore in FY 2015-16 has registered a profit of ₹ 496 Crore even after creation of

provision for wage revision of ₹ 961 Crore (including one time cumulative impact on account of gratuity and leave liability of ₹ 674 Crore) made during 2016-17.

Other Comprehensive Income

(₹ in Crore)

	2016-17	2015-16
Re-measurement of defined employee benefits	(44)	(116)
Income tax related to above item	15	40
	(29)	(76)

1.3.2 Financial Review of Subsidiary Company

BHEL Electrical Machines Ltd.

A subsidiary company was incorporated on 19th 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 2016-17, BHEL EML recorded a turnover of ₹ 32.07 Crore with a loss of ₹ 4.24 Crore.

Particulars	2016-17	2015-16
BHEL's Investment in Equity	5.36	5.36
Turnover	32.07	41.63
Profit / (Loss) after Tax	(4.24)	(2.98)

1.3.3 Financial Review of Joint Ventures Companies

a. BHEL-GE Gas Turbine Services Private Limited (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	2016-17	2015-16
BHEL's Investment in Equity	2.38	2.38
Orders booked during the year	465.50	595.10
Turnover	523.08	564.20
Profit After Tax	47.99	59.63
Net Worth	258.61	241.82

For the FY 2016-17, BGGTS has paid interim dividend at 520% and proposed final dividend at 130% on the equity share capital of ₹ 4.76 Crore.

b. NTPC-BHEL Power Projects Private Limited (NBPPL)

BHEL along with NTPC Limited 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 has set up a manufacturing facility for Balance of Plant (BoP) equipment at Mannavaram in Andhra Pradesh.

The financial highlights of the Company are as under:

(₹ in Crore)

Particulars	2016-17*	2015-16
BHEL's investment in equity	50.00	50.00
Turnover	635.39	818.12
Profit/ (loss) after tax	(76.92)	(13.09)

* based on provisional unaudited figures

c. Raichur Power Corporation Limited (RPCL)

BHEL has promoted a Joint Venture Company by the name of "Raichur Power Corporation Limited" with Karnataka Power Corporation Limited (KPCL) for setting up of 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 paid up equity capital as on 06.06.2017 is ₹ 2,155.34 Crore with contribution of ₹ 1,133.30 Crore from KPCL, ₹ 589.32 Crore from BHEL and ₹ 432.72 Crore from IFCI.

The financial highlights of the Company are as under:

(₹ in Crore)

Particulars	2016-17*	2015-16
BHEL's Investment in Equity	589.32	589.32
Net Block	6673.07	137.09
Capital Work in Progress	5591.04	10436.29

* based on provisional unaudited figures

The Commercial Operation Date (COD) of Unit-I and Unit-II of 2x800 MW Yeramarus TPP achieved in March 2017 and April 2017 respectively.

d. Dada Dhuniwale Khandwa Power Limited (DDKPL)

BHEL has promoted a Joint Venture Company by the name of "Dada Dhuniwale Khandwa Power Limited" with Madhya Pradesh Power Generating Company Limited (MPPGCL) for setting up of 2x800 MW supercritical thermal power plant at Khandwa, Madhya Pradesh on build, own and operate basis. Due to non-availability of coal linkage and problems being faced in land acquisition, both the promoters have approved for voluntary winding up of the JVC.

(₹ in Crore)

Particulars	2016-17*	2015-16
BHEL's Investment in Equity	22.50	22.50
Net Block	0.01	0.01
Capital Work in Progress	-	3.53

* based on provisional unaudited figures

e. Latur Power Company Limited (LPCL)

BHEL had promoted a Joint Venture Company by the name of "Latur Power Company Limited" with Maharashtra State Power Generation Company Limited (MAHAGENCO) for setting up 2x660 MW thermal power plant or 1500 MW gas based Combined Cycle Power Plant (CCPP) in Latur, Maharashtra.

Due to non availability of coal linkage and domestic gas, both the promoters (BHEL and MAHAGENCO) had approved for voluntary winding up of the JVC. The JVC is under liquidation.

f. Powerplant Performance Improvement Limited (PPIL):

The Joint Venture Company, Powerplant Performance Improvement Private Limited (PPIL), had 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. The process of winding up of the JVC would be initiated after closure of one pending contract.

1.3.4 Consolidated Financial Statement (CFS)

Consolidated Financial Statements have been prepared in accordance with Ind AS -110 on 'Consolidated Financial Statements" and Ind AS 28 " Investments in Associates and Joint Ventures".

The financial statements of subsidiary company is combined on a line by line basis after fully eliminating the intra group balances and intra-group transactions and for joint ventures, Equity method is adopted in line with Ind AS.

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

(₹ in Crore)

	2016-17	2015-16
Statement of Profit & Loss		
Revenue from operations	29507	26679
Profit / (Loss) Before Tax	586	(1161)
Profit / (Loss) for the period	455	(706)
Other Comprehensive income (net)	(29)	(76)
Total comprehensive income for the period	426	(782)

(₹ in Crore)

	As at 31.03.2017	As at 31.03.2016
Balance Sheet		
Assets		
Property, Plant and Equipment	3496	3831
Capital work-in-progress	160	309
Intangible assets	105	137
Intangible assets under development	9	9
Investment accounted for using equity method	753	790
Financial Assets (non current)	9871	11201
Deferred Tax Assets (net)	3846	3663
Other Non current assets	203	240
Current Assets	42904	45140
Total	**61347**	**65320**
Equity and Liabilities		
Equity Share capital	490	490
Other Equity	31899	31824
Non controlling interest	(1)	1
Non current liabilities	8817	12265
Current liabilities	20142	20740
Total	**61347**	**65320**



Sh. Anant Geete, Hon'ble Union Minister for HI & PE inaugurates BHEL's upgraded, state-of-the-art Solar PV Manufacturing Lines

1.4 Capital Investment

- Continuing its thrust on the Indigenization, Capability Building and Productivity Enhancement in thrust areas, BHEL has invested ₹ 294 Crore in various assets of the company.
- During the year, BHEL has enhanced its manufacturing capacity for Solar Photovoltaics (SPV) Modules to 226 MW and Solar cells to 105 MW with complete automation at its manufacturing units of Bengaluru.
- During the year, BHEL has established another 5.0 MWp Grid Connected Solar Photovoltaic Power Plant for captive use at Trichy manufacturing plant. With this addition, BHEL is operating 11.5 MWp solar power plants apart from the several rooftop solar PV systems. These solar plants showcase our move towards sustainable energy mix in our operations.
- Towards our strategy of water management and making our industrial units as Zero Liquid Discharge units, BHEL has established Sewage Treatment Plants at Hyderabad and Trichy units which have been equipped with latest Membrane Bio-Reactor (MBR) technology.



Welding overlay machine at BHEL, Haridwar

1.5 Quality Performance

"In its quest to be Global Engineering Enterprise, BHEL pursues Continual Improvement in the Quality of its Products, Services and Performance leading to Customer Delight through Commitment, Innovation and Team work of all Employees".

To realize the aforementioned policy, standardization of quality management systems and enhancement of their efficacy are being taken up.

Major thrust is being given to Root Cause Analysis (RCA) of Quality Issues faced at manufacturing shops and erection sites. Intra-unit standing RCA committees and Inter-Unit Special RCA committees are analyzing the Quality issues and recommending Corrective/ Preventive Actions. RCA findings are shared with customers to gain their confidence. RCA initiative has been institutionalized in the organization. RCA findings are reviewed by Top Management in the Management Committee Meetings (MCM).

BHEL units/divisions are in the process of switching over to certification of the Quality Management Systems as per new ISO 9001:2015 from old version of 2008. Six BHEL units/divisions (BAP Ranipet, HEEP Haridwar, ROD, Corporate Office, HPVP Vizag and PEM) have already been certified by M/s BVCI for ISO 9001:2015 version. Switching over for other BHEL divisions from ISO 9001:2008 to ISO 9001:2015 shall be completed during the financial year 2017-18.



CMD, BHEL at the New Blade Shop at BHEL, Haridwar

To strengthen the existing quality systems in Manufacturing Units (MUs) & Power Sector project sites, periodic Quality Audits and Quality Management Effectiveness Review (QMER - An indigenous copyright Quality Model of BHEL) by cross functional teams made of Corporate Quality and MU/ site representatives are being conducted. Action plans based on the identified gaps are prepared & followed up for implementation for improvement.

Capability building of employees in Quality field through various training programs, awareness sessions, and workshops is the strength of BHEL. Quality Management training programs are conducted by Corporate Quality at different centers of BHEL for executives whereas training for other levels are done at HRD Centers of units. In 2016-17, about 590 executives were trained on Quality Management subjects by Corporate Quality & Business Excellence function.

Quality Circle (QC) movement in BHEL which is being driven by workers & supervisors is the role model in the country. Every year inter-unit annual QC summit is being held in BHEL where Quality Circles showcase their case studies. 27th BAQCS (BHEL Annual Quality Circle Summit: 2016-17) was organised at HPBP Trichy. Quality Circle no. 100 of BAP – Ranipet was awarded Shri S R Udpa Trophy for best Quality Circle.

Quality Award:

- A case study from BHEL Bhopal titled "Development of Ferrule Expansion Procedure and Functional testing of Double Tube OFWF Cooler" has been conferred DL Shah Gold Award 2016 by Quality Council of India.
- A case study from BHEL Haridwar titled "Provision for supply of Pressurized Air in Roughing Operation During 5-Axis Milling of Steam Turbine Blades on 3-Spindle 5-Axis" has been conferred DL Shah Silver Award 2016 by Quality Council of India.

Customers/ National agencies have certified/ accredited our divisions viz.:

- M/s CLW has certified ESD (Electronics Systems Division) division of EDN as a Manufacturing center for Traction Controls.
- Mechanical, Metallography & Spectrometer Labs of CFFP accredited by NABL.
- Electrical, Mechanical & Chemical lab of BHEL Bhopal recertified & accredited by NABL.
- BHEL Bhopal has been recertified for ASME- U Stamp issued by ASME.

Following new products successfully cleared Quality requirements of customers:

- Power Transformer for RRVPNL (rating 160 MVA, 220/132/11 KV, WO 71141) designed, manufactured & tested at Jhansi successfully using GPT technology.
- The transformers a) 45 MVA, 27/11.5 KV NTPC Lara (Power) b) 16 MVA, 66/11 KV NTPC Lara (Power) c) 6 MVA/ 27 KV/ 670V Dry Type transformer BGR/NTPC manufactured by Jhansi were tested for short circuit test in 2016-17 successfully in first attempt.

1.6 Human Resource Development

1.6.1 Learning and Development

Corporate Learning and Development (CLD)

CLD Group was constituted for better alignment of learning and development activities with evolving business strategy of BHEL in emerging business scenario. CLD as the nodal learning agency is focusing on providing a platform for technical training and leadership development opportunities thereby enhancing technical-managerial competency of the employees through class

room training, digital learning, blended learning, outbound training, certification courses, sponsored courses etc. CLD is also providing direction and policy guidelines to Human Resource Development Institute (HRDI), Human Resources Development Centers (HRDCs) at major manufacturing units and ATEC (Advanced Technical Education Centre) at R&D Hyderabad. The idea behind whole movement is to deepen the learning ability of the company and to keep "employees in a state of readiness" for 'Creating BHEL of Tomorrow' which is Robust, Responsive & Rising. The different initiatives undertaken by CLD brought the following laurels for the organization in the year 2016-17:

- Hon'ble Prime Minister of India presented a cheque (₹ 1.79 Crore) to CMD, BHEL at Skill Mahotsav Programme in Kanpur, as a mark of appreciation for active participation and engaging maximum number of apprentices in country under National Apprenticeship Promotion Scheme (NAPS).
- BHEL won 1st Prize in 4th L&D NHRDN Case Competition at Mumbai (Nov. 9-11, 2016). Theme of competition was 5As (Anywhere, Anytime, Any Content, Any Device, Anyone) Learning.



Delegates of Hydro Conclave - 2016 organised at BHEL, Bhopal

Training Man Days (TMD)

Training Man Days per employee including e-learning and smart classroom training in BHEL achieved was 3.90. In addition to this during 2016-17, BHEL has provided skill development opportunities to 18,282 individuals under various schemes like Graduate apprentices, diploma apprentices, vocational apprentices, etc. Also about 800 customers were trained. 4,728 ITI trade apprentices were also imparted training.

E-learning

950 participants were given training by e-learning in 2016-17 on Project Management. This e-learning module was developed in-house.

Skill Development Initiatives

CLD-HRDI is an active member of Governing Council of two Skill Councils of Govt. of India namely Power Sector Skill Council and Capital Goods Skill Council.

Capability Building for young Executives

In order to ensure a continuous flow of behavioral sciences trainers, following programs were conducted to enhance internal capability.

- Certification course on Achievement Motivation to prepare pool of Internal Trainers (training in 3 phases)
- Training of Trainers for Winning Together Participants for E1 to E4 for conducting training

New Initiatives

- Programmes to raise Awareness on Cash-less Transactions has been organized across BHEL.
- Special VC Sessions on Govt. of India's Roadmap for Solar Energy and Paris Summit on Climate Change conducted on 25th Nov 2016 and 19th October, 2016 respectively.
- CLD-HRDI has also been actively involved as Core Team Member of SCOPE International HR Summit 2017 (20-21 February 2017), under the guidance of Director/HR, who was in the Summit Steering Committee.

1.6.2 Performance and Career Development

The in-house Performance Management System e-MAP was reviewed and some new modules were introduced in the process workflow. These are Quarterly Feedback Module, Pen Picture module, number of KRAs (Key Responsibility Areas) per plan, Mandatory KRAs and Revised KRA Masters.

An employee engagement survey was conducted for Executives in BHEL, in which 4,390 executives participated. BHEL's overall score in the survey was 5.5 on a scale of 7. The responses were captured on an online platform and relevant reports were generated. Focused group discussions were conducted across the organization to identify employees' causes of concerns. Action plans have been initiated in these areas to address organization and unit level issues.

Employee recognition initiatives like 'Best Employee of the Quarter' and 'High Potential (HiPo) Employees Scheme' were initiated in the previous year and continued in 2016-17. Under the HiPo scheme, 415 HiPos have been identified amongst the mid-level executives so far. The grooming process for such executives, as envisaged in the HiPo scheme has been initiated in the units/divisions. The grooming process includes: Stretch Assignments, On

the Job experience, Job Rotation, Cross Functional Team exposure, Specific Training programmes and Appointment of Coach.

In 'Best Employee of the Quarter' scheme, 1,400 applications were received during the year and 340 awards have been given in different categories.

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 performance evaluation of CMD and Functional Directors. Department of Public Enterprises (DPE) has designed a format and laid down a procedure for filling up and evaluation of the Director's performance. Once the concerned Director does self assessment, his evaluation is done 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.

Ministry of Corporate Affairs has vide its notification dated 5th June, 2015 notified the 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.

1.6.3 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 2016-17. No mandays were lost during the year.

The thrust on participative culture and communication continued during the year. The elections of the unions through secret ballot at various manufacturing units and Business Sector/Offices for representation at the apex level Joint Committee were held in two phases on 04.05.2016 and 27.06.2016. Accordingly, Joint Committee for BHEL was reconstituted. Subsequently, a Special Session of the Joint Committee was organized at Bengaluru on 17th & 18th November, 2016 for the orientation of new members of the reconstituted Joint Committee especially familiarization with the issues related to the business scenario, company performance, future challenges etc. besides certain employee related issues. Presentation were also made on the aforesaid issues. Besides, six Syndicate Groups were formed during the meeting on different topics of cardinal concern to the Company's operations in various spheres and they gave their valuable suggestions and recommendations on the assigned topics.

Two meetings of the apex level bipartite forum, namely "The Joint Committee for BHEL" were held during the year. There were 35 meetings of the Plant Councils and 304 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 on business prospects & challenges, company level issues etc.

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.

On the HR Policy front a new initiative was taken with the creation of "BHEL Retired Employee Medical Benefit Trust" was made.

The other notable policy directions initiated during the year are Revision of BHEL Employees Pension Scheme, RECH Scheme for retired BHEL employees, administration of Medical benefits to serving/retired employees through a centralized online Portal/System.

1.6.4 Manpower Strength

The manpower strength of the company as on 31.03.2017 was 39,821.

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 for certain concessions and relaxations in direct recruitments, promotions and reservation for housing for specified category of employees. The Presidential Directives on the subject 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.

Other relevant information on the subject is furnished below:

1. Representation of SC/ST/OBC employees

The overall representation of SC/ST/OBC employees in total manpower as on 31/12/2016 was 20.09%, 6.59% and 30.75% for SCs, STs and OBC respectively. However, the percentages in direct recruitment during the year were 13.91%, 2.61% and 27.83% for SCs, STs and OBC respectively.

The Annual Statement in the prescribed format showing the representation of SCs, STs and OBCs as on 31/12/2016 and number of appointments made during the preceding calendar year, as furnished to the Government, is given at **Annexure - A**.

2. Manpower strength of physically challenged employees as on 31/12/2016

As on 31/12/2016, we have a total of 828 Physically Challenged employees in BHEL. In the year 2016, 34 Persons with Disability were recruited under the Special Recruitment Drive for PwD. The group wise manpower strength of Physically Challenged employees in the Company as on 31/12/2016 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 9th 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 (ICC) has been constituted in all units of BHEL and their constitution and contact details have been hosted on unit's website. Posters highlighting the key provisions of the Act, Duties of the Employer, Complaints Redressal Mechanism, Action for Malicious Complaints & various misconceptions about Sexual Harassment have been displayed at conspicuous places in all units in Hindi, English and Regional languages. 5 workshops were conducted by Corporate Office for ICC members across units through Video Conferencing. At unit level, 41 workshops / awareness programmes were conducted on Gender Sensitization, self defense and awareness about the Act. In addition, women employees are nominated for programs conducted by outside agencies on Sexual Harassment.

The Annual Report showing details on number of complaints of sexual harassment received during the year 2016-2017 and status thereof as on 31.03.2017 is given at **Annexure - C.**

Annexure- A

Annual Statement Showing the Representation of SCs, STs and OBCs as on 31/12/2016 and No. of appointments made during the preceding calendar year

Groups	Representation of SCs/STs/ OBCs (As on 31/12/2016)				No. of appointments made during the calendar year 2016										
					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	12696	2106	899	2746	92	14	3	27	0	0	0	1	0	0	0
Group B	8551	1624	546	1785	0	0	0	0	0	0	0	0	0	0	0
Group C	18345	4214	1194	7618	1	0	0	0	0	0	0	0	0	0	0
Group D (Excl. SW)	675	118	18	245	22#	2#	0	5#	0	0	0	0	0	0	0
Group D (SW)	48	39	1	1	0	0	0	0	0	0	0	0	0	0	0
Total	**40315**	**8101**	**2658**	**12395**	**115**	**16**	**3**	**32**	**0**	**0**	**0**	**1**	**0**	**0**	**0**

** In BHEL, no appointments are made at induction level by promotion*
 # 22 casual workers were absorbed in HPVP unit as an outcome of arbitration proceedings

Annexure-B

Representation of the persons with disabilities as on 31/12/2016

Group	Number of Employees (representation)				Direct Recruitment (During the calendar year 2016)							Promotion *						
	(As on 31/12/2016)				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	12696	6	20	227	34			92	0	1	33	NA						
Group B	8551	4	12	191	0	0	0	0	0	0	0							
Group C	18345	21	36	396	0	0	0	1	0	0	0							
Group D	723	1	6	14	0	0	0	22	0	0	1							
Total	**40315**	**32**	**74**	**828**	**34**			**115**	**0**	**1**	**34**							

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 C to B, Group B to A and within Group A. In BHEL within Group C & D, except in cadre change promotion, 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

1	Number of complaints received during the year 2016-17	4
2	Number of complaints disposed off during the year 2016-17	4
3	Number of cases pending for more than ninety days	0
4	Number of workshops or awareness programme against sexual harassment carried out	46
5	**Nature of action taken by the employer on recommendations of ICC**	
•	2 women, one Act apprentice and one regular employee, jointly submitted a complaint against a male employee. After detailed inquiry and ascertaining the misconduct, penalty was imposed by reducing the pay of the respondent by one stage for one year with cumulative effect w.e.f. 01/04/2017	Case closed
•	An Act Apprentice made a complaint against a male employee for using filthy and obscene words on phone with someone else when she was sitting nearby. On enquiry, the complaint was found to be true though the act was not with the intention of hurting her. He realized his mistake and assured better behaviour. The Committee disposed off the case with a letter of warning. The respondent superannuated in March 2017.	Case closed
•	Complaint was made by a female security guard against a Supervisor for using double meaning words. The respondent was transferred to another workplace and the case closed	Case closed
•	The complaint received by ICC was of official nature and not amounting to sexual harassment. On examining he matter it was found that it is not a case of sexual harassment, rather of official conflict. Counselling was provided & it was reiterated that if in future, employee faces harassment; she may give complaint in writing & action will be taken by ICC accordingly.	Case closed

1.7 Right to Information Act, 2005

BHEL has been 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) at the Corporate Office along with 20 CPIOs at each of the major administrative units are functioning as part of the Right to Information Group.

21 First Appellate Authorities are functioning at the Company level to dispose of 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.

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 sensitised regularly about their obligations under the Act through trainings and workshops. BHEL organized its Annual workshop on Right to Information Act, 2005 on 4.2.2017 for the benefit of the CPIOs and First Appellate Authorities.

BHEL received 1349 RTI applications and 130 appeals during the year 2016-2017 which were dealt with as per the provisions of the RTI Act.

1.8 Internal Financial Control System

BHEL has adequate internal financial control system in place, in the form of well documented policies & procedures that cover critical as well as important activities of financial and other operating functions. The procedures are in the form of manuals, guidelines, delegation of Powers and IT system & controls which are effected though people operating in various departments within the company at different levels at each stage of the processes. These are designed to ensure compliance to the Internal Financial controls as detailed in the Companies Act'2013. The senior management reviews and certifies the effectiveness of the internal control mechanism over financial reporting, adherence to the code of conduct and Company's policies.

BHEL has an in-house Internal Audit (IA) Department commensurate with its size of operations. Apart from Corporate Internal Audit, 12 cells are set up across BHEL to cover internal audit at all locations of BHEL, as per Annual Audit Programme approved by Board Level Audit Committee. Heads of the IA Cells report to GM In-charge(IA), Corporate Office. The Internal Audit Department checks the adequacy and effectiveness of the internal financial control system through regular audits, special study, system reviews in order to provide reasonable assurance to management of the orderly and efficient conduct of its business, including adherence to company's policies, the safeguarding of assets, the prevention & detection of frauds and errors, the accuracy & Completeness of the accounting records, and the timely preparation of reliable financial information.

Heads of IA Meet was conducted on 26th & 27th September, 2016 at Corporate Office and highlights of Internal Audit activities were communicated to senior executives of management. Interactions of Internal audit with Vigilance at Corporate level as well as at Unit level are also held on periodical basis to review the observations and share the learnings.

Functioning of internal financial control systems as well as Internal Audit are periodically evaluated by the Board Level Audit Committee (BLAC) which is supported by Unit Level Audit Committees (ULAC). Necessary directions are issued by BLAC/ULAC/ Management wherever required to further strengthen the internal financial 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 Opportunities and Threats

Domestic economy is experiencing a turnaround but is still affected by the uncertainties. Economy has grown at 7.1% in 2016-17. Gross domestic product (GDP) growth slowed to 6.1% in the fiscal fourth quarter from 7% in the third. RBI has projected Gross Value Added (GVA) growth of 7.3 % in 2017-18 as compared to 6.6% in 2016-17. Important economic reforms and government initiatives are expected to stimulate capital expenditure, rural demand, and social and physical infrastructure invigorating economic activity. Over the medium run, the roll out of the Goods and Services Tax (GST), follow-up to demonetization, and enacting other structural reforms should push the economy towards a higher growth path.

Many initiatives taken by the Government in the form of Make-in-India, Start Up India and e-biz Mission Mode Project under the national e-governance plan, the Insolvency and Bankruptcy Code, and the abolition of the Foreign Investment Promotion Board are facilitating investment and ease of doing business in the country. "Make in India" platform presents a plethora of opportunities with major initiatives taken in various sectors

like Defence, Transportation, Transmission, Renewables etc. Sectoral push for Solar, Urban transportation, Dedicated Freight Corridor, e- mobility & Green energy corridor will open new avenues for long term sustainable growth. The opportunities have been discussed in detail in the respective chapters on Business sectors under **Annexure-I** of MDA.

Today, Climate change is a critical concern which presents both enormous challenges as well as opportunities. Significant cuts in GHG emissions from energy need to be achieved through either reducing emission generation by replacing old plants or employing energy efficiency measures. The government is adequately focusing on meeting the energy needs through a balanced fuel mix consisting of renewables, clean coal, Nuclear & Hydro. This focus in the recent past has led to continued cost reductions and acceleration in installation of clean energy in the country. Development of grid-based power storage is also being focused upon.

But one of the biggest concerns for the country today is the investment slowdown which has taken hold of the economy since quite some time and is deeply rooted in the structural debt overhang problem of a number of country' s industrial sectors, power sector being the prominent one. This excessive debt is saddled on the bank balance sheets which is further hindering credit growth and a revival of investment cycle in the country. This twin balance sheet problem - over-leveraged corporate sector and stressed banking sector - may delay the revival in private investment demand.

The global economy continued to recover during 2016, albeit at a low pace amidst increasing uncertainty. World growth is expected to rise from 3.1 percent in 2016 to 3.5 percent in 2017. But these positive developments do not take away the impediments to a stronger recovery. The growth rate in China was a bit stronger than expected, supported by continued policy stimulus. However, continued reliance on policy stimulus measures, with rapid expansion of credit and slow progress in addressing corporate debt, raises the risk of a sharper slowdown or a disruptive adjustment.

Geopolitical tensions in Iraq, Libya, Yemen, the Syrian Arab Republic and Ukraine have already had economic impacts at the national and sub-regional levels and the outlook over the medium term is not clear. Major economies of the world are engaged in simmering issues with other economies and inward-looking policies threaten global economic integration and the cooperative global economic order, which have served the world economy, especially emerging market and developing economies, well.

1.10 Preparing for Growth

Today, India is on the cusp of a higher economic growth. The new era will present new growth opportunities. But, the landscape of technology and competition is under transformation. BHEL too is transforming and has embarked upon a transformation journey with a vision of 'Creating BHEL of Tomorrow' – creating an organisation which will be Rising, Robust and Responsive to the needs of customer, employees, shareholders and society.

Leveraging BHEL's enviable capabilities, glorious past and contribution in the nation's building, the company is putting a series of efforts focussed on sustaining growth and profit; asserting leadership in core business and developing people & digital capabilities; and finally, building capabilities in new businesses and technology for sustained growth.

Execution, Consolidation & Simplification (ECS)

Creating momentum for growth and making operations profitable in the shortest possible time has been the immediate priority of the company in recent times. To attain this, the company has been focussing on Execution, Consolidation & Simplification as the major enablers.

i. **Execution:** The immediate focus is on bringing speed in Execution capabilities and improve system capabilities. Major initiatives taken include conversion of non-executable orders into executable ones; focus on quarterly business performance in addition to annual results and; formation of 'Project Closure Synergy Group' (PCSG) for swift resolution of outstanding issues of identified projects to expeditiously realise balance payments & close projects.

ii. **Consolidation:** To improve operational efficiency and reduce operations cost, structural layers of duplication in the organisation are being removed through consolidation of various structures and establishments. Corporate Functions have been reorganised to give more focus to execution of strategies and, enhance their responsiveness towards customers, internal and external. Consolidation of consistently non-performing products and assets is also being examined.

iii. **Simplification:** The company is making an endeavour to simplify systems and policies to eliminate waste, low-value activities and multiplicity of works.

Business Strategy: Power Sector

Energy sector is under transition; so is the power sector business of BHEL. We need to be assertive in protecting leadership in the core business and towards this, the Company is developing solutions to enhance value propositions in the existing portfolio. Organization has been restructured and new business groups for Hydro & Nuclear business have been formed to enhance responsiveness towards customers. Company is also making effort to

expand core by offering new products and services such as emission control equipment, Lift Irrigation System, AUSC technology, primary side capabilities for nuclear and, expanding spares & services business.

Business Strategy: Diversification

Engineering and manufacturing are the core strengths of BHEL. Leveraging these strengths, the company is swiftly moving to capitalize emerging opportunities in solar power, transportation, defence and water business with the objective of increasing share of business from 'non-coal' areas. Accordingly, new business groups for Defence & Aerospace Business (DABG), Transportation Business & Systems (TBSG) and, Energy Storage Solutions (ESS) have been formed to harness emerging opportunities and consolidate the existing capabilities.

Leveraging three decades of experience in **Solar PV** and with focus on capacity & capability enhancement, BHEL's share of business in Solar is gradually increasing. BHEL has expanded manufacturing capacity of Solar PV cells from 8 MW to 105 MW and modules from 26 MW to 226 MW, at its manufacturing units at Bengaluru. The company has expanded its offerings in EPC solutions for both Grid Interactive and Off-Grid Solar PV power plants of utility scale and rooftop applications.



105 MW Solar PV line at BHEL, Bengaluru

Capability building and establishing a strong technology base are the focus areas to strengthen the existing and developing the new businesses in urban transportation, defence and aerospace business.

With the revival of demand from Indian Railways and emerging opportunities in urban metro **transportation** as well as semi and high-speed trains, BHEL is focusing on business opportunities in these areas. BHEL is working with Indian Railways for IGBT based Propulsion Equipment required in air-conditioned ACEMU and Traction Converter for DE locomotives. BHEL is also engaged in development of Electric Power Train for electric vehicles/buses with an automobile partner. In parallel, BHEL has developed prototype Hybrid (Grid and/or Solar PV based) Wayside Charging Stations.

Defence provides new opportunities and the company is working on expansion of this portfolio. Towards this, BHEL has been nominated as the production agency for major Gun Systems for Indian Navy. The company is also being considered for production of Marine Gas Turbine for naval applications.

Strengthening EPC capabilities and technological advancements are central to growth in the business of **transmission** products and systems. BHEL has strengthened its higher voltage transmission portfolio with indigenously developed 1200 kV class Transformer and 765 kV Transformers and Reactors. The company is gearing up to address Extra High Voltage Gas Insulated Switchgear (EHV GIS) business with its in-house developed products as well as strengthening EPC capabilities in 765 kV segment.

To harness growth opportunities in **water** business, the company is strengthening existing business and adopting new business models. BHEL offers turnkey solutions from concept to commissioning for various feed water characteristics. The company is also gearing up to address Sewage Treatment Plant (STP) business and Large Scale Desalination with O&M.



Membrane Bio-Reactor (MBR) based STP at BHEL, Hyderabad

Business Strategy: Global

BHEL has been continuously striving to align its export strategies in line with global dynamics. Currently, the company is focusing on deepening its global presence through market expansion and market penetration. With maiden orders from Chile and Estonia, the company has expanded its global footprint to 82 countries.

Digital Strategy

For harnessing digital technologies to create new growth opportunities and to enhance operational excellence, a digital transformation strategy has been developed and 'Corporate Digital Transformation' group has been formed to execute it. Diagnostics & predictive maintenance services, digitalization of all employee-facing services

and, developing digital platforms for enhancing employee engagement are the priority initiatives.

People Development

Developing people and orienting them towards organisation transformation strategy is a key imperative. In the current situation, both the demography of the employees and the business-mix are under transition. 'Corporate Learning and Development' (CLD) group has been formed and assigned the responsibility to improve alignment of training and development with business strategy. Further, technology interface is being enhanced with the objective of 'Ease of learning, Ease of sharing, Ease of access' to support learning endeavours of the employees.

Innovation

Ability of the company to indigenise technology as per Indian operating conditions and upgrade existing products to contemporary levels through in-house efforts is BHEL's key competitive advantage. This has been possible due to consistent focus of the company on R&D and Innovation. Prevailing challenges in the environment viz. urbanization, climate change and the associated regulations are also creating demand for new products. Therefore, BHEL is further strengthening Engineering and Technology base through outcome based approach. 'Corporate Technology Management' (CTM) group has been formed to strengthen Engineering and R&D capabilities in an integrated & focused manner.

1.11 Risks and Concerns

BHEL has in place a Board approved Risk Management Charter & Policy which provides overall framework for Enterprise Risk Management in the company. In pursuance with SEBI (Listing Obligations and Disclosure Requirements) Regulation 2015, BHEL has in place a 'Board level Risk Management Committee' (BLRMC) with assigned responsibility of reviewing the company's Risk Governance structure, Risk Assessment & Risk Management framework, Guidelines, Policies and Processes. Besides this, Risk Management Steering Committee (RMSC) is responsible for adopting & implementing the risk management framework and leading the risk management initiative across the company. Chief Risk Officer (CRO) is the convener of BLRMC & RMSC and responsible for periodic reporting on risk management to Board/ BLRMC.

In line with the requirements of the Risk Management Charter & Policy, key risks being faced by the company are analyzed in detail by the risk management committees at top level. Top risk areas are regularly reviewed by the Board/ BLRMC. Risk Management committees at unit level analyze the risks concerned to their respective areas, prepare risk mitigation plans, ensure implementation and also inform the top management, if so required.

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



CMD, BHEL addressing a cross-section of employees at BHEL, Haridwar

Risk Statement	Mitigation Strategies
Order Book Reduction due to increasing competition, excess domestic manufacturing capacities and low business sentiments.	• Expanding the offerings • Diversifying Product Profile • Focus on non-coal based business
Online data & information security breach leading to loss and critical information infrastructure breakdown	• Policies in place for Technical controls • Implementation of Cyber security incident capturing system across the company • Third party audit as per ISO27001 ISMS Standards • Business Continuity Plan (BCP) & Disaster Recovery (DR) strategy in place • Crisis Management Group in place
Impact of External Factors Viz. Govt. Policy, infrastructure inadequacy, which may adversely impact the business	• Policy advocacy through Administrative Ministry & Industry Associations • Liaison with key business partners
Technology readiness to meet current/ future market requirements	• In house development of new products/ Technologies • Technical collaborations with suitable partners

For and on behalf of the Board of Directors of

BHARAT HEAVY ELECTRICALS LTD.



Atul Sobti

Chairman & Managing Director

Place : New Delhi

Dated : July 19, 2017

Annexure – II

CEO and CFO Certification

(As per regulation 17(8) of Listing Regulations)

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 31st March, 2017 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 the applicable Ind AS, laws and regulations.

(b) There are, to the best of our knowledge and belief, no transactions entered into by the company during the year 2016-17 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 over financial reporting during the year 2016-17;

(ii) Revised accounting policies in line with Ind AS during the year 2016-17 and the same have been disclosed in the notes to the financial statements; and

(iii) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the company's internal control system over financial reporting.



(T. Chockalingam)

Director (Finance)



(Atul Sobti)

Chairman & Managing Director

Place: New Delhi

Date: May 29, 2017

Annexure–III
Sustainable Development

3.1 Sustainability Performance – Environmental

The tenets of Sustainable Development have taken deep roots in our business processes and is embedded in our systems. Our concern for environment protection is manifested in our efforts towards development of products having a lesser environmental footprint, use of renewable energy & cleaner fuels having lesser carbon footprint in our operations, recycling of natural resources like raw materials & water to the extent feasible, and responsible waste management. Our concern for societal development is manifested in our CSR programme which is aimed at promoting inclusive growth in the society. Our ethos of working in socially responsible manner and economic value addition throughout the history of our existence is a strong manifestation of our commitment towards Sustainability of the business.

Like past years, this year too, the thrust continued on initiatives and projects in the area of generation of renewable power through solar power plants, energy conservation, energy efficiency, water conservation, conservation of various natural resources used in our operations, tree plantation, rainwater harvesting, development of green areas, waste management based on the concept of Reduce-Recycle-Reuse (3R) all aimed towards reduction of our environmental footprint.

World Environment Day was celebrated on 5th June, 2016 across BHEL. On this day, across BHEL, various programs were organised to promote environmental awareness among employees, students and society in general. Talk on environmental issues by senior officials, plantation of saplings, distribution of saplings, display of posters and banners on Environmental issues, competitions like slogan writing, poster making etc. were the key events organised on the occasion of World Environment Day-2016.

The snapshots of some of the Sustainable Development related activities carried out during 2016-17 are given below:

3.1.1 Material & Natural Resource Management

Our thrust on conservation and efficient utilization of various natural resources in manufacturing activities and at project sites continued this year as well. Some of the examples of such specific activities undertaken during

the year included recycling of ferrous and non-ferrous scrap, reduction in use of fossil fuels through system improvements, recovery and reuse of waste oil etc.

3.1.2 Energy Management

Reduction in energy consumption was achieved in our premises through continued emphasis on better upkeep of energy intensive systems, installation of turbo ventilator based on natural air flow, installation of LED lights replacing conventional lighting systems, installation of rooftop solar plants, installation of energy efficient Air Conditioning and Ventilation Systems (ACVS), providing acrylic sheets on side walls of shops for use of natural lights during daytime etc. A 5 MWp Solar Power Plant was installed in Trichy unit during the year taking the cumulative installed capacity for MW-scale solar power plants to 11.5 MWp as on March-2017 across BHEL. The total electricity generated from various solar systems stood at 14.82 Million units for 2016-17.

3.1.3 Water and Biodiversity Management

At BHEL, water and wastewater systems are sustainably managed with emphasis on recycling and reusing of water. Many of our premises like HPEP Hyderabad, EPD Bengaluru, EDN Bengaluru, Trichy unit etc. use treated wastewater for horticulture purpose. Reduction in water consumption through process improvement, reduction in duration of water supply and creating awareness amongst stakeholders for optimal use of water were some of the specific activities taken up during the year. Afforestation activity is a regular feature in BHEL and during the reporting period also, tree plantation activities were taken up with vigour to further enhance the green cover inside our factory premises and townships. Our EDN Bengaluru unit planted thousands of saplings of various varieties on the road median below Metro line from Nayandahalli station to Attiguppe station in Bengaluru.



Hon'ble Union Minister for HI&PE, Sh. Anant Geete, planting a sapling at BHEL, Bengaluru

3.1.4 Carbon Management

Continued thrust on energy conservation & energy efficiency measures and installation of renewable energy based systems resulted in a significant reduction in our carbon footprint during the reporting period. Installation of additional 5 MWp solar power plant significantly bolstered our efforts towards mitigation of carbon footprint in the reporting period. Overall, due to renewable energy generated through various Solar systems across BHEL, in the reporting period, around 14,378 MT of CO_2-equivalent of carbon emission was avoided.



5 MWp captive solar power plant at BHEL Tiruchirappalli, augmenting in-house generation of green power

3.1.5 Waste Management

Waste management is an important thrust area in our sustainability management system. Reduction of waste generation at sources and recycling & reuse of generated waste is an area were lot of emphasis is there. In addition to regular activities in waste management, some of the examples of specific activities taken up during the reporting period in this area included total recycling of all the effluent generated in the electroplating process after proper treatment through a Multi Effect Evaporation system at HEP Bhopal, installation of different types of bins for waste segregation at source, improving storage facility for hazardous waste, composting of organic wastes at HERP Varanasi and Trichy units, use of Sludge from ETP as manure for plantations inside the BHEL premises horticulture in EDN Bengaluru etc. Across BHEL, solid wastes/scraps having resale value were collected, stored safely and then sold to authorised agencies/recyclers. Similarly, Hazardous Wastes and e-wastes were disposed of following procedure/methodology prescribed in the relevant statutes.

3.2 Sustainability Performance – Social

BHEL remained focused on its social responsibilities by undertaking or supporting various CSR initiatives in diversified areas in line with the Schedule-VII of The Companies Act-2013.The initiatives were spread across the country, mostly near BHEL establishments. During the year BHEL was awarded with **"Skoch Order-of-Merit"** Award

for "Holistic approach in Health Care Services Sector for good health & wellbeing of society". BHEL also **received recognition from HelpAge India** on 1st October, 2016 for its exemplary services and commitment to provide quality medical healthcare services to the underprivileged people and in particular, the elderly people living in the remote/ backward regions of the country. Following are the major CSR activities (focus area-wise) undertaken by BHEL during the year:

Clean India

- BHEL is providing support for construction of 25 Clusters of Bio-Digester toilets in Haridwar and Rishikesh. The project also includes provision for safe drinking water at each cluster and maintenance for a period of 2 years after commissioning.



Bio-digestor toilets on the banks of river Ganga near Haridwar & Rishikesh, installed by BHEL

- Provided financial support to Varanasi Nagar Nigam for the project "Automatized system for solid waste collection and transportation".
- Provided financial support for construction of a covered RCC drain along DSC road in sector-17, Noida and construction of public toilet facility near Rajnigandha Chowk, Noida.

Educated India

- Providing support for running more than 30 schools located in BHEL manufacturing units, benefitting more than 40,000 school children.
- Provided financial support for construction/ renovation of toilets, electrical fixtures, installation of Solar Street Lights and providing tables & chairs in 108 Govt. Schools including 8 Kasturba Gandhi Residential Schools in Lucknow, Uttar Pradesh.
- Provided financial support for running Mobile Science Labs in vicinity of three units (one at each Unit) of BHEL viz, Haridwar, Jhansi and Trichy, benefitting more than 30,000 students during the year.
- BHEL is providing financial support to the project "Udayan Shalini" fellowships programme for supporting higher education of 100 Nos. of girl students coming from below-the-poverty line (BPL) families.



100 girl students provided financial support by BHEL under the 'Udayan Shalini' fellowship programme

- Provided financial support for distribution of 5,000 educational tablets to students of Govt. Schools in Maharashtra.

Healthy India

- Partnered with HelpAge India, PHDRDF and Wockhardt Foundation by providing financial support for running operations of total 10 Mobile Medical Units (MMUs) in the vicinity of our project sites and manufacturing units, benefitting more than one lakh patients during 2016-17.



Mobile Medical Units and transport ambulance services provided by BHEL in the vicinity of its project sites and manufacturing units

- Provided financial support for construction of Ganga Prem Hospice, a 30 bedded facility for the palliative care of terminally ill cancer patients, near Raiwala, Rishikesh.



A 30-bed facility for terminally ill cancer patients, Ganga Prem Hospice in Rishikesh, Uttarakhand, financially supported by BHEL

- Provided financial support for distribution of Anti Hemophilic Factor (AHF) to 1,021 Haemophilic patients. During the year 20 camps were organised, covering 240 beneficiaries.

Green India

- BHEL undertook the green initiative project "Installation of 100 kWp Grid interactive Solar Power System in schools" at Bhopal.
- Provided financial support for installation of 75 kWp capacity Solar PV Plant at Ramakrishna Mission Ashram, New Delhi.
- Installed solar street lights and domestic lights in two villages in Medak district, Telangana.



Solar street lights installed by BHEL in villages in Medak, Telengana

Responsible & Inclusive India

- Provided financial support for construction of cement concrete roads in 3 villages of Davangere district, Karnataka.
- Continued financial support for upliftment and economic empowerment of marginalized farmers of Khargone district of Madhya Pradesh.
- Provided financial support for construction of a Multipurpose Hall in Kasturba Nursing College, Bhopal.
- Provided tailoring machines and training in tailoring to women at Sthree Shakthi Bhavan, Devanahalli, Bengaluru.



Tailoring machines and training provided by BHEL to women in Devanahalli, Karnataka

Disaster & Calamity

- BHEL has constructed 96 Model Houses [Flats] at Vizag, Andhra Pradesh, for Hud-Hud affected People.



Model flats constructed by BHEL in Vizag, Andhra Pradesh for families affected by Hudhud cyclone

3.3 Reporting of Corporate Social Responsibility (CSR)

1. Period for which CSR is being reported: 01/04/2016 to 31/03/2017.
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. 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 attached as **Annexure – A** to this report.

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 (Part-time Non-Official 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 2016-17 was as below:

Name (S/Shri)	Designation	Position in CSR Committee
Ms. Harinder Hira*	Part-time Non-official Director	Chairperson
Rajesh Kumar Singh	Part-time Official Director	Member Up to 06/10/2016
Anshu Prakash	Part-time Official Director	Member From 31/10/2016 to 03/01/2017
Bhaskar Jyoti Mahanta	Part-time Official Director	Member Since 03/01/2017
D. Bandyopadhyay	Director (Human Resources)	Member
T. Chockalingam	Director (Finance)	Member

**Shri Rajesh Kishore (part-time Non-Official Director) has taken over as chairman of CSR Committee w.e.f. 15.05.2017*

6. Average net profit of the company for last three financial years (2013-14, 2014-15, 2015-16), calculated in accordance with Section 198 of the Companies Act, 2013, is ₹ 1,874.21 Crore.
7. Prescribed CSR Expenditure (2% of the amount as in pt. 6 above) comes to ₹ 37.48 Crore, in view of which the Board approved ₹ 37.50 Crore as CSR budget for 2016-17.
8. Details of CSR spent during the financial year (2016-17):
   a. Total amount to be spent for the FY : ₹ 37.50 Crore
   b. Amount committed but unspent : ₹ 10.72 Crore
   c. Manner in which the amount spent in 2016-17 is detailed in **Annexure-B** to this report
9. Reasons for not spending the amount:
   a) Some projects taken up during the year are going to stretch beyond 2016-17. Fund required for completing these projects shall be met from funds already allocated to them from the CSR budget for FY 2016-17.
   b) Enhanced allocation was made to meet likely increase in wages of teacher and other staff engaged in educational initiatives. However, due to paucity of time the allocated amount could not be fully utilised.
   c) In some of the projects, increased focus on monitoring resulted in efficient fund utilization, which led to lesser actual expenditure vis-à-vis amount allocated.
   d) It is pertinent to mention that in line with the Guidelines on CSR & Sustainability, issued by Department of Public Enterprises (DPE), the unspent amount of ₹ 10.72 Crore will not lapse and will be carried forward to FY 2017-18.
10. We, hereby, declare that the implementation and monitoring of CSR Policy, is in compliance with CSR objectives and Policy of the company.



(Chairman & Managing Director, BHEL)



(Chairperson, CSR Committee)

New Delhi
Dated: July 19, 2017

Annexure-A

BHEL Corporate Social Responsibility (CSR) Policy Outline

BHEL's CSR vision is "To be a responsible corporate citizen working towards a better tomorrow". Our CSR Mission statement is "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 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 CSR Policy are:

- It covers the requirements stated in the Companies Act, the Companies (CSR Policy) Rules, 2014 and DPE Guidelines on CSR & Sustainability;
- 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 net profit of last three years as CSR budget for the year and allocation of fund among various expenditure heads (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 their 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 www.bhel.com at http://www.bhel.com/CSR/pdf/BHEL-CSR-Policy-December-2014.pdf under CSR section.

Annexure-B

Manner in which CSR Fund spent in FY 2016-17

(₹ in Lakhs)

S. No.	Project Name	Sector in which the project is covered (Item No. of Schedule VII) & BHEL Thrust Area	Project or Program 1. Local area or other 2. State and district where projects or programs were undertaken	Amount outlay (budget) project wise	Amount spent on the project or programs (in 2016-17)	Cumulative-expenditure upto the reporting period	Amount spent directly or through implementing agency	Name of Implementing Agency
1	Construction of Toilets at Neyveli and at Govt. schools in Melakuppam, Mudhanai, Seplanatham	1 Clean India	Local, Tamil Nadu, Cuddalore	9.90	9.81	9.81	Direct	BHEL - PSSR, Chennai
2	Construction / renovation of Toilets in Schools/ villages/underdeveloped area	1 Clean India	Local, Maharashtra, Nagpur	10.00	9.41	9.41	Direct	BHEL - PSWR, Nagpur
3	Construction of New Toilets for Gents at Ceylon Colony, Navalpattu	1 Clean India	Local, Tamil Nadu, Tiruchirappalli	8.00	8.00	8.00	Direct	BHEL - HPBP, Trichy
4	Support for Toilet construction to Mahatma Jyotiba Fule Abhasika, Chandrapur	1 Clean India	Other, Maharashtra, Chandrapur	3.50	3.50	3.5	Implementing Agency	Mahatma Jyotiba Fule Abhasika, Buddhist Samanvay Kruti Samiti
5	Construction of Toilets-Yermaras, Govt. Higher Primary School, Chikkasuguru	1 Clean India	Other, Karnataka, Raichur	3.47	3.46	3.46	Direct	BHEL - PSSR, Chennai
6	Provision of water purification(RO) system in School, Mudetha by Lokseva Shikshan Vikas Trust, Gujarat	1 Clean India	Other, Gujarat, Banaskanta	3.00	3.00	3.00	Implementing Agency	Lokseva Shikshan Vikas Trust
7	Safe drinking water, Durachati & Brajaballavpur Gram	1 Clean India	Local, West Bengal, South 24 Parganas	2.47	2.47	2.47	Implementing Agency	South Sundarban Janakalyan Sangha (SSJS)
8	Installation of RO water facility, 2000 L water storage tank with taps, with pedestal, pavement and drainage system along with required piping & valves for continuous operation at Onaiyur near PPPU Thirumayam	1 Clean India	Local, Tamil Nadu, Pudukkottai	2.10	2.10	2.10	Direct	BHEL - PPPU, Thirumayam
9	Providing Bio-Toilets at 05 Villages of Jhansi Distt.	1 Clean India	Local, Uttar Pradesh, Jhansi	2.00	2.00	2.00	Implementing Agency	Upman Mahila Sansthan
10	Renovation of Existing Toilets for Ladies at Ceylon Colony, Navalpattu	1 Clean India	Local, Tamil Nadu, Tiruchirappalli	2.00	2.00	2.00	Direct	BHEL - HPBP, Trichy
11	Toilet construction in Government School	1 Clean India	Local, Uttarakhand, Udham Singh Nagar	2.00	1.91	1.91	Implementing Agency	Paryavaran Evam Jan Kalyan Samiti
12	Installation of RO Water Plants at neighbouring Schools	1 Clean India	Local, Tamil Nadu, Tiruchirappalli	4.15	1.38	1.38	Direct	BHEL - HPBP, Trichy
13	Other projects related expenditure on Sanitation & Safe Drinking Water with spending less than ₹1 L in 2016-17 at Andhra Pradesh, Karnataka, Punjab, Tamil Nadu, Telangana, Uttarakhand	1 Clean India	NA, Pan India, Various Locations	40.85	0.70	0.70	NA	NA
14	Mental Health initiatives by the Banyan for the poor and homeless people in Chennai and Kanchipuram districts through outreach clinics and home care services for one year	1 Healthy India	Other, Odisha, Angul	27.81	13.91	13.91	Implementing Agency	The Banyan

S. No.	Project Name	Sector in which the project is covered (Item No. of Schedule VII) & BHEL Thrust Area	Project or Program 1. Local area or other 2. State and district where projects or programs were undertaken	Amount outlay (budget) project wise	Amount spent on the project or programs (in 2016-17)	Cumulative-expenditure upto the reporting period	Amount spent directly or through implementing agency	Name of Implementing Agency
15	Community based Rehabilitation programme for children having multiple disorders with the help of DISHA Foundation.	1 Healthy India	Local, Uttar Pradesh, Gautam Budhh Nagar	6.25	6.25	6.25	Implementing Agency	Disha Foundation
16	Financial support for the dedicated eye donation counsellors for eradication of the corneal blindness with the help of Sightlife.	1 Healthy India	Local, Uttar Pradesh, Gautam Budhh Nagar	6.21	6.14	6.14	Implementing Agency	Sightlife India
17	Financial support for purchase of Medical Equipment to M/s HelpAge India-Vishokanand Vridhhashram Society Bijnor	1 Healthy India	Local, Uttarakhand, Bijnor	4.30	4.30	4.30	Implementing Agency	HelpAge India
18	Eye checkup and cataract surgery camp at remote areas of NCR, OPD at different places and cataract surgeries in I-Care Hospital Noida	1 Healthy India	Local, Uttar Pradesh, Gautam Budhh Nagar	3.10	3.10	3.10	Implementing Agency	Icare Hospital
19	Conducting Medical Camp for various ailments for the needy and poor people through Rotary Club/Other agencies.	1 Healthy India	Local, Uttarakhand, Haridwar	3.00	2.50	2.50	Implementing Agency	Rotary Club
20	Blood Donation, Health Awareness, Medical Camps, Eye Camps, Etc. in vicinity of Unit	1 Healthy India	Local, Andhra Pradesh, Visakhapatnam	2.27	2.26	2.26	Direct	BHEL - HPVP, Vizag
21	Financial Support for procurement of equipment/ appliances, Nandlala Medical Foundation	1 Healthy India	Local, Karnataka, Bengaluru	3.60	1.90	1.90	Implementing Agency	Nandlala Medical Foundation
22	Community Development Yoga Classes	1 Healthy India	Local, Madhya Pradesh, Bhopal	1.37	1.25	1.25	Direct	BHEL - HEP, Bhopal
23	Other projects related to Healthcare services with spending less than ₹1 L in 2016-17 at Delhi, Karnataka, Maharashtra, Madhya Pradesh, Tamil Nadu, Telangana and Uttar Pradesh	1 Healthy India	NA, Pan India, Various Locations	9.03	3.51	3.51	NA	NA
24	School Expenditure	2 Educated India	Local, Uttarakhand, Haridwar	1261.00	612.00	612.00	Direct	BHEL - HEEP, Haridwar
25	School Expenditure	2 Educated India	Local, Madhya Pradesh, Bhopal	510.00	327.20	327.20	Direct	BHEL - HEP, Bhopal
26	School Expenditure	2 Educated India	Local, Uttar Pradesh, Jhansi	330.00	326.75	326.75	Direct	BHEL - TP, Jhansi
27	School Expenditure	2 Educated India	Local, Uttar Pradesh, Amethi	162.90	158.52	158.52	Direct	BHEL - IP, Jagdishpur
28	School Expenditure	2 Educated India	Local, Andhra Pradesh, Visakhapatnam	150.00	141.73	141.73	Direct	BHEL - HPVP, Vizag
29	School Expenditure	2 Educated India	Local, Tamil Nadu, Tiruchirappalli	140.00	138.81	138.81	Direct	BHEL - HPBP, Trichy
30	School Expenditure	2 Educated India	Local, Tamil Nadu, Vellore	70.00	67.42	67.42	Direct	BHEL - BAP, Ranipet
31	Scholarship to students from various categories: A. orphans, widows wards and differently abled students. B. BE/Btech & LLB Students C. MBBS & BSc. Nursing Students D. Physically Challenged students of IIT E. Physically Challenged students of the Polytechnic	2 Educated India	Local, Madhya Pradesh, Bhopal	20.18	18.17	18.17	Direct	BHEL - HEP, Bhopal

S. No.	Project Name	Sector in which the project is covered (Item No. of Schedule VII) & BHEL Thrust Area	Project or Program 1. Local area or other 2. State and district where projects or programs were undertaken	Amount outlay (budget) project wise	Amount spent on the project or programs (in 2016-17)	Cumulative-expenditure upto the reporting period	Amount spent directly or through implementing agency	Name of Implementing Agency
32	Lift for Library Building at National college, Trichy - Academy of Higher Education	2 Educated India	Local, Tamil Nadu, Tiruchirappalli	14.50	14.50	14.50	Implementing Agency	Academy of Higher Education
33	School Expenditure	2 Educated India	Local, Telangana, Medak	55.00	8.86	8.86	Direct	BHEL - HPEP, Hyderabad
34	Bench, fans, Computer, DWO	2 Educated India	Local, Jharkhand, Giridih	8.87	5.04	5.04	Implementing Agency	Deep Welfare Organization (DWO)
35	Establishment of 8 No. smart classrooms in 3 Govt. Schools in Delhi/NCR	2 Educated India	Local, Delhi, Delhi	5.00	5.00	5.00	Implementing Agency	Buddha Education Foundation
36	Donation of Benches & Blackboards in Schools, 40 Marry Ann Prim. School & 28 L N English School through Nrityanjali	2 Educated India	Local, Maharashtra, Mumbai	3.50	3.32	3.32	Implementing Agency	Nrityanjali
37	Providing Computer /furniture / water purifier and cooler in Schools	2 Educated India	Local, Maharashtra, Nagpur	3.28	3.18	3.18	Direct	BHEL - PSWR, Nagpur
38	Repairing of Toilet & Lab., Kendriya Vidyalaya, Jagdishpur, Amethi	2 Educated India	Local, Uttar Pradesh, Amethi	2.86	2.86	2.86	Direct	BHEL - IP, Jagdishpur
39	Support for Education of students from Economically Weaker Section through BHEL ladies Club	2 Educated India	Local, Madhya Pradesh, Bhopal	2.24	2.24	2.24	Direct	BHEL - HEP, Bhopal
40	Installation of Water Cooler, Water Filter & stabilizer at 4 schools in Tarn Taran Dist.	2 Educated India	Local, Punjab, Tarn Taran	2.04	2.04	2.04	Direct	BHEL - IVP, Goindwal
41	Bench & Desk distribution in Primary school, Haide & Jagdishpur	2 Educated India	Local, Uttar Pradesh, Amethi	2.00	2.00	2.00	Direct	BHEL - CSU & FP, Jagdishpur
42	Computer Training for BPL students	2 Educated India	Local, Uttar Pradesh, Jhansi	2.70	1.61	1.61	Implementing Agency	Upman Mahila Sansthan
43	Running & maintenance of GVSS school at Chandanayak Nagar	2 Educated India	Local, Telangana, Hyderabad	1.60	1.60	1.60	Direct	BHEL - Corp. R&D, Hyderabad
44	Reflooring and colour wash (Painting) of classrooms at Government Elementary School, Thirumayam	2 Educated India	Local, Tamil Nadu, Pudukkottai	1.55	1.35	1.35	Direct	BHEL - PPPU, Thirumayam
45	Uniform distribution at Atti Guppe School	2 Educated India	Local, Karnataka, Bengaluru	1.04	1.04	1.04	Direct	BHEL - EDN, Bengaluru
46	Other Projects related to Education with spending less than ₹1 L in 2016-17 at Karnataka, Punjab, Rajasthan, Tamil Nadu, Uttar Pradesh, Uttarakhand	2 Educated India	NA, Pan India, Various Locations	25.19	1.74	1.74	NA	NA
47	Skill Development Expenses	2 Inclusive India	Local, Tamil Nadu, Tiruchirappalli	91.09	91.09	91.09	Direct	BHEL - HPBP, Trichy
48	Skill Development Expenses	2 Inclusive India	Local, Delhi, Delhi	36.10	36.10	36.10	Direct	BHEL - Corporate Office, Delhi
49	Skill Development Expenses	2 Inclusive India	Local, Madhya Pradesh, Bhopal	24.77	24.77	24.77	Direct	BHEL - HEP, Bhopal
50	Skill Development Expenses	2 Inclusive India	Local, Karnataka, Bengaluru	23.98	23.98	23.98	Direct	BHEL - EDN, Bengaluru

S. No.	Project Name	Sector in which the project is covered (Item No. of Schedule VII) & BHEL Thrust Area	Project or Program 1. Local area or other 2. State and district where projects or programs were undertaken	Amount outlay (budget) project wise	Amount spent on the project or programs (in 2016-17)	Cumulative-expenditure upto the reporting period	Amount spent directly or through implementing agency	Name of Implementing Agency
51	Skill Development Expenses	2 Inclusive India	Local, Uttarakhand, Haridwar	21.78	21.78	21.78	Direct	BHEL - HEEP, Haridwar
52	Skill Development Expenses	2 Inclusive India	Local, Telangana, Medak	19.47	19.47	19.47	Direct	BHEL - HPEP, Hyderabad
53	Skill Development programme for unemployed youth through ITCOT	2 Inclusive India	Local, Tamil Nadu, Chennai	9.43	9.43	9.43	Implementing Agency	ITCOT Consultancy and Services Ltd.
54	Conducting free Tuition Centre through PTF at 10 Locations	2 Inclusive India	Local, Tamil Nadu, Tiruchirappalli	16.10	9.20	9.20	Implementing Agency	Puthiya Thalaimurai Foundation (PTF)
55	Skill Development Expenses	2 Inclusive India	Local, Tamil Nadu, Vellore	8.84	8.84	8.84	Direct	BHEL - BAP, Ranipet
56	Creating Employability through CII Foundation	2 Inclusive India	Local, Tamil Nadu, Tiruchirappalli	8.77	8.77	8.77	Implementing Agency	CII Foundation
57	Training of workers by Eklavya Foundation	2 Inclusive India	Local, Telangana, Medak	8.50	7.86	7.86	Implementing Agency	Eklavya Foundation
58	Skill Development Expenses	2 Inclusive India	Local, Tamil Nadu, Pudukkottai	7.86	7.86	7.86	Direct	BHEL - PPPU, Thirumayam
59	Support to Aao Saksham Bane program by Bihang Welfare Association	2 Inclusive India	Local, Uttar Pradesh, Varanasi	6.00	5.99	5.99	Implementing Agency	Bihang Welfare Association
60	Skill Development Expenses	2 Inclusive India	Local, Karnataka, Bengaluru Rural	5.70	5.70	5.70	Direct	BHEL - EPD, Bengaluru
61	Skill Development Expenses	2 Inclusive India	Local, Uttar Pradesh, Amethi	3.65	3.65	3.65	Direct	BHEL - IP, Jagdishpur
62	Skill Development in Various Traits Like : Tailoring, Purse Making, Flower Bouquet, Making Beautician, Music, Dance etc. through Ladies Club	2 Inclusive India	Local, Uttarakhand, Haridwar	3.36	3.35	3.35	Direct	BHEL - HEEP, Haridwar
63	Skill Development Expenses	2 Inclusive India	Local, Delhi, Delhi	3.23	3.23	3.23	Direct	BHEL - IO Division, Delhi
64	Skill Development Programs like Beautician, Mehandi, Rangoli, Painting, Stitching, Dance Classes etc. through BHEL Ladies Club.	2 Inclusive India	Local, Madhya Pradesh, Bhopal	2.92	2.92	2.92	Direct	BHEL - HEP, Bhopal
65	Skill Training on welding at Central Prison through TREAT	2 Inclusive India	Local, Tamil Nadu, Tiruchirappalli	2.88	2.88	2.88	Implementing Agency	CII Foundation
66	Skill Development Expenses	2 Inclusive India	Local, Andhra Pradesh, Visakhapatnam	2.13	2.13	2.13	Direct	BHEL - HPVP, Vizag
67	Making of Jute Bag/ folder for low income group women.	2 Inclusive India	Local, Uttarakhand, Udham Singh Nagar	2.50	1.87	1.87	Implementing Agency	Paryavaran Evam Jan Kalyan Samiti
68	Skill Development Expenses	2 Inclusive India	Local, Uttar Pradesh, Gautam Budhh Nagar	1.75	1.75	1.75	Direct	BHEL - TBG, Noida
69	High end industrial training for women empowerment by SETU NGO	2 Inclusive India	Local, Uttar Pradesh, Gautam Budhh Nagar	1.43	1.41	1.41	Implementing Agency	SETU Skill Centre

S. No.	Project Name	Sector in which the project is covered (Item No. of Schedule VII) & BHEL Thrust Area	Project or Program 1. Local area or other 2. State and district where projects or programs were undertaken	Amount outlay (budget) project wise	Amount spent on the project or programs (in 2016-17)	Cumulative-expenditure upto the reporting period	Amount spent directly or through implementing agency	Name of Implementing Agency
70	Other Projects related to Skill Development & Training with spending less than ₹1 L in 2016-17 at Andhra Pradesh, Jharkhand, Karnataka, Uttar Pradesh	2 Inclusive India	NA, Pan India, Various Locations	12.88	0.85	0.85	NA	NA
71	Providing for the Security of Working Women Hostel	3 Responsible India	Local, Uttarakhand, Haridwar	9.68	9.67	9.67	Direct	BHEL - HEEP, Haridwar
72	Financial Aid for Old Age Home run by Shree Sanathan Dharam Sabha, Bhagwat Dham.	3 Responsible India	Local, Uttar Pradesh, Gautam Budhh Nagar	3.00	3.00	3.00	Implementing Agency	Sanathan Dharam Sabha
73	Supply of Tricycle, Wheel Chair Child, Wheel Chair Adult, Elbow Crutches Size-II, Axillary Crutches large, Walking Stick, Braille Cane, MSIED Kit, BTE Digital Hearing Aid, 6 Pack of 13 Zinc air Battery through ALIMCO	3 Responsible India	Local, Telangana, Medak	2.00	1.97	1.97	Implementing Agency	ALIMCO
74	50 % funding for 2 no. Special educator Special Educator's Honorarium and 50% Honorarium for one supporting staff- teaching Hearing impaired children by Ashray-Akruti	3 Responsible India	Local, Telangana, Hyderabad	1.68	1.68	1.68	Implementing Agency	Ashray Akruti
75	Provision for 25% funding for one educator and paying fees for two autism effected students by Aarambh	3 Responsible India	Local, Telangana, Hyderabad	1.49	1.49	1.49	Implementing Agency	Aarambh
76	Tricycle & Wheel Chairs (34 Tricycle, 36 Wheelchair) through ALIMCO	3 Responsible India	Local, West Bengal, Kolkata	4.90	1.45	1.45	Implementing Agency	ALIMCO
77	Providing 50 % funding for 1 no. Special educator and 50% funding for one junior teacher by Sri Vidhyas Centre for the special children.	3 Responsible India	Local, Telangana, Hyderabad	1.38	1.38	1.38	Implementing Agency	Sri Vidhyas Centre
78	Providing financial support funding 25 % salary for 2 nos. special educators in the Sweekar, for mentally challenged children.	3 Responsible India	Local, Telangana, Hyderabad	1.20	1.20	1.20	Implementing Agency	Sweekar
79	Providing Braille paper, etc. to Divya Jyothi Charitable Trust	3 Responsible India	Local, Karnataka, Bengaluru	1.06	1.05	1.05	Implementing Agency	Divya Jyothi Charitable Trust
80	Other Projects related to Community Development, Disaster Relief & Social Upliftment with spending less than ₹10 L in 2016-17 at Madhya Pradesh, Tamil Nadu, Telangana, Uttar Pradesh	3 Responsible India	NA, Pan India, Various Locations	44.28	3.10	3.10	NA	NA
81	Installation of 75 kWp capacity Solar PV Plant at Ramakrishna Mission Ashram, New Delhi	4 Green India	Local, Rajasthan, Jaipur	52.87	52.87	52.87	Implementing Agency	Ramakrishna Mission
82	Provision of Solar Lighting System in Community Centre/Vihar/Hall in Chandrapur Distt., Maharashtra	4 Green India	Other, Maharashtra, Chandrapur	4.00	3.19	3.19	Implementing Agency	Dr. Babasaheb Ambedkar Smarak Bahuudeshiya Samiti
83	Community Development: Environment Awareness Programs	4 Green India	Local, Madhya Pradesh, Bhopal	0.50	0.41	0.41	Direct	BHEL - HEP, Bhopal
84	Advanced Training in Nadhaswaram and Thavil to Students through Dr. Chinna Moulana Trust at 4 Locations	5 Heritage India	Local, Tamil Nadu, Tiruchirappalli	3.60	3.60	3.60	Implementing Agency	Dr Chinna Moulana Trust
85	Providing Musical Instruments to BPL students through Dr. Chinna Moulana Trust	5 Heritage India	Local, Tamil Nadu, Tiruchirappalli	1.00	1.00	1.00	Implementing Agency	Dr Chinna Moulana Trust
86	Providing Cremation Structure at Simrawai Village	10 Responsible India	Local, Uttar Pradesh, Jhansi	3.30	0.00	0.00	Direct	BHEL - TP, Jhansi

S. No.	Project Name	Sector in which the project is covered (Item No. of Schedule VII) & BHEL Thrust Area	Project or Program 1. Local area or other 2. State and district where projects or programs were undertaken	Amount outlay (budget) project wise	Amount spent on the project or programs (in 2016-17)	Cumulative-expenditure upto the reporting period	Amount spent directly or through implementing agency	Name of Implementing Agency
87	Infrastructure work of Sant Ravidas Samajik Bhawan at Naya Basera Basti, Kotra Sultanabad, Bhopal	11 Responsible India	Local, Madhya Pradesh, Bhopal	5.00	3.83	3.83	Direct	BHEL - HEP, Bhopal
88	Capacity Building Expense including expenses on Admin. Overheads	Capacity Building	NA, Pan India, Various Locations	348.14	340.86	340.86	NA	NA
	Total			**3750.00**	**2678.48**	**2678.48**		

Annexure–IV

Business Responsibility Report 2016-17

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:** 2016-17
7. **Sectors that the Company is engaged in:** Refer to 'Corporate Profile', Annual Report 2016-17
8. **List three key products/services that the Company manufactures/provides:**
   a) Steam Turbine, Generators, Boilers & accessories for Thermal power plant (NIC Code: Group 281)
   b) Locomotives, propulsion equipment, traction motors/alternators (NIC Code: Group 302)
   c) Power & instrument transformers, reactors, switchgear, capacitors, insulators, FACTS & HVDC system for Transmission segment (NIC Code: Group 271)
9. **Total number of locations where business activity is undertaken by the Company:**
   a) **Number of International Locations (Provide details of major 5)**
   Major locations from where business activity is undertaken by BHEL are Jakarta (Indonesia), Tripoli (Libya), Thimpu (Bhutan), Dubai (UAE).
   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 (2016-17)

1.	**Paid up capital**	:	₹ 489.52 Crore
2.	**Total Turnover**	:	₹ 28,840 Crore
3.	**Total Profit after Tax**	:	₹ 496 Crore
4.	**Total expenses incurred on CSR&SD**	:	₹ 37.50 Crore (including unspent amount of ₹ 10.72 Crore carried forward)

5. **List of activities in which expenditure on CSR has been incurred:** Refer to **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 31-03-2017.
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

SN	Particulars	Details
i.	DIN Number (if applicable)	07221633
ii.	Name	D. Bandyopadhyay
iii.	Designation	Director (HR)
iv.	Telephone number	011 26001003
v.	e-mail id	db@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 being 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

SN	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 been 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
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

1. 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.

2. Once a policy is approved by the Board, it need not be necessarily signed by CMD/Board Director.

3. Policies and procedures of the organization are subject to audits/reviews during/by ISO 9001, ISO 14001, OHSAS 18001, CAG, Parliamentary Committees, Board of Directors, Committee of Functional Directors, Board Level Committees 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 established practices based on 'Policy advocacy in responsible manner', but do not have a formal policy document. 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 two times during 2016-17. While BHEL Board met six times in 2016-17 for assessment & review of CSR activities in BHEL.

- **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

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 in compliance with the requirements of DPE Guidelines on Corporate Governance for CPSEs & the SEBI's Listing Regulations.

http://www.bhel.com/investor_relations/pdf/Code_of_Business_Conduct_and_Ethics.pdf

The Board has laid down a Charter of the Board of Directors which clearly defines the roles and responsibilities of the Board and individual Directors. Further, the company endeavors to preserve the confidentiality of unpublished price sensitive information and prevent misuse of such information. Towards this a Board approved policy 'Code of Conduct for Regulating & Reporting Trading by Insiders and for Fair Disclosure - 2015' inline with SEBI (Prohibition of Insider Trading) Regulations - 2015 and Listing Regulations governs Board members and other designated employees of the Company. The Code also provides for practices and procedures for fair disclosure of unpublished price sensitive information.

http://www.bhel.com/investor_relations/pdf/BHEL-Insider-Trading-Code-2015.pdf

In line with the requirements of DPE Guidelines on Corporate Governance and the Listing Regulations, BHEL provides progress reports on quarterly basis to DHI and stock exchanges. Further, with a view to ensure effective implementation of the Insider Trading Code, the Company has also in place Internal Operating Guidelines wherein the concerned HoDs of Functions/ Manufacturing units are required to ensure timely dissemination of information with regard to the Code to Connected Persons pertaining to their area. In line with the Listing Regulations, all Board members and Senior Management personnel affirm annually that they have fully complied with the provisions of the Code of Business Conduct and Ethics during the relevant financial year and an affirmation to this effect is given by the Chairman & Managing Director in the Annual Report of the Company. For the purpose of the 'Code of Conduct for Regulating & Reporting Trading by Insiders and for Fair Disclosure, 2015', Director (Finance) is the compliance officer of the Company.

In addition, as a 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' is in place. This is augmented by Fraud Prevention Policy and Whistle Blower Policy which not only arm one against unacceptable practices but also act as a deterrent. The Company is subject to RTI Act 2005 and audit by Statutory Auditors and CAG audit under section 139 of the Companies Act, 2013.

http://www.bhel.com/pdf/BHEL%20Fraud%20Prevention%20Policy.pdf

http://www.bhel.com/pdf/Whistle%20Blower%20Policy.pdf

http://www.bhel.com/pdf/Contact%20details%20of%20authorities%20under%20Whistle%20Blower%20Policy.pdf

BHEL has signed MoU with Transparency International India (TII) to adopt 'Integrity Pact' to make procurement and contracting more transparent by binding both the parties to ethical conduct. A panel of three Independent External Monitors (IEMs) have been appointed to oversee implementation of Integrity Pact in BHEL with due approval of Central Vigilance Commission. Within BHEL, accountability is well defined through 'Delegation of Powers' for various functionaries. Works Policy, Purchase Policy and other policy documents facilitate transparency in BHEL's working and commitment of the highest order of integrity. Six representations from suppliers have been received during the year under Integrity Pact out of which five have been resolved by the IEMs. One complaint is under processing.

The Company 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), 488 complaints were received from the shareholders during the year under review and all the complaints were redressed up to 31st March, 2017.

In addition, a total of 269 public grievance complaints were received from the general public under the Centralized Public Grievance Redressal and Monitoring Scheme during the 2016-17. All the grievances were disposed within the prescribed time of 60 days.

Principle 2: Products Life Cycle Sustainability

BHEL is contributing to the global effort for sustainable development by encouraging application of inclusive and environment friendly business practices across the value chain.

Products addressing contemporary environmental concerns: Power Plants operating with Steam at Supercritical parameters; Flue-gas desulfurization (FGD) system; Solar Photovoltaic; Electrostatic Precipitator (ESP).

Resource efficiency improvement through above products: These products leads to lower auxiliary power consumption, higher plant efficiency, lower design heat rate & better PLF resulting in lower life cycle cost and less fuel consumption.

Sustainable Sourcing: BHEL has implemented e-procurement as business improvement and sustainable business practice. In this direction, the company has implemented in-house developed "Online Supplier Registration Portal" hosted at www.bhel.com applicable for all its manufacturing units. The portal enables prospective suppliers to submit their registration forms and processing thereof online to BHEL units, saving precious natural resources by eliminating paper based hard copies from the process.

Inclusive sourcing: Micro and Small Enterprises (MSEs) and local suppliers in and around the manufacturing units are part of BHEL's supply chain and the company has been supporting them from various fronts. As mandated in the Public Procurement Policy-2012 for MSEs (issued by Ministry of MSME-GOI), BHEL has achieved the target of 20% of its total procurement from MSEs during 2016-17. Regular Vendor Meets and Supplier development programs are being organized by BHEL units, specifically for MSEs (including local suppliers) as well as specific to SC/STs, which serve as platform for identification of needs and formulation of action plan for mutual benefits.

Recycle & Reuse: Company's manufacturing processes generate fair amount of metal scraps. These scraps subsequently undergo recycling within the company and are reused appropriately. One of our units, Central Foundry Forge Plant (CFFP) manufactures Steel Forgings and Castings 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. Moreover, for packing and other activities reusable materials are also being used.

Principle 3: Employee's Well-being

BHEL has been a frontrunner in the area of human resource management. The guiding principle for company's HRM policy is to ensure availability of competent, motivated and effectively contributing Human resources and to facilitate achievement of their full potential at all times to realize organizational mission. Company has documented the HRM policies and rules in the form of a 'Codified Personnel Manual' to ensure transparency and uniformity in implementation for regulating employment relationship, career growth/ development, employees' emoluments/ benefits, healthcare and well-being.

1. The total number of regular employees as on 31-03-2017: 39,821

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 31-03-2017: 2,251

4. Number of permanent employees with disabilities as on 31-03-2017: 929

5. BHEL has 29 participative trade unions represented in the apex level bipartite body namely the Joint Committee for BHEL for discussing worker and

Company's interest related issues with the worker representatives, based on the principle of participative Management. Besides the above, there are two employee associations one each for Executives and Supervisors in BHEL.

6. All three categories of employees viz. Executives, Supervisors and Workers are represented by their Association/Trade Unions. However, since there is no check-off facility to ascertain the exact membership of Executive/Supervisory Associations and Workers' Unions, a firm number in respect of the three class of employees is not available.

7. In 2016-17, the company received a total of four complaints on sexual harassment 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 2016-17, total number of training man-days per employee is 3.9. Company provides training in technical as well as behavioral skills to its employees. Training on Health Safety & Environment (HSE) aspect is one of the essential element of our induction training programme. In addition, separate programmes are also regularly conducted at all BHEL's manufacturing units and project sites to train employees on HSE by both internal and external faculty members. Below is the list of no. of employees (in percentage) who were given safety and skill (both technical and behavioural) upgradation training. A training on safety is also provided to casual/ temporary/ contractual workers (23.19%) coming through job/ work contracts between BHEL and contractors.

a.	Permanent Employee-	35.04%
b.	Permanent Woman Employee-	46.06%
c.	Casual/ Temporary/ Contractual workers-	23.19%
d.	Employees with disabilities-	39.18%

Principle 4: Stakeholder Engagement

BHEL has identified 'Customers', 'Employees', 'Shareholders', 'Vendors' and 'Society' as its stakeholders. Processes are in place to ensure inclusion of stakeholder concerns and their 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, mutual benefits and support. Customers are engaged through several modes like customers meets. Investor community is engaged through meetings, conferences etc and are provided with relevant information pertaining to their investment decisions.

BHEL has 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 & Sustainability for CPSEs released on 21.10.2014.

Principle 5: Human Rights

BHEL's policies are in line with the principles of Human Rights, The Constitution of India, and applicable Laws. BHEL has special provisions for ensuring safeguard of women employees 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

The same is also available and accessed from:

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. These policies are in-line with the requirements of ISO 14001 & OHSAS 18001 Management System certification. The HSE management system provides BHEL 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 drive the company 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. Additionally, BHEL has the Sustainable Development policy approved by the Board.

As a responsible Corporate Citizen, BHEL acknowledges the 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, by providing world class products and services to its customers so as to help them meet market demands in a sustainable manner and minimize environmental footprint over the entire life cycle, as well as BHEL's own internal processes across the organization.

Due to sustained efforts for reducing BHEL's carbon footprint through various means like energy efficiency & conservation efforts, company has avoided a significant amount of Carbon Emission. In operations too there is a gradual increase in usage of solar energy. In this direction, a 5.0 MWp capacity solar power plant each at Ranipet & Trichy and 1.5 MWp solar power plant at HPEP, Hyderabad were established. In addition to the above, several kWp scale solar power plants are already working in various units. Solar street lights, rooftop solar power plants, solar water heaters etc. have been installed which has resulted in enhancement of green energy generation capacity. Due to all these initiatives, BHEL achieved Carbon footprint avoidance to the extent of 14,387 MT CO_2-e during 2016-17 which is approx. 82% more as compared to 2015-16 (7,887 MT). Total energy generated through various renewable energy systems stood at 14.82 Million Units during 2016-17 as compared to 8.08 Million units during 2015-16. The Company has also taken a number of projects related to water and energy conservation, tree plantation, waste management, resource conservation, etc.

In parallel to the improvements made in carbon footprint of BHEL's operation, company is also working towards reducing the carbon footprint of BHEL made products during its running lifecycle. BHEL in association with IGCAR and NTPC, is developing Advanced Ultra Supercritical Technology under the aegis of the National Mission on Clean Coal Technology. The technology will yield targeted efficiency of 45-46% against efficiency of ~38% of subcritical and ~41-42% of supercritical sets. In result, this will further reduce coal consumption and CO_2 emission by about 11% as compared to Super Critical plants and by about 20% as compared to Subcritical power plants. Company has already introduced Super Critical Technology in India which has lower carbon footprint in comparison to previous generation subcritical technology.

To address the new emission norms which have come into force for generation utilities, BHEL is ready with the solutions required to meet the stipulated norms. Company has initiated several measures like modification in boiler design, modifications in the wind box firing system of Boilers and development of SCR catalyst for NOx reduction, installation of FGD systems for SOx capture, improvement in particulate collection efficiency of ESPs.

BHEL has also undertaken R&D initiatives towards CO_2 reduction and/or CO_2 capture through Oxy-fuel combustion, Biomass combustion, Ammonia based CO_2 sequestration systems, Algal based CO_2 decomposition of industrial flue gases, etc.

As a part of reducing emissions in transportation sector, there is favorable movement towards Electric Vehicle mobility as the future mode of transportation. BHEL is already developing Motors/ Alternators, IGBT controllers and VCU (Vehicle Control Unit) hardware for e-vehicles.

No show cause / legal notice received from Central Pollution Control Board (CPCB) / State Pollution Control Board (SPCB) are pending as on 31.03.17.

Principle 7: Policy Advocacy

BHEL is a member of many Industry bodies/ chambers viz., Confederation of Indian Industry (CII), Standing conference of Public Enterprises (SCOPE), Federation of Indian Chambers of Commerce and Industry (FICCI), Associated Chambers of Commerce and Industry of India (ASSOCHAM), International Chamber of Commerce (ICC), PHD Chamber of Commerce and Industry (PHD), Delhi Management Association (DMA).

BHEL participates in policy advocacy through these Industry bodies for promoting company's interests via knowledge sharing, surveys, representation to government on industry needs, due diligence in the formation of government policy like GST, Fiscal Budget, Foreign trade etc. Company participates in multilateral bodies such as Indo-US, Indo-French, Indo-Sweden, Indo-UK, Indo-Russia, Indo-Japan forums for trade promotion and collaboration. Company also interacts with NITI Aayog and participates in policy formulations like the policy for Coastal Economic Zone, Atal Tinkering Labs, Investment Summit etc.

Company actively contributed through public advocacy towards development of 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.

Principle 8: Inclusive Growth

BHEL has well-structured organizational set-up, policy & procedures through which various CSR programmes are implemented, which include CSR initiatives on inclusive growth and equitable development. The CSR policy, which includes inclusive growth as one of the thrust areas, is approved by the Board of Directors. The policy is hosted on website link http://www.bhel.com/CSR/csr_policy.php and is in line with the Schedule VII of section 135 of the Companies Act 2013.

The policy is implemented through a three-tier structure and unit level CSR Committee, which approves, aligns, implements & monitors the CSR initiatives including

projects which benefit the society especially the poor, needy & economically weaker section of the society. The company supports numerous social initiatives across the country through the various specialized agencies such as NGOs, Govt. agencies etc. in line with the CSR Policy. BHEL has undertaken several initiatives in areas such as Health, Education, Swachh Bharat, Environment Protection, Vocational Trainings, Skill Development Programmes, Infrastructure Development and community development programmes, which ultimately contributed to the holistic welfare and inclusive growth of the society. Close supervision and monitoring is carried out for effective implementation, providing maximum benefits to the society and to ensure fruitfulness of the initiatives undertaken.

During 2016-17, the major CSR activities carried out include installation of R.O. Plants for providing clean & pure drinking water, construction of toilets in schools specially for girls, running of schools near our manufacturing units for providing quality education to children from underprivileged section of society, running of Mobile Science Labs in schools, majorly in villages for developing scientific temperament among students, plying Mobile medical vans in the outreach areas & villages across India, providing health care facilities and check-up in the outreach areas of Bundelkhand through lifeline express train, infrastructure development activities namely: Construction of Hospice for terminally ill cancer patients, augmenting water supply facilities, Construction/Renovation of Community Centre, Installation of Solar Lighting System in villages, Construction of classrooms, Construction of check dam & ponds for rainwater harvesting, installation of lift irrigation system, construction of dug wells in the villages to provide irrigation source other than rain, extending agriculture based interventions to marginal farmers of various villages, toilets in schools in the villages in the vicinity of BHEL's establishments. Project details are listed on the link http://www.bhel.com/CSR/projects.php

The company take affirmative action in recruitments and promotion for representation of employees from socio-economically backward section of society as well representation of minorities and women, as mandated by the Govt. of India. The company is an equal opportunity employer and does not discriminate on the basis of gender, race, caste, religion, language, region etc. in recruitment, and employment relationship.

Principle 9: Customer Value

For BHEL, customer focus is an essential part of business and company is persistently working towards creating value for customer through products and services. It is an integral part of BHEL's culture which is also reflected in our Vision, Mission and Values statement.

Company provides detailed Product Labels/ Name Plates/ Test Certificates, O&M manuals to customers as per their requirement and terms of the contracts, besides fulfilling all the mandatory requirements as per the applicable law.

Given the diverse and large scale operations of BHEL, customer complaints get registered through multiple modes. Two dedicated online complaint system, i.e., Customer Complaint Management System (CCMS) and Site Action request (SAR)/ Commissioning Action Report (CAR) System have been introduced and are in operation. Apart from complaints, customer feedback is taken regularly through customer satisfaction surveys, customers' meets and face-to-face interactions.

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 at the end of financial year i.e., 31-03-2017. ●



Annexure–V

Research & Development and Technological Achievements

5.1 Innovation

Innovation capability and a culture of creative development are important drivers for achieving growth. The rapidly changing business environment, increasing competition and shrinking margins make it imperative to develop new products & processes and improve the performance & efficiency of existing products. BHEL follows a structured approach for R&D and technology development. It has a well-defined R&D policy & structure and infrastructure enabling a culture of innovation and creative development.

To keep abreast with the latest technology, BHEL has entered into technology collaboration arrangements with leading global engineering and manufacturing companies. It has successfully indigenized these technologies to meet the requirements of Indian customers and to establish manufacturing facilities at its own works. Today, with twelve ongoing collaborations, BHEL is focusing on successful adaptation and timely absorption of these technologies.



Prototype solar cell under development at BHEL ASSCP, Gurugram

Ongoing Technology Collaborations

	Name of Collaborator	Product
1.	Mitsubishi Heavy Industries Ltd, Japan	Pumps
2.	General Electric Co., U.S.A	Gas Turbines
3.	General Electric Technology GmbH, Switzerland	Once Through Boilers and Coal Pulverisers
4.	Siemens AG, Germany	Steam Turbines, Generators and Lateral/Axial Condensers
5.	Metso Automation Inc, Finland	New Generation C&I Automation
6.	Sheffield Forgemasters International Ltd, UK	Forgings
7.	Nuovo Pignone S.R.L, Italy	Centrifugal Compressors
8.	Vogt Power International Inc., USA	Heat Recovery Steam Generators
9.	GE India Industrial Private Limited, India	Water Treatment Equipment
10.	TLT- Turbo Gmbh, Germany	Fans
11.	Mitsubishi Hitachi Power Systems Ltd, Japan	Flue Gas Desulphurization
12.	Oto Melara, Italy	76/62 Super Rapid Gun Mount

5.2 Strategy

Today, BHEL is deeply focused on innovation than ever before. The company has transformed 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 reputed Indian scientists, captains of industry and academia.

BHEL is focusing on the following in mission mode to build and consolidate capabilities in emerging and existing areas:

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 (Solar PV).
3. Develop in house capability for transmission HVDC (± 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. E-mobility and Energy storage solutions.
7. Develop & commercialize applications in the area of emerging technologies like High Temperature Superconducting (HTSC) Motor, Fuel cell upto 5 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 Technology Management (CTM) at corporate level. CTM has been formed to strengthen engineering and R&D capabilities of BHEL in an integrated and focused manner so as to have strong capabilities in product development & engineering guided primarily by responsiveness to the ever-evolving market demands.

In addition, each product group in BHEL units has a dedicated Research & Product Development (RPD) group well complemented by a centralized Corporate Research & Development Division at Hyderabad.

The Company has a structured approach for strengthening R&D infrastructure, consisting of laboratories at Corporate R&D and manufacturing units, Centres of Excellence, Specialized Research Institutes, well equipped with state-



of-the-art R&D infrastructure benchmarked with the best in the world.

BHEL's Specialized 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 (ASSCP), Gurugram

Centres of Excellence:

At Hyderabad:

- Intelligent Machines and Robotics
- Machine Dynamics
- Compressors & Pumps
- Nano-technology
- UHV Laboratory
- Simulators
- Computational Fluid Dynamics
- Surface Engineering
- Permanent Magnet Machines
- Advanced Transmission Systems

At Bengaluru:

- Power Electronics, IGBT & Controller Technology
- Centre of Excellence for Control and Instrumentation

At Tiruchirapalli:

- Coal Research Centre
- Advanced Fabrication Technology



UHV laboratory at Corporate R&D, Hyderabad

Knowledge Based Engineering (KBE) has been identified as a focus area for reducing design cycle time and design optimization in all its products. BHEL has initiated a number of KBE projects to build expertise and facilitate KBE/PLM activities.

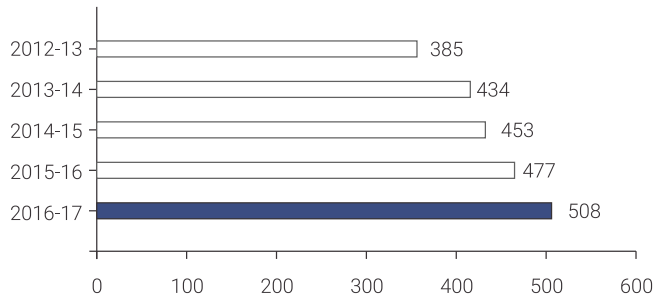
Further, with a view to bridge knowledge gaps BHEL has increased collaboration with academia and R&D Institutes for basic and applied research. Currently BHEL has Memorandum of Understanding (MoU) with 20 leading academia/ research institutes/ organizations. Company is also putting in place all enablers like people capabilities, infrastructure, processes and organization support to succeed in its ambitious technology endeavors.

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
- Indian Institute of Technology, Roorkee
- Indian Institute of Technology, Bhubaneswar
- Indian Institute of Engineering Science & Technology, Shibpur
- National Institute of Technology, Warangal
- International Research Centre for Powder Metallurgy & New Materials (ARCI), Hyderabad
- Mishra Dhatu Nigam limited (MIDHANI), 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

5.4 Achievements during the year

BHEL has recorded significant achievements on R&D parameters during the year. The R&D expenditure of the company for the current financial year is ₹ 793.62 Crore which is 2.75% 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 508 patent and copyright applications during the year 2016-17, enhancing the company's intellectual capital to 3,915. A total of ₹ 6,025 Crore (20.89%) of the company's total turnover has been achieved from its in-house developed products.



Filing of Patents & Copyrights (Nos.)

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:

- Indigenously designed and manufactured 420 kV GIS bay being supplied for NHPC Chamera project.
- Developed 2x500 kVA Hotel Load Converter (HLC) to replace polluting DG sets for Indian railways. The first 2x500 kVA HLC was commissioned in the locomotive attached to Chennai-Coimbatore Shatabdi express. With this successful development & field trial, BHEL has secured an order for supply of 32 sets of HLC through competitive bidding.
- Developed Polar Axis Solar Passive Tracker which will generate more energy for the same MWp

rating. Presently 50 kW system is working at Shivasamudram site of KPCL.



420 kV GIS for NHPC Chamera, Himachal Pradesh, indigenously designed by BHEL

- Designed and Commissioned India's first 1 MW Seasonal Tiltable Canal Top Solar PV Plant at Bhimavaram, AP.
- Designed, commissioned and demonstrated 25 kWp floating solar plant at Narsapur Lake (near Hyderabad), Telangana. Besides generating power at higher efficiency, the floating solar farm conserves precious irrigation and drinking water by reducing evaporation.
- With the increasing trend of higher MW level of solar power plants, BHEL has successfully developed state-of-the-art 1.25 MW Grid Connected Power Conditioning Unit (GCPCU) for Solar Power Plants.
- BHEL has undertaken development of model software for Boiler and Auxiliaries for GUI based modeling tool for Thermal power plant simulator as an MOU R&D Project with Govt. of India and successfully completed it on 24th Dec 2016. This will be used to offer GUI tool based Thermal Power plant simulators, which results in savings in cash out flow and eliminates dependency on external vendors. Simulator for NTPC, Gadarwara, TSGENCO's Nalgonda (800 MW) will be supplied with this tool.
- BHEL has undertaken development of Aero Mechanical design of axial flow compressor for process applications as an MOU R&D Project with Govt. of India and successfully completed it on 31st Aug 2016 achieving state-of-the-art efficiency level. This capability will enable BHEL to become an OEM in axial compressor industrial segment.
- Developed two cylinder reheat steam turbine with new back pressure HP module for 70 MW rating industrial sets. This turbine incorporated advanced blading and brush seals resulting in improved heat rate. This turbine is for supply to M/s NIRMA, Bhavnagar (Gujarat).
- Developed a new variant of 80 MW, 11 kV, 50 Hz, 3000 RPM Air cooled Turbo Generator with compact overhang brushless exciter, supplied to M/s NIRMA, Bhavnagar (Gujarat).
- Developed an efficient variant 5075 kW, 11 kV, 10 Pole ID fan motor with modified slot combination and slot size achieving low noise & low starting current for 3X660 MW North Karanpura STPP.
- Developed a new 3250 kW, 11 kV, 30 pole, vertical, slow speed cage Induction Motor for lift irrigation application which is capable of withstanding external thrust upto 140 Tonnes. Supplied to M/s Xylem Water Solutions India Pvt. Ltd. for Sardar Sarovar Narmada Nigam Ltd. (SSNNL PS-1).
- Developed a new compact 4061 kW Diesel Alternator to suit compact mounting requirement of Turbo diesel engines for 18 MW Diesel generator based power station for export order of M/s Man Turbo Diesel Engines in Union of Comoros.
- Developed High Temperature wear resistant coating by HVOF process and stellite coating by laser cladding on Ni-Based super alloy material (IN617 CCA) for Advanced Ultra Supercritical (AUSC) Steam Turbine control valve components. Developed coating shows four to six times improvement for high temperature erosion resistance over base material (IN617 CCA) at lab scale and will be used for HP & IP control and stop valves for AUSC applications.
- Developed In-house capability through establishing special welding procedure & advanced NDT techniques for special Nickel based alloy IN617M capable of operating at high temperature & pressure for Advanced Ultra Supercritical (AUSC) Boiler applications.
- Successfully manufactured, tested and supplied a new in-house designed Generator Module THRI 108/40 for Koradi R&M project. This shall propel BHEL towards self-reliance in executing R&M orders.



New back-pressure HP module for two-cylinder reheat steam turbine, under assembly at BHEL works, Hyderabad

5.5 Future focus areas

BHEL has taken several technology development initiatives to address changing business scenario in areas of Power, Transportation, Transmission, Nuclear, Solar, Water, Defence and others. In recent years, company has undertaken projects with focus on low-carbon emission technologies, Advanced Ultra Super Critical Technology, Solar PV, 765/1200 kV Transmission System, GIS up to 765 kV, ±800 kV HVDC system, IGBT based Propulsion Systems for higher rating Locos, EMU, Metro coaches, e-mobility and Energy storage systems.



Dr. R. Chidambaram, Principal Scientific Advisor to GoI, briefed on developments in AUSC project during his visit to BHEL at Tiruchirappalli

The company is also engaged in development of Fuel Cells, High temperature wear resistant coatings, new materials with addition of Nano-/micro-particles with improved characteristics, technologies for alternate use of coal and superconducting applications in electrical equipments. ●

Annexure–VI

Corporate Governance

6.1 Our Philosophy on Corporate Governance

BHEL functions within 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 Corporate Governance framework of BHEL rests upon the four pillars of transparency, full disclosure, independent monitoring and fairness to all. To strengthen this, BHEL has signed an MoU with Transparency International to adopt 'Integrity Pact'. The corporate structure, business procedures and disclosure practices have attained a sound equilibrium resulting in achievement of goals as well as high level of business ethics. The following principles strengthen Corporate Governance in BHEL:

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 the core values and positions BHEL to deliver long-term returns to the shareholders, favourable outcomes to the customers, attractive opportunities to the employees and making the suppliers the company's partners in progress & enrichment of 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 Central Government through 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 50% of the composition of the Board.

The composition of the Board of Directors is as follows:

Particulars	Board Structure	Actual Strength as on 31.03.2017
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	6
TOTAL	**16**	**14**

As on 31st March, 2017, there exist two 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 2016-17 and the last AGM

Director's Name S/Shri	No. of Board Meetings		Last AGM (held on 22.09.2016)
	Held	Attended	
EXECUTIVE DIRECTORS			
Atul Sobti, Chairman & Managing Director #	8	8	Yes
D. Bandyopadhyay, Director (HR)	8	8	Yes
Amitabh Mathur, Director (IS&P)	8	7	Yes
Subrata Biswas, Director (E,R&D)	8	8	Yes
T. Chockalingam, Director (Finance)	8	8	Yes
Akhil Joshi, Director (Power) (w.e.f. 10.08.2016)	4	4	Yes
PART-TIME OFFICIAL DIRECTORS – GOVT. NOMINEES			
Dr. Subhash Chandra Pandey, Additional Secretary & Financial Adviser, Department of Industrial Policy and Promotion, Ministry of Commerce & Industry	8	8	No
Bhaskar Jyoti Mahanta , Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises (w.e.f. 03.01.2017)	2	1	*
Rajesh Kumar Singh, Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises (upto 06.10.2016)	5	4	No
Anshu Prakash, Additional Secretary, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises (w.e.f. 31.10.2016 upto 03.01.2017)	1	1	*
PART-TIME NON-OFFICIAL (INDEPENDENT) DIRECTORS			
Ms. Harinder Hira	8	4	No
A.N. Roy	8	7	Yes
Rajesh Kishore	8	7	Yes
Keshav N. Desiraju	8	6	Yes
R. Swaminathan	8	7	Yes
Ms. Surama Padhy (w.e.f. 02.02.2017)	2	1	*

#Shri Atul Sobti, CMD held additional charge of Director (Power) from 01.01.2016 to 09.08.2016.
** 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 31st March, 2017

Director's name S/Shri	Details of Directorships in other Companies	Details of Committee Memberships and Committee Chairmanship in other Companies*
Atul Sobti Chairman & Managing Director	-NIL-	-NIL-
D. Bandyopadhyay Director (HR)	1. Dada Dhuniwale Khandwa Power Ltd. 2. NTPC BHEL Power Projects Pvt. Ltd.	**Audit Committee:** NTPC BHEL Power Projects Pvt. Ltd. (Member)
Amitabh Mathur Director (IS & P)	1. Dada Dhuniwale Khandwa Power Ltd. 2. Indian Electrical & Electronics Manufacturer's Association 3. BHEL GE Gas Turbine Services Pvt. Ltd.	**Audit Committee:** Dada Dhuniwale Khandwa Power Ltd. (Chairman)
Subrata Biswas Director (E,R&D)	-NIL-	-NIL-
T. Chockalingam Director (Finance)	-NIL-	-NIL-
Akhil Joshi Director (Power)	Raichur Power Corporation Ltd.	-NIL-
Dr. Subhash Chandra Pandey Part-time Official Director	HMT Ltd.	-NIL-
Bhaskar Jyoti Mahanta Part-time Official Director	1. Andrew Yule & Co. Ltd. 2. Tide Water Oil Co India Ltd. 3. Hindustan Paper Corporation Ltd.	-NIL-
Ms. Harinder Hira Part-time Non-official Director (Independent Director)	-NIL-	-NIL-
A.N. Roy Part-time Non-official Director (Independent Director)	1. India Venture Advisors Pvt. Ltd. 2. HDFC Bank Ltd. 3. Vandana Foundation (Section 8 Company) 4. GlaxoSmithKline Pharmaceuticals Ltd. 5. Mayar Infrastructure Development Pvt. Ltd. 6. Mayar Health Resorts Ltd. 7. Skills Academy Pvt. Ltd.	**Audit Committee:** HDFC Bank Ltd. (Member) **Stakeholders' Relationship Committee:** HDFC Bank Ltd. (Chairman)
Rajesh Kishore Part-time Non-official Director (Independent Director)	Aureous Advisory and Consulting Services Pvt. Ltd.	-NIL-
Keshav N. Desiraju Part-time Non-official Director (Independent Director)	Tamil Nadu Infrastructure Fund Management Corporation Ltd.	**Audit Committee:** Tamil Nadu Infrastructure Fund Management Corporation Ltd. (Chairman)
R. Swaminathan Part-time Non-official Director (Independent Director)	-NIL-	-NIL-
Ms. Surama Padhy Part-time Non-official Director (Independent Director)	-NIL-	-NIL-

**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.

Disclosure of relationship between Directors inter-se: NIL

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 members of the Board have access to all information of the Company and are free to recommend inclusion of any matter for discussion in agenda which is usually sent in advance. 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 eight times on the following dates:

(i)	April 7, 2016	(ii)	May 27, 2016
(iii)	July 16, 2016	(iv)	August 10, 2016
(v)	September 7, 2016	(vi)	November 8, 2016
(vii)	February 7, 2017	(viii)	March 7, 2017

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, Stakeholders Relationship Committee and CSR Committee. In terms of Companies Act, 2013 and Listing Regulations, the Audit Committee and the Nomination & Remuneration Committee are chaired by an Independent Director and function within their respective defined terms of references.

Further, in line with DPE OM dated 28th 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 Listing Regulations 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/investor.php'.

vii. Information placed before the Board of Directors

The agenda placed before the Board *interalia* includes the following:-

- 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 investments, subsidiaries, assets, which are material in nature and 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 as required under Listing Regulations, DPE guidelines and SS-1 etc., 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 and Functional Directors on the Board of BHEL and also appoints Part-time Non-official (Independent) Directors on the Board of BHEL. 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.

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 for a period of five years from the date of their assumption of charge of the post, or till the date of their superannuation or until further orders, whichever is the earliest. The Part-time Official Directors 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 erstwhile Listing Agreement with the Stock Exchanges, the Board of Directors of BHEL in its 465th meeting held on 14th November, 2014 revised and approved the "Code of Business Conduct & Ethics for Board Members and Senior Management Personnel" of the Company. The Code is also in compliance with the current Listing Regulations. 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**'.

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.

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.

xii. CEO/CFO certification

CEO / CFO certification pursuant to Listing Regulations is enclosed at Annexure II of the Director's 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 Listing Regulations 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;

vii. Qualifications in the draft audit report;

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 at least 2/3rd members as Independent Directors as mandated by the Listing Regulations. 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.

The Audit Committee was last reconstituted on 3rd January, 2017. 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, Independent Director)	Chairperson	7	7
Rajesh Kumar Singh, JS, DHI (Part-time Official Director) (upto 06.10.2016)	Member	4	3
Anshu Prakash, AS, DHI (Part-time Official Director) (upto 03.01.2017)	Member (w.e.f. 31.10.2016)	-	-
Bhaskar Jyoti Mahanta, JS, DHI (Part-time Official Director)	Member (w.e.f. 03.01.2017)	3	1
Ms. Harinder Hira (Part-time Non-official Director, Independent Director)	Member	7	5
Rajesh Kishore (Part-time Non-official Director, Independent Director)	Member	7	7

Director (Finance) is permanent invitee. Company Secretary acts 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 seven times on 7th April, 2016, 27th May, 2016, 15th July, 2016, 7th September, 2016, 8th November, 2016 (adjourned due to lack of quorum and held on 6th February, 2017), 7th February, 2017 and 7th March, 2017 during the year under review. The detail of attendance of each member is given in the above table.

6.4 Nomination and 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 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. The part-time non-executive directors are not paid any remuneration except sitting fees to Independent Directors for attending meetings of the Board or Committee thereof.

ii. Terms of Reference

In line with the requirements of Section 178 of the Companies Act, 2013 and Clause 49 of the erstwhile Listing Agreement (now Listing Regulations), the Board constituted the Nomination & Remuneration Committee (NRC) w.e.f. 30th 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/ LR/ 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.

MCA vide Notification dated 5th June, 2015 provided that Section 178 (2) of the Companies Act, 2013 with regard to performance evaluation of Directors shall not apply to Government Company.

iii. Composition of Committee, name of Members & Chairperson

The Nomination & Remuneration Committee was last reconstituted on 3rd January, 2017. 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, Independent Director)	Chairperson	1	0
Dr. Subhash Chandra Pandey, AS & FA, DIPP (Part-time Official Director)	Member	1	1
Rajesh Kumar Singh, JS, DHI (Part-time Official Director) (upto 06.10.2016)	Member	1	1
Anshu Prakash, AS, DHI (Part-time Official Director) (upto 03.01.2017)	Member (w.e.f. 31.10.2016)	-	-
Bhaskar Jyoti Mahanta, JS, DHI (Part-time Official Director)	Member (w.e.f. 03.01.2017)	-	-
A.N. Roy (Part-time Non-official Director, Independent Director)	Member	1	1

Director (HR) is permanent invitee. Company Secretary acts as Secretary to the Committee.

iv. Meetings and Attendance

The Nomination & Remuneration Committee met once during the year on 6th September, 2016. The detail of attendance of each member is given in the above table.

v. Details of remuneration of Functional Directors during the year 2016-17 are given below:-

(in ₹)

Sl. No.	Name of the Director S/Shri	Salary	Benefits	Performanc Linked Incentives*	Total	Service Contract/ Notice Period Severance Fee
1	Atul Sobti	30,86,213	8,89,065		39,75,278	--
2	D. Bandyopadhyay	28,59,242	16,88,816		45,48,058	Liable to retire by rotation
3	Amitabh Mathur	29,38,018	6,96,454		36,34,472	Liable to retire by rotation
4	Subrata Biswas	28,46,910	10,12,998		38,59,908	Liable to retire by rotation
5	T. Chockalingam	24,52,162	11,45,203		35,97,365	Liable to retire by rotation
6	Akhil Joshi (w.e.f. 10.08.2016)	16,82,017	6,65,794		23,47,811	Liable to retire by rotation

** No payment of PRP for FY 2015-16*

vi. Details of payments made to Independent Directors during the year 2016-17 are given below:-

(in ₹)

Name of the Independent Directors	Sitting Fees		Total
	Board Meeting	Committee Meeting	
Ms. Harinder Hira	80,000	1,50,000	2,30,000
Shri A.N. Roy	1,40,000	1,35,000	2,75,000
Shri Rajesh Kishore	1,40,000	1,80,000	3,20,000
Shri Keshav N. Desiraju	1,20,000	30,000	1,50,000
Shri R. Swaminathan	1,40,000	75,000	2,15,000
Ms. Surama Padhy	20,000	15,000	35,000

During 2016-17 Independent Directors were entitled for sitting fee @ ₹ 20,000 per Board Meeting and ₹15,000 per Board Level Committee Meeting attended by them. Independent Directors are not entitled to Stock Option.

vii. Equity Shares held by Directors

Except as stated hereunder, none of the Directors hold any Equity Shares in BHEL (as on 31st March, 2017):

Name of the Director S/Shri	No. of shares held
Atul Sobti	1500
Akhil Joshi	10

The Company has not issued any stock options during the year 2016-17.

6.5 Shareholders Committees

6.5.1 Stakeholders Relationship Committee

i. Terms of Reference

The Board of Directors on 12th May, 2014 reconstituted the Shareholders'/ Investors' Grievance Committee as the Stakeholders Relationship Committee in line with the requirements of Companies Act, 2013 and erstwhile Listing Agreement. The Committee is also in compliance with the Listing Regulations. The Committee looks into the redressal of grievances of shareholders 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 on 3rd January, 2017. 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
R. Swaminathan (Part-time Non-official Director, Independent Director)	Chairperson	4	4
Rajesh Kumar Singh JS, DHI (Part-time Official Director) (upto 06.10.2016)	Member	2	1
Anshu Prakash AS, DHI (Part-time Official Director) (upto 03.01.2017)	Member (w.e.f. 31.10.2016)	1	1
Bhaskar Jyoti Mahanta JS, DHI (Part-time Official Director)	Member (w.e.f. 03.01.2017)	1	0
Director (Finance)	Member	4	4
Director (HR)	Member	4	4

Company Secretary acts as Secretary to the Committee.

Shri I.P. Singh, Company Secretary is the Compliance Officer in terms of the SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015.

iii. Meetings and Attendance

The Committee met four times on 27th May, 2016, 6th September, 2016, 7th November, 2016 and 6th February, 2017 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, 488 complaints were received from the shareholders during the year under review and all complaints were redressed up to 31st March, 2017. No complaint was pending at the end of the period under report.

6.5.2 Share Transfer Committee

The Board constituted a Share Transfer Committee on 25th March, 1992. The Board of Directors revised the terms of reference of the Committee w.e.f. 1st August, 2014. The Share Transfer Committee considers and approves share related issues pertaining to transposition, sub-division, consolidation, issue of duplicate share certificate etc. in physical mode. The Share Transfer Committee was last reconstituted on 12th January, 2016 and comprises Chairman & Managing Director, Director (Finance) and Director (HR).

Meetings during 2016-17

The Share Transfer Committee met 7 times during the year. The minutes of the Share Transfer Committee meetings are periodically placed before the Board of Directors.

6.6 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 25th 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 12th 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);
3. Monitoring the Corporate Social Responsibility activities of the company from time to time; and
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 on 3rd January, 2017. 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, Independent Director)	Chairperson	2	2
Rajesh Kumar Singh, JS, DHI (Part-time Official Director) (upto 06.10.2016)	Member	1	0
Anshu Prakash, AS, DHI (Part-time Official Director) (upto 03.01.2017)	Member (w.e.f. 31.10.2016)	-	-
Bhaskar Jyoti Mahanta, JS, DHI (Part-time Official Director)	Member (w.e.f. 03.01.2017)	1	0
Director (Finance)	Member	2	2
Director (HR)	Member	2	2

Head (CSR)-ED/GM In-charge, Corporate Office is Permanent Invitee. Company Secretary acts as Secretary to the Committee.

iii. Meetings and Attendance

The Committee met two times during the year on 26th May, 2016 and 6th February, 2017. The detail of attendance of each member is given in the above table.

6.7 HR Committee

i. Terms of Reference

The Board constituted the HR Committee on 31st 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 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 Kishore (Part-time Non-official Independent Director)	Chairperson	4	4
Director (Finance)	Member	4	4
Director (HR)	Member	4	4

Head (HR)-ED/GM In-charge, Corporate Office is permanent invitee. Company Secretary acts as Secretary to the Committee.

iii. Meetings and Attendance

The HR Committee met four times during the year on 13th July, 2016, 6th September, 2016, 23rd September, 2016 and 6th February, 2017. The detail of attendance of each member is given in the above table.

6.8 Committee of Independent Directors

i. Terms of Reference

The Board, in line with DPE OM dated 28th 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 Listing Regulations.

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	Chairperson & Lead Independent Director	1	1
A.N. Roy	Member	1	1
Rajesh Kishore	Member	1	1
Keshav N. Desiraju	Member	1	1
R. Swaminathan	Member	1	1
Ms. Surama Padhy	Member	1	1

iii. Meetings and Attendance

The Committee met once during the year on 7th March, 2017. The detail of attendance of each member is given in the above table.

6.9 Board Level Risk Management Committee

i. Terms of Reference

In line with erstwhile Listing Agreement (now Listing Regulations), the Board of Directors on 14th November, 2014 constituted the Board Level Risk Management Committee. The Committee is also in compliance with the Listing Regulations. 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 the 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
Keshav N. Desiraju (Part-time Non-official Director, Independent Director)	Member	1	1
Director (Finance)	Member	1	1
Director (Power)	Member	1	1
Director (IS&P)	Member	1	1
Chairman, Risk Management Steering Committee	Member	1	1
Chief Risk Officer	Member & Convener	1	1

iii. Meetings and Attendance

The Committee met once during the year on 6th March, 2017. The detail of attendance of each member is given in the above table.

6.10 Committee on Arbitration & Major Legal Disputes

i. Terms of Reference

The Board of Directors in its meeting held on 26th May, 2015 constituted the Committee on Arbitration & Major Legal Disputes for detailed review of arbitration cases as well as major legal disputes and thereafter apprising the Board accordingly.

ii. Composition of Committee, name of Members & Chairperson

The Committee was last reconstituted on 3rd January, 2017. 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, Independent Director)	Chairperson	3	2
Rajesh Kumar Singh, JS, DHI (Part-time Official Director) (upto 06.10.2016)	Member	1	0
Anshu Prakash, AS, DHI (Part-time Official Director) (upto 03.01.2017)	Member (w.e.f. 31.10.2016)	1	1
Bhaskar Jyoti Mahanta, JS, DHI (Part-time Official Director)	Member (w.e.f. 03.01.2017)	1	0
Director (HR)	Member	3	3

Head-Law is convenor of the Committee and furnishes the required information for review by the Committee.

iii. Meetings and Attendance

The Committee met three times during the year on 26th May, 2016, 7th November, 2016 and 6th February, 2017. The details of attendance of each member is given in the above table.

6.11 Board Level Committee on Mergers & Acquisitions

i. Composition of Committee, name of Members & Chairperson

To examine the feasibility of the proposals relating to mergers, acquisitions and takeover of entities, the Committee was last reconstituted on 3rd January, 2017.

The Committee comprises of the following directors:

Name of the Director S/Shri	Position
Rajesh Kumar Singh, JS, DHI (Part-time Official Director) (upto 06.10.2016)	Chairperson
Anshu Prakash, AS, DHI (Part-time Official Director (upto 03.01.2017)	Chairperson (w.e.f. 31.10.2016)
Bhaskar Jyoti Mahanta, JS, DHI (Part-time Official Director)	Chairperson (w.e.f. 03.01.2017)
Keshav N. Desiraju (Part-time Non-official Director, Independent Director)	Member
Director (IS&P)	Member
Director (Finance)	Member
Director (E,R&D)	Member
Director (Power)	Member
Director (HR)	Member

Head of M&A Department will be permanent invitee. Company Secretary shall provide secretarial support to the Committee.

ii. Meetings and Attendance

No Meeting of the Board Level Committee on Mergers & Acquisitions took place during the year under review.

6.12 General Meetings

i. Location and time of last three AGMs:

Year	Location	Date	Time
FY 2013- 14 (50th AGM)	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	19th September, 2014	10.00 a.m.
FY 2014- 15 (51st AGM)	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	22nd September, 2015	10.00 a.m.
FY 2015- 16 (52nd AGM)	Manekshaw Centre, Parade Road, Khyber Lines, Delhi Cantt., Delhi-110010	22nd September, 2016	10.00 a.m.

ii. Details of Special resolutions passed in previous three AGMs

In line with SEBI circular No. CIR/CFD/POLICY CELL/2/2014 dated 17th April, 2014, a Special Resolution was passed in the 51st Annual General Meeting held on 22nd September, 2015, for approval of prior material related party transaction with Raichur Power Corporation Limited, a Joint Venture between BHEL and Karnataka Power Corporation Limited, for order of main plant equipment supply & services for the 2x800 MW Yeramarus Power Project at a value of ₹ 6,300 Crore.

iii. Postal Ballot

No special resolutions were passed through postal ballot in the previous year. No such resolution is proposed to be conducted through postal ballot.

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 (RPTs) that may have potential conflict with the interests of the company at large. Nonetheless, transactions with related parties have been disclosed in Point No. 14 of Note 39 – Notes to Accounts 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 has 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 detailed Whistle Blower Policy was drafted by the Company and it was duly approved by the Board of Directors in its 464th meeting held on 12.8.2014. Subsequent to this, a Circular notifying the Whistle Blower Policy and informing the contact details of the Competent Authority and of Chairman, Audit Committee was issued for the notice of all employees.

A copy of the Whistle Blower Policy has also been placed on the website of the Company 'www.bhel.com' for wide publicity. Changes in address, contact number(s) and email address of the Competent Authority and Chairman, Audit Committee are being notified from time to time.

The complaints received under the Policy are being

processed as per the guidelines in this regard and no employee has been denied access to the Audit Committee.

iv. Details of compliance with the requirements of DPE Guidelines on Corporate Governance, compliance with mandatory requirements and adoption of the non-mandatory Corporate Governance requirements of Listing Agreement/ Regulations

All mandatory requirements of the DPE Guidelines on Corporate Governance for CPSEs, erstwhile Listing Agreement & current Listing Regulations 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 Listing Regulations, BHEL is already in the regime of financial statements with unmodified audit opinion.

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

During the last three years i.e. 2014-15, 2015-16 & 2016-17, one presidential directive on encashment of half pay leave on superannuation was received and the same has been complied with.

vi. Risk Management

In compliance with SEBI Regulations 2015 and DPE guidelines on Corporate Governance for CPSEs, BHEL has in place a Board approved Risk Management Charter laying down procedures to inform Board members about the risk assessment & minimization. An important purpose of the Charter is to implement a structured and comprehensive risk management system across the company which ensures that the risks are being properly identified and effectively managed. The risk management process includes risk identification, risk assessment, risk evaluation, risk mitigation and regular review & monitoring of risks.

BHEL has in place a Board Level Risk Management Committee (BLRMC) with assigned responsibility of reviewing the company's risk governance structure, risk assessment & risk management framework, guidelines, policies and processes.

Besides this, Risk Management Steering Committee (RMSC) leads the risk management initiative across the company. RMSC members comprising of Executive Directors/ Functional Heads from Corporate Functions and Business sectors are responsible for adopting & implementing the risk management framework. At the divisional level, Risk Management Committees at the Business Sectors/Regions/Units/functions are responsible for review of risk profiles & risk mitigation plans and their implementation at the respective Units/ Regions.

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 the Listing Regulations, the company issues a notice in advance to the Stock Exchanges of the Board Meetings in which the unaudited/ audited financial results are due for consideration within the statutory time period. 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 atleast 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. change in directorship, 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. During 2016-17, BHEL has not made any presentation on financial results to analysts or investors during quarterly teleconference calls post financial result declaration or during any investor conference organized by investor or analyst firms.

In compliance with Listing Regulations, the company disseminates on its website information as required under Regulation 46 which interalia contains, details regarding composition of various committees of Board of Directors, code of conduct, policy dealing with RPTs, 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**
	22nd September, 2017	10.00 AM	Manekshaw Centre, Parade Road (Khyber lines), Delhi Cantt., New Delhi-110010
ii.	**Financial year**	1st April, 2016 to 31st March, 2017	

iii.	**Dates of Book Closure**	26th August 2017 to 30th August 2017 (Both days inclusive)
iv.	**Dividend payment date**	On or before 21st October, 2017

v. Dividend History:

BHEL has been paying dividend consistently since 1976-77. The details of dividend paid by BHEL are summarized as under:

Year	Rate of Dividend	Total Amount of Dividend Paid (₹in Crore)	Date which Dividend was Declared
2008-2009 (Final)	80%	391.62	17.09.2009
2009-2010 (Interim)	110%	538.47	21.01.2010*
2009-2010 (Final)	123%	602.11	17.09.2010
2010-2011 (Interim)	132.50%	648.62	15.03.2011*
2010-2011 (Final)	179%	876.24	20.09.2011
2011-2012 (Interim)	136%	665.75	02.03.2012*
2011-2012 (Final)	184%	900.72	19.09.2012
2012-2013 (Interim)	106%	518.89	01.02.2013*
2012-2013 (Final)	164.50%	805.26	20.09.2013
2013-2014 (Interim)	65.50%	320.64	05.02.2014*
2013-2014 (Final)	76%	372.04	19.09.2014
2014-2015 (Interim)	27%	132.17	12.02.2015*
2014-2015 (Final)	31%	151.75	22.09.2015
2015-2016(Final)	20%	97.90	22.09.2016
2016-2017(Interim)	40%	195.81	07.02.2017*

** Date of meeting of Board of Directors in which interim dividend was declared.*

- Number of shares of BHEL were 48.952 Crore of ₹ 10/- each, which are 244.76 Crores shares of ₹ 2/- each post-split w.e.f. 04.10.2011.
- Unclaimed dividend for the year 2008-09 (Final) and 2009-10 (interim) was already transferred to Investor Education & Protection Fund (IEPF) during the year 2016-17. Further, unclaimed dividend for the year 2009-10 (Final) is proposed to be transferred to IEPF on 22.10.2017.

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). In respect of dividend / shares which have been transferred to IEPF, shareholders can claim the same from IEPF Authority by following the procedure prescribed under IEPF Authority (Accounting, Audit, Transfer and Refund) Rules, 2016. These Rules are available on the website of IEPF (www.iepf.gov.in) and company's website (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 2016-17 has been paid:

Name of the Stock Exchange	Stock Code
1. BSE 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 2016-17.

vii. The High, Low, Close & Volume of BHEL shares and market index during each month in the financial year 2016-17 at BSE & NSE are indicated below:

Market Price Data: High, Low, Close during each month in the financial year 2016-17										
Months	**BSE**				**NSE**				**Market Index (Close)**	
	High	**Low**	**Close**	**Volume**	**High**	**Low**	**Close**	**Volume**	**S&P BSE SENSEX**	**NSE NIFTY**
	(in ₹)	**(in ₹)**	**(in ₹)**	**(No. of shares)**	**(in ₹)**	**(in ₹)**	**(in ₹)**	**(No. of shares)**		
Apr-16	135.40	112.30	125.40	23917891	135.45	112.35	125.40	192689643	25606.62	7849.80
May-16	131.95	115.75	120.70	17816754	132.20	115.65	120.50	128462668	26667.96	8160.10
Jun-16	128.45	113.90	127.65	16477306	128.20	113.75	127.70	127304047	26999.72	8287.75
Jul-16	151.25	128.75	145.80	18334350	151.25	128.90	145.90	151390148	28051.86	8638.50
Aug-16	149.00	132.15	139.05	16879631	149.00	132.20	139.10	132880198	28452.17	8786.20
Sep-16	162.80	129.40	134.65	32760689	162.90	129.60	134.70	287293733	27865.96	8611.15
Oct-16	143.45	130.05	138.80	13102691	143.65	129.80	139.00	108318709	27930.21	8625.70
Nov-16	146.85	122.60	130.35	17507532	146.80	122.50	130.15	167875874	26652.81	8224.50
Dec-16	131.20	116.15	121.05	9813230	131.20	116.10	121.20	77476296	26626.46	8185.80
Jan-17	142.00	120.85	137.05	12907256	142.20	120.70	137.05	117151165	27655.96	8561.30
Feb-17	163.70	136.00	162.00	22944598	163.80	135.70	162.45	185283213	28743.32	8879.60
Mar-17	172.00	155.90	163.10	13068745	172.10	155.80	162.85	131144367	29620.50	9173.75

Source: www.bseindia.com / www.nseindia.com

viii. 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 26th August, 2002 which was subsequently revised w.e.f. 29th January, 2009.

SEBI vide notification dated 15.01.2015, introduced the SEBI (Prohibition of Insider Trading) Regulations, 2015, applicable w.e.f. 15th May, 2015. In line with SEBI (Prohibition of Insider Trading) Regulations, 2015, the Board, in its 469th meeting held on 6th April, 2015, approved the 'Code of Conduct for Regulating & Reporting Trading by Insiders and for Fair Disclosure, 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. Head – CSM is the Chief Investor Relations Officer (CIRO) of the company under this code.

ix. Registrar & Share Transfer Agent (RTA)

Delhi Address	Hyderabad Address
Karvy Computershare Private Limited	Karvy Computershare Private Limited
UNIT: **BHEL**	UNIT: **BHEL**
305 New Delhi House,	Karvy Selenium Tower B,
27, Barakhamba Road,	Plot 31-32, Gachibowli, Financial District,
New Delhi – 110 001	Nanakramguda, Hyderabad – 500 032
Tel. : 011-43681700	Tel.: 040-67162222
Fax: 011-43681710	Fax : 040-23001153
Email:ksbldelhi@karvy.com	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.

x. 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 Regulations. In line with Listing Regulations, share certificates are being issued within the timeline prescribed 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.

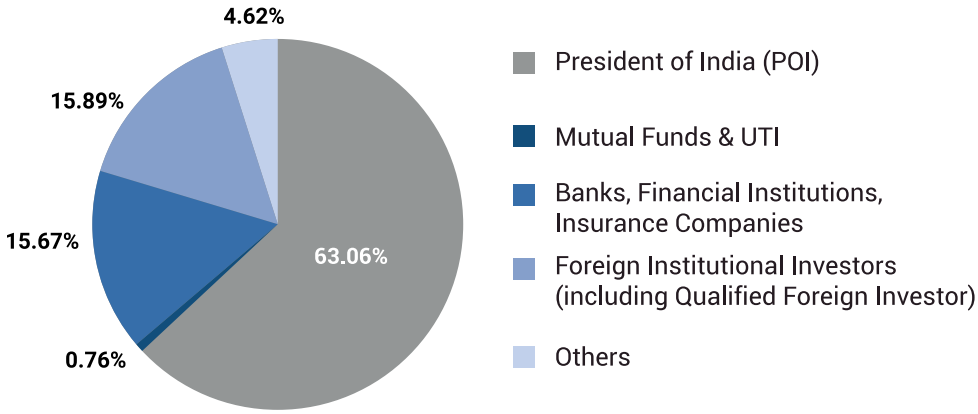
xi. Distribution of Shareholding

(i) Distribution of shares according to size of holding as on 31st March 2017

No. of equity share(s) held	No. of Shareholders	% of Shareholders	No. of Shares	% of Shareholding
1 - 500	354834	92.56%	34822780	1.42%
501 - 1000	16449	4.29%	13079573	0.53%
1001 - 2000	6988	1.82%	10708147	0.44%
2001 - 3000	1905	0.50%	4852940	0.20%
3001 - 4000	785	0.21%	2813940	0.12%
4001 - 5000	623	0.16%	2963964	0.12%
5001 - 10000	812	0.21%	5938347	0.24%
10001 and above	975	0.25%	2372420309	96.93%
Total	**383371**	**100.00%**	**2447600000**	**100.00%**

(ii) Shareholding Pattern as on 31st March 2017

Category	2017		2016	
	Voting strength (%)	No. of Shares held	Voting strength (%)	No. of Shares held
Promoters Holding				
Indian Promoters-				
President of India (POI)	63.06	1543452000	63.06	1543452000
Total Promoter holding	**63.06**	**1543452000**	**63.06**	**1543452000**
Non-promoters Holding				
Mutual Funds and UTI	0.76	18498146	2.71	66356008
Banks, Financial Institutions, Insurance Companies	15.67	383542722	15.68	384009517
Foreign Institutional Investors (including Qualified Foreign Investor)	15.89	389004270	13.95	341291372
Others				
Directors & Relatives	0.00	1510	0.00	1500
Bodies Corporate	0.72	17563551	0.98	24025478
Individuals	3.09	75630859	3.19	77944110
NRIs	0.20	4991743	0.20	4886565
Trust	0.13	3226202	0.13	3097094
Clearing Members	0.48	11688997	0.10	2536356
Total Non-promoter holding	**36.94**	**904148000**	**36.94**	**904148000**
Grand Total	**100.00**	**2447600000**	**100.00**	**2447600000**



(iii) List of shareholders who are holding more than 1% of the shares of the Company as on 31st March 2017

	31-03-2017	
	Voting strength	No. of shares held
Promoters		
1. President of India	63.06	1543452000
Non-promoters		
1. Life Insurance Corporation of India	9.42	230453920
2. Comgest Growth PLC - Comgest Growth Emerging Markets	1.42	34660004
3. Pinebridge Investments GF Mauritius Limited	1.13	27696389
4. Lazard Emerging Markets Portfolio	1.12	27369356
5. Magellan	1.10	26822509
6. LIC of India Market Plus 1 Growth Fund	1.02	24939880

xii. 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. 5th 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 31st March, 2017, 99.95% (NSDL: 99.00%, CDSL; 0.95%) of the total equity share capital of BHEL is being held in demat mode by the shareholders. Shares held in physical mode by the shareholders are 0.05%. 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.

xiii. Outstanding GDRs /ADRs / Warrants or any convertible instruments, conversion date and likely impact on equity:

Nil

xiv. Foreign Exchange risk or Commodity price risk and hedging activities

Hedging activities/transactions during the financial year 2016-17 have been undertaken by the company in line with the Board approved Foreign Exchange Risk Management Policy. Major industrial commodities like Steel, Copper, Aluminium, CRGO, CRNGO, Transformer Oil, Lubricants are being procured centrally by one of the identified units by bulking the requirements of various BHEL units, to the extent possible, to drive price advantage. To insulate the company against price fluctuations, Framework Agreements are being entered into on annual/half yearly/ quarterly basis.

xv. Plant locations

BHEL Manufacturing Units	Bengaluru	1. Electronics Division (EDN)
		2. Electronics Systems Division (ESD)
		3. Electro Porcelain Division (EPD)
	Bhopal	4. Heavy Electrical Plant (HEP)
	Goindwal	5. Industrial Valves Plant (IVP)
	Haridwar	6. Heavy Electrical Equipment Plant (HEEP)
		7. Central Foundry Forge Plant (CFFP)
	Hyderabad	8. Heavy Power Equipment Plant (HPEP)
	Jagdishpur	9. Insulator Plant (IP)
		10. Centralised Stamping Unit (CSU)
	Jhansi	11. Transformer Plant (TP)
	Rudrapur	12. Component Fabrication Plant (CFP)
	Ranipet	13. Boiler Auxiliaries Plant (BAP)
	Tiruchirappalli	14. High Pressure Boiler Plant (HPBP)
		15. Seamless Steel Tube Plant (SSTP)
	Thirumayam	16. Power Plant Piping Unit (PPPU)
	Visakhapatnam	17. Heavy Plates & Vessels Plant (HPVP)
BHEL Repair Units	Mumbai	1. Electrical Machine Repair Plant (EMRP)
	Varanasi	2. Heavy Equipment Repair Plant (HERP)
BHEL Subsidiary	Kasaragod	1. BHEL Electrical Machines Ltd. (BHEL-EML)

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:	305, New Delhi House 27, Barakhamba Road New Delhi – 110 001	Phone: 011-4368 1700 Fax: 011-43681710 Email: ksbldelhi@karvy.com einward.ris@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 Listing Regulations, 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 2016-17.

For and on behalf of the Board of Directors of

BHARAT HEAVY ELECTRICALS LTD.



(Atul Sobti)

Chairman & Managing Director

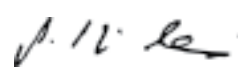
Place: New Delhi

Dated: July 19, 2017

Auditors' Certificate on Corporate Governance

To
The Members,
Bharat Heavy Electricals Limited
Siri Fort, New Delhi-110049

1. I have examined the compliance conditions of Corporate Governance by **Bharat Heavy Electricals Limited** (CIN L74899DL1964GOI004281) for the year ending 31st March 2017 as stipulated in the Securities Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations 2015 and the guidelines on Corporate Governance for Central Public Sector Undertakings issued by the Department of Public Enterprises in May 2010.
2. The compliance of conditions of Corporate Governance is the responsibility of the Management. My examination was limited to procedures and implementations 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 opinion on the financial statements of the Company.
3. In my opinion and to the best of my information and according to the explanations given to me, I certify that the Company has complied with all applicable conditions of Corporate Governance except the provision pertaining to the composition of the Board with the required Independent Directors as required under Regulation 17(1)(b) of the aforementioned Listing Regulations and Clause 3.1.4 of the DPE Guidelines.
4. I further state that such compliance is neither an assurance as to the future viability of the Company nor the efficiency or the effectiveness with which the management has conducted the affairs of the Company.



(P.S.R. Murthy)

Practicing Company Secretary

C.P. 13090

Place: New Delhi

Dated: May 20, 2017

SECRETARIAL AUDIT REPORT

For the Financial Year Ended 31st March, 2017

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 'the Company' or 'BHEL'). 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 company's books, papers, minute books, forms and returns filed and other records maintained by the company and also the information provided by the Company, its officers, agents and authorized representatives during the conduct of secretarial audit, I hereby report that in my opinion, the company has, during the audit period covering the financial period ended on 31st March, 2017 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 the Company for the financial year ended on 31st March, 2017 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, 2015;

(c) The Securities and Exchange Board of India (Issue of Capital and Disclosure Requirements) Regulations, 2009 (Not applicable to the Company during the audit period);

(d) The Securities and Exchange Board of India (Employee Stock Option Scheme and Employee Stock Purchase Scheme) Guidelines, 1999 (Not applicable to the Company during the audit period);

(e) The Securities and Exchange Board of India (Issue and Listing of Debt Securities) Regulations, 2008 (Not applicable to the Company during the audit period);

(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 (Not applicable to the Company during the audit period);

(h) The Securities and Exchange Board of India (Buy back of Securities) Regulations, 1998 (Not applicable to the Company during the audit period); and

(i) The Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015.

(vi) I further report that, having regard to the compliance system prevailing in the Company and on examination of the relevant documents and records in pursuance thereof, on test-check basis, the Company has complied with the following specific applicable laws to the Company:

a) Atomic Energy (Radiation Protection) Rules, 2004;

b) Batteries (Management and Handling) Rules, 2001;

c) Factories Act, 1948; and

d) The Indian Boilers Act, 1923.

I have also examined compliance with the applicable clauses of the following:

i. Secretarial Standards with regard to Meetings of the Board of Directors (SS-1) and General Meetings (SS-2) issued by the Institute of Company Secretaries of India; and

ii. Corporate Governance Guidelines issued by the Department of Public Enterprises vide their OM No. 18(8)/2005-GM dated 14th May, 2010.

During the period under review the Company has complied with the provisions of the Act, Rules, Regulations, Guidelines, Standards etc. mentioned above subject to the following observation:

The composition of the Board of Directors is not in compliance with the Regulation 17(1) (b) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and Para 3.1.4 of the DPE Guidelines on Corporate Governance as the Company did not have requisite number of Independent directors on its Board.

The Company has explained that BHEL, being a Government Company, the nomination/ appointment of the Independent Directors is made by the Govt. of India. The Company has already requested the Department of Heavy Industry in the Ministry of Heavy Industries, Govt. of India for nomination of requisite number of Independent Directors on the Board.

I further report that the changes in the composition of the Board of Directors that took place during the period under review were carried out in due 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.

As per the minutes of the meetings duly recorded and signed by the Chairman, the decisions of the Board were unanimous in all cases and no dissenting views have been recorded.

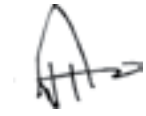
I further report that based on the review of compliance mechanism established by the Company and on the basis of the Certificate of Legal Compliance taken on record by the Board of Directors at their meetings, I am of the opinion that there are adequate systems and processes in the Company commensurate with the size and operations of the Company to monitor and ensure compliance with applicable laws, rules, regulations and guidelines. Further, I am informed that the Company has responded to notices for demands, claims, penalties etc., levied by various statutory/ regulatory authorities and initiated actions for corrective measures, wherever found necessary during the audit period.

I further report that during the audit period, there were no specific events/actions having a major bearing on the Company's affairs in pursuance of the above referred laws.

For **P. P. Agarwal & Co.**

Company Secretaries

U. C. No. S2012DE174200



Pramod P. Agarwal

CoP No.: 10566

Place: New Delhi

Dated: June 17, 2017

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.

Annexure-A

To,

The Members,

Bharat Heavy Electricals Limited

Our report of even date is to be read along with this letter.

1. Maintenance of secretarial record is the responsibility of the management of the Company. Our responsibility is to express an opinion on these secretarial records based on our audit.
2. We have followed the audit practices and processes as were appropriate to obtain reasonable assurance about the correctness of the contents of the secretarial records. The verification was done on test basis to ensure that correct facts are reflected in secretarial records. We believe that the processes and practices, we followed provide a reasonable basis for our opinion.
3. We have not verified the correctness and appropriateness of financial records and Books of Accounts of the Company.
4. Where ever required, we have obtained the Management representation about the compliance of laws, rules, regulations and happening of events etc.
5. The Compliance of the provisions of corporate and other applicable laws, rules, regulations, standards are the responsibility of the management. Our examination was limited to the verification of procedures on test basis.
6. The Secretarial Audit Report is neither an assurance as to future viability of the Company nor of the efficacy or effectiveness with which the management has conducted the affairs of the Company.

For **P. P. Agarwal & Co.**

Company Secretaries

U. C. No. S2012DE174200



Pramod P. Agarwal

CoP No.: 10566

Place: New Delhi

Dated: June 17, 2017

Secretarial Audit Report for the FY 2016-17

Observation	Management Reply
The composition of the Board of Directors is not in compliance with the Regulation 17(1) (b) of Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 and Para 3.1.4 of the DPE Guidelines on Corporate Governance as the Company did not have requisite number of Independent directors on its Board.	BHEL, being Government Company, the Independent Directors are selected by the Administrative Ministry viz., Department of Heavy Industry in consultation with the Search Committee of the Department of Public Enterprises. The Company is in constant communication with the Department of Heavy Industry for the appointment of requisite number of Independent Directors on its Board in order to comply with the provisions of the SEBI Listing Regulations and DPE Guidelines.

Extracts of Annual Return

Form No. MGT-9

EXTRACT OF ANNUAL RETURN

as on the financial year ended on 31.03.2017

[Pursuant to section 92(3) of the Companies Act, 2013 and rule 12(1) of the Companies (Management and Administration) Rules, 2014]

I. REGISTRATION AND OTHER DETAILS:

i)	CIN	L74899DL1964GOI004281
ii)	Registration Date	13th November, 1964
iii)	Name of the Company	Bharat Heavy Electricals Limited
iv)	Category/ Sub-Category of the Company	Public Company/ Government Company/ Limited by shares
v)	Address of the Registered office and contact details	BHEL House, Siri Fort, New Delhi- 110049 Tel: 011-66337000 Fax: 011-66337428 Email: shareholderquery@bhel.in
vi)	Whether listed company (Yes / No)	YES
vii)	Name, Address and Contact details of Registrar and Transfer Agent, if any	**Karvy Computershare Private Limited** Karvy Selenium Tower B, Plot 31-32, Gachibowli Financial District, Nanakramguda, Hyderabad-500032 Tel.: 040-67162222 Fax : 040-23001153 Email: madhusudhan.ms@karvy.com einward.ris@karvy.com

II. PRINCIPAL BUSINESS ACTIVITIES OF THE COMPANY

All the business activities contributing 10 % or more of the total turnover of the company:

Sl. No.	Name and Description of main products/ services	NIC Code of the Product/ service	% to total turnover of the company
1.	Boiler	2513	30.88
2.	Turbine & Generator	2811	16.84
3	Construction & Service	42201	23.19

III. PARTICULARS OF HODLING SUBSIDIARY AND ASSOCIATE COMPANIES

Sl. No.	Name and address of the company	CIN/ GLN	Subsidiary/ Associate	% of shares held	Applicable Section
1	**BHEL Electrical Machines Ltd.** 283/1&2, Village Puttur, Post Bedradka, Kasaragod, Kerala-671124	U31909KL2011GOI027440	Subsidiary	51%	Sec 2(87) of Companies Act, 2013
2	**Raichur Power Corporation Ltd.** # 22/23, Sudarshan Complex, Sheshadari Road, Bengaluru- 560009	U40101KA2009PLC049582	Associate	27.34%	2(6) of Companies Act, 2013
3	**Dada Dhuniwale Khandwa Power Ltd.** Shed No. 7, MPSEB Complex, Rampur, Jabalpur- 482008	U40100MP2010PLC023131	Associate	50%	2(6) of Companies Act, 2013

Sl. No.	Name and address of the company	CIN/ GLN	Subsidiary/ Associate	% of shares held	Applicable Section
4	**BHEL-GE Gas Turbine Services Pvt. Ltd.** Gumidelli Towers, 6th Floor, 1-10-39 to 44, Begumpet Airport Road, Begumpet, Hyderabad- 500016	U51505TG1997PTC040657	Associate	50% less one share	2(6) of Companies Act, 2013
5	**NTPC BHEL Power Projects Pvt. Ltd.** NTPC Bhawan, SCOPE Complex, 7 Institutional Area, Lodhi Road, New Delhi- 110003	U40102DL2008PTC177307	Associate	50%	2(6) of Companies Act, 2013
6	**Powerplant Performance Improvement Ltd.** 54/ D-9, Kishangarh Village, Vasant Kunj, New Delhi- 110070	U28991DL2003PLC120915	Associate	50% less one share	2(6) of Companies Act, 2013
7	**Latur Power Company Ltd.** Prakashgad, 2nd Floor, Plot No. G-9, Anant Kanekar Marg, Bandra (E), Mumbai- 400051	U40102MH2011PLC215884	Associate	(JV under liquidation)	2(6) of Companies Act, 2013

IV. SHAREHOLDING PATTERN (Equity Share Capital Breakup as percentage of Total Equity)

i) Category-wise Share Holding

Category of Shareholders	No. of Shares held at the beginning of the year (as on 01.04.2016)				No. of Shares held at the end of the year (as on 31.03.2017)				% Change during the year
	Demat	Physical	Total	% of Total Shares	Demat	Physical	Total	% of Total Shares	
A. Promoters									
(1) Indian									
a) Individual/ HUF	0	0	0	0.00	0	0	0	0	0.00
b) Central Govt	1543452000	0	1543452000	63.06	1543452000	0	1543452000	63.06	0.00
c) State Govt (s)	0	0	0	0.00	0	0	0	0	0.00
d) Bodies Corp.	0	0	0	0.00	0	0	0	0	0.00
e) Banks / FI	0	0	0	0.00	0	0	0	0	0.00
f) Any Other....	0	0	0	0.00	0	0	0	0	0.00
Sub-total (A)(1):-	**1543452000**	**0**	**1543452000**	**63.06**	**1543452000**	**0**	**1543452000**	**63.06**	**0.00**
(2) Foreign									
a) NRIs -Individuals	0	0	0	0.00	0	0	0	0	0.00
b) Other – Individuals	0	0	0	0.00	0	0	0	0	0.00
c) Bodies Corp.	0	0	0	0.00	0	0	0	0	0.00
d) Banks / FI	0	0	0	0.00	0	0	0	0	0.00
e) Any Other....	0	0	0	0.00	0	0	0	0	0.00
Sub-total (A)(2):-	**0**	**0**	**0**	**0.00**	**0**	**0**	**0**	**0**	**0.00**
Total shareholding of Promoter (A) = (A)(1)+(A)(2)	**1543452000**	**0**	**1543452000**	**63.06**	**1543452000**	**0**	**1543452000**	**63.06**	**0.00**

Category of Shareholders	No. of Shares held at the beginning of the year (as on 01.04.2016)				No. of Shares held at the end of the year (as on 31.03.2017)				% Change during the year
	Demat	Physical	Total	% of Total Shares	Demat	Physical	Total	% of Total Shares	
B. Public Shareholding									
(1) Institutions									
a) Mutual Funds/ UTI	66340008	16000	66356008	2.72	18482146	16000	18498146	0.76	-1.95
b) Banks/ FI	128612301	4000	128616301	5.25	129480506	4000	129484506	5.29	0.04
c) Central Govt	0	0	0	0.00	0	0	0	0	0.00
d) State Govt(s)	0	0	0	0.00	0	0	0	0	0.00
e) Venture Capital Funds	0	0	0	0.00	0	0	0	0	0.00
f) Insurance Companies	255391216	2000	255393216	10.43	254056216	2000	254058216	10.38	-0.05
g) FIIs	341282372	9000	341291372	13.94	388995270	9000	389004270	15.89	1.95
h) Foreign Venture Capital Funds	0	0	0	0.00	0	0	0	0	0.00
i) Others (specify)									
Qualified Foreign Investor	0	0	0	0.00	0	0	0	0	0.00
Sub-total (B)(1):-	**791625897**	**31000**	**791656897**	**32.34**	**791014138**	**31000**	**791045138**	**32.32**	**-0.01**
(2) Non-Institutions									
a) Bodies Corp.									
i) Indian	24000312	6000	24006312	0.98	17511453	6000	17517453	0.72	-0.26
ii) Overseas	0	0	0	0.00	0	0	0	0	0
b) Individuals									
i) Individual shareholders holding nominal share capital upto ₹1 lakh	75493102	1314053	76807155	3.14	71817739	1254108	73071847	2.99	-0.15
ii) Individual shareholders holding nominal share capital in excess of ₹1 lakh	1136955	0	1136955	0.05	2559012	0	2559012	0.10	0.05
c) Others (specify)									
Clearing Members	2536356	0	2536356	0.10	11688997	0	11688997	0.48	0.38
Directors	1500	0	1500	0.00	1510	0	1510	0	0.00
NBFC	19166	0	19166	0.00	46098	0	46098	0	0.00
Non Resident Indians	4874065	12500	4886565	0.20	4979243	12500	4991743	0.20	0.00
Trusts	3097094	0	3097094	0.13	3226202	0	3226202	0.13	0.00
Sub-total (B)(2):-	**111158550**	**1332553**	**112491103**	**4.60**	**111830254**	**1272608**	**113102862**	**4.62**	**0.02**

Category of Shareholders	No. of Shares held at the beginning of the year (as on 01.04.2016)				No. of Shares held at the end of the year (as on 31.03.2017)				% Change during the year
	Demat	Physical	Total	% of Total Shares	Demat	Physical	Total	% of Total Shares	
Total Public Shareholding (B)=(B)(1)+(B)(2)	**902784447**	**1363553**	**904148000**	**36.94**	**902844392**	**1303608**	**904148000**	**36.94**	**0.00**
C. Shares held by Custodian for GDRs & ADRs	0	0	0	0.00	0	0	0	0.00	0.00
Grand Total (A+B+C)	**2446236447**	**1363553**	**2447600000**	**100.00**	**2446296392**	**1303608**	**2447600000**	**100.00**	**0.00**

(ii) Shareholding of Promoters

Sl. No.	Shareholder's Name	Shareholding at the beginning of the year (as on 01.04.2016)			Shareholding at the end of the Year (as on 31.03.2017)			% change in share holding during the year
		No. of Shares	% of total Shares of the Company	%of Shares Pledged/ encumbered to total shares	No. of Shares	% of total Shares of the company	%of Shares Pledged/ encumbered to total shares	
1	President of India	1543452000	63.06	0.00	1543452000	63.06	0.00	0.00
	TOTAL	**1543452000**	**63.06**	**0.00**	**1543452000**	**63.06**	**0.00**	**0.00**

(iii) Change in Promoters' Shareholding (No Change)

Sl. No.	Shareholder's Name	Shareholding at the beginning of the year (01.04.2016)/ end of the year (31.03.2017)		Date wise Increase/ Decrease in Promoters Shareholding during the year specifying the reasons for increase/ decrease			Cumulative Shareholding during the year (01.04.2016 to 31.03.2017)	
		No. of Shares	% of total Shares of the Company	Date	Increase/ Decrease in Share holding	Reason	No. of shares	% of total shares of the Company
1	President of India	1543452000	63.06	31.03.2017	No Change		1543452000	63.06

(iv) Shareholding Pattern of top ten Shareholders (other than Directors, Promoters and Holders of GDRs and ADRs):

Sl. No.	Name	Shareholding at the beginning of the year (01.04.2016)/ end of the year (31.03.2017)		Date wise Increase/ Decrease in Shareholding during the year specifying the reasons for Increase/ Decrease			Cumulative Shareholding during the year (01.04.2016 to 31.03.2017)	
		No. of shares	% of total shares of the Company	Date	Increase/ Decrease in Share holding	Reason	No. of shares	% of total shares of the Company
1	Life Insurance Corporation of India	230453920	9.42		No Change			
		230453920	9.42	31.03.2017			230453920	9.42
2	Comgest Growth PLC A/c Comgest Growth Emerging Markets	31801590	1.30					
				22.04.2016	116000	Purchase	31917590	1.30
				02.09.2016	2742414	Purchase	34660004	1.42
		34660004	1.42	31.03.2017			34660004	1.42
3	Magellan	26822509	1.10		No Change			
		26822509	1.10	31.03.2017			26822509	1.10
4	LIC of India Market Plus 1 Growth Fund	24939880	1.02		No Change			
		24939880	1.02	31.03.2017			24939880	1.02
5	Lazard Asset Management LLC A/c Lazard Emerging Markets Portfolio	23730934	0.97					
				29.04.2016	258095	Purchase	23989029	0.98
				24.06.2016	461506	Purchase	24450535	1.00
				09.12.2016	365928	Sale	24084607	0.98
				16.12.2016	257082	Sale	23827525	0.97
				27.01.2017	1251820	Purchase	25079345	1.02
				03.02.2017	1130060	Purchase	26209405	1.07
				10.02.2017	220934	Purchase	26430339	1.08
				10.03.2017	939017	Purchase	27369356	1.12
		27369356	1.12	31.03.2017			27369356	1.12
5	Lazard Asset Management LLC A/c Lazard Emerging Markets Portfolio	23730934	0.97					
				29.04.2016	258095	Purchase	23989029	0.98
				24.06.2016	461506	Purchase	24450535	1.00
				09.12.2016	365928	Sale	24084607	0.98
				16.12.2016	257082	Sale	23827525	0.97
				27.01.2017	1251820	Purchase	25079345	1.02
				03.02.2017	1130060	Purchase	26209405	1.07
				10.02.2017	220934	Purchase	26430339	1.08
				10.03.2017	939017	Purchase	27369356	1.12
		27369356	1.12	31.03.2017			27369356	1.12
6	LIC of India Money Plus Growth Fund	22406815	0.92		No Change			
		22406815	0.92	31.03.2017			22406815	0.92

Sl. No.	Name	Shareholding at the beginning of the year (01.04.2016)/ end of the year (31.03.2017)		Date wise Increase/ Decrease in Shareholding during the year specifying the reasons for Increase/ Decrease			Cumulative Shareholding during the year (01.04.2016 to 31.03.2017)	
		No. of shares	% of total shares of the Company	Date	Increase/ Decrease in Share holding	Reason	No. of shares	% of total shares of the Company
7	Fidelity Puritan Trust-Fidelity Low-Priced Stock Fund	21000000	0.86		No Change			
		21000000	0.86	31.03.2017			21000000	0.86
8	Life Insurance Corporation of India P& GS Fund	18902990	0.77		No Change			
		18902990	0.77	31.03.2017			18902990	0.77
9	LIC of India Market Plus Growth Fund	18387175	0.75		No Change			
		18387175	0.75	31.03.2017			18387175	0.75
10	LIC of India Profit Plus Growth Fund	17381255	0.71		No Change			
		17381255	0.71	31.03.2017			17381255	0.71
11	Pinebridge Investments GF Mauritius Limited	17221676	0.70	07.10.2016*				
				21.10.2016	2183738	Purchase	19405414	0.79
				04.11.2016	900000	Purchase	20305414	0.83
				11.11.2016	550000	Purchase	20855414	0.85
				25.11.2016	3260126	Purchase	24115540	0.99
				09.12.2016	1200000	Purchase	25315540	1.03
				16.12.2016	600000	Purchase	25915540	1.06
				23.12.2016	600000	Purchase	26515540	1.08
				30.12.2016	555849	Purchase	27071389	1.11
				20.01.2017	625000	Purchase	27696389	1.13
		27696389	1.13	31.03.2017			27696389	1.13

* Note: Details of M/s Pinebridge Investments GF Mauritius Limited have been shown only from the date of entering into list of top ten shareholders

(v) Shareholding of Directors and Key Managerial Personnel:

Sl. No.	Name S/Shri	Shareholding at the beginning of the year (01.04.2016)/ end of the year (31.03.2017)		Date wise Increase/ Decrease in Shareholding during the year specifying the reasons for increase/ decrease			Cumulative Shareholding during the year (01.04.2016 to 31.03.2017/ till cessation)	
		No. of shares	% of total shares of the Company	Date	Increase/ Decrease in Share holding	Reason	No. of shares	% of total shares of the Company
1	Atul Sobti Chairman & Managing Director	1500	0.00		No Change			
		1500	0.00	31.03.2017			1500	0.00
2	Dr. Subhash Chandra Pandey Part-time Official Director	0	0.00		No Change			0.00
		0	0.00	31.03.2017			0	0.00
3	Rajesh Kumar Singh Part-time Official Director (upto 06.10.2016)	0	0.00		No Change			0.00
		0	0.00	06.10.2016			0	0.00
4	Anshu Prakash Part-time Official Director (wef 31.10.2016 upto 03.01.2017)	0	0.00		No Change			0.00
		0	0.00	03.01.2017			0	0.00
5	Bhaskar Jyoti Mahanta Part-time Official Director (w.e.f. 03.01.2017)	0	0.00		No Change			0.00
		0	0.00	31.03.2017			0	0.00
6	Ms. Harinder Hira Part -time Non-Official Director (Independent Director)	0	0.00		No Change			0.00
		0	0.00	31.03.2017			0	0.00
7	A.N. Roy Part -time Non-Official Director (Independent Director)	0	0.00		No Change			0.00
		0	0.00	31.03.2017			0	0.00
8	Rajesh Kishore Part -time Non-Official Director (Independent Director)	0	0.00		No Change			0.00
		0	0.00	31.03.2017			0	0.00
9	Keshav N. Desiraju Part -time Non-Official Director (Independent Director)	0	0.00		No Change			0.00
		0	0.00	31.03.2017			0	0.00
10	R. Swaminathan Part -time Non-Official Director (Independent Director)	0	0		No Change			0.00
		0	0	31.03.2017			0	0
11	Ms. Surama Padhy Part -time Non-Official Director (Independent Director) (wef 02.02.2017)	0	0		No Change			
		0	0	31.03.2017			0	0
12	D. Bandyopadhyay Director (HR)	0	0		No Change			
		0	0	31.03.2017			0	0

Sl. No.	Name S/Shri	Shareholding at the beginning of the year (01.04.2016)/ end of the year (31.03.2017)		Date wise Increase/ Decrease in Shareholding during the year specifying the reasons for increase/ decrease			Cumulative Shareholding during the year (01.04.2016 to 31.03.2017/ till cessation)	
		No. of shares	% of total shares of the Company	Date	Increase/ Decrease in Share holding	Reason	No. of shares	% of total shares of the Company
13	Amitabh Mathur Director (IS&P)	0	0		No Change			
		0	0	31.03.2017			0	0
14	Subrata Biswas Director (E,R&D)	0	0		No Change			
		0	0	31.03.2017			0	0
15	T. Chockalingam Director (Finance)	0	0.00		No Change			
		0	0.00	31.03.2017			0	0.00
16	Akhil Joshi Director (Power) (wef 10.08.2016)	10	0.00		No Change			
		10	0.00	31.03.2017			10	0.00
17	I.P. Singh Company Secretary	0	0.00		No Change			
		0	0.00	31.03.2017			0	0.00

V. INDEBTEDNESS

Indebtedness of the Company including interest outstanding/ accrued but not due for payment

	Secured Loans excluding deposits	Unsecured Loans	Deposits	Total Indebtedness
Indebtedness at the beginning of the financial year	NIL			
i) Principal Amount				
ii) Interest due but not paid				
iii) Interest accrued but not due				
Total (i+ii+iii)				
Change in Indebtedness during the financial year				
• Addition				
• Reduction				
Net Change				
Indebtedness at the end of the financial year				
i) Principal Amount				
ii) Interest due but not paid				
iii) Interest accrued but not due				
Total (i+ii+iii)				

VI. REMUNERATION OF DIRECTORS AND KEY MANAGERIAL PERSONNEL

A. Remuneration to Managing Director, Whole-time Directors and/or Manager:

(in ₹)

Sl. No.	Particulars of Remuneration	Name of MD/ WTD/ Manager (S/Shri)						Total
		Atul Sobti CMD	D. Bandyopadhyay Director (HR)	Amitabh Mathur Director (IS&P)	Subrata Biswas Director (E,R&D)	T. Chockalingam Director (Finance)	Akhil Joshi Director (Power) *w.e.f. 10.08.16	Amount
1	Gross Salary							
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961	39,35,678	40,82,767	35,90,638	34,79,292	32,32,073	20,98,952	2,04,19,400
	(b) Value of perquisites u/s 17(2) of the Income-tax Act, 1961	39,600	4,65,291	43,834	3,80,616	3,65,292	2,48,859	15,43,492
	(c) Profits in lieu of salary under section 17(3) of the Income-tax Act, 1961							
2	Stock Option							
3	Sweat Equity							
4	Commission							
	- as % of profit							
	- others, specify...							
5	Others, please specify							
	Total (A)	**39,75,278**	**45,48,058**	**36,34,472**	**38,59,908**	**35,97,365**	**23,47,811**	**2,19,62,892**
	Ceiling as per the Act							

B. Remuneration to other Directors:

(in ₹)

Sl. No.	Particulars of Remuneration	Name of Directors (S/Shri)						Total Amount
1	**Independent Directors**	**Ms. Harinder Hira**	**A.N. Roy**	**Rajesh Kishore**	**Keshav N. Desiraju**	**R. Swaminathan**	**Ms. Surama Padhy (w.e.f. 02.02.17)**	
	• Fee for attending board/ committee meetings	2,30,000	2,75,000	3,20,000	1,50,000	2,15,000	35,000	12,25,000
	• Commission	-	-	-	-	-	-	-
	• Others, please specify	-	-	-	-	-	-	-
	Total (1)	2,30,000	2,75,000	3,20,000	1,50,000	2,15,000	35,000	12,25,000
2	**Other Non-Executive Directors**	**Dr. Subhash Chandra Pandey**	**Rajesh Kumar Singh (upto 06.10.16)**	**Anshu Prakash (w.e.f. 31.10.16 upto 03.01.17)**	**Bhaskar Jyoti Mahanta (w.e.f. 03.01.17)**	**-**	**-**	**-**
	• Fee for attending board/ committee meetings	-	-	-	-	-	-	-
	• Commission	-	-	-	-	-	-	-
	• Others, please specify	-	-	-	-	-	-	-
	Total (2)	-	-	-	-	-	-	-
	Total (B)=(1+2)	2,30,000	2,75,000	3,20,000	1,50,000	2,15,000	35,000	12,25,000
	Total Managerial Remuneration (A+B)							2,31,87,892
	Overall Ceiling as per the Act	Section 197 of the Companies Act, 2013 pertaining to ceiling on Managerial Remuneration including sitting fees paid to Directors is not applicable on BHEL, being a Government Company.						

C. Remuneration to Key Managerial Personnel other than MD/ Manager/ WTD:

(in ₹)

Sl.	Particulars of Remuneration	Key Managerial Personnel			
		CEO	I.P. Singh Company Secretary	CFO	Total
1.	Gross salary	As per table VI (A)		As per table VI (A)	
	(a) Salary as per provisions contained in section 17(1) of the Income-tax Act, 1961		30,25,686		30,25,686
	(b) Value of perquisites u/s 17(2) of the Income-tax Act, 1961		4,854		4,854
	(c) Profits in lieu of salary under section 17(3) of the Income-tax Act, 1961				
2	Stock Option				
3	Sweat Equity				
4	Commission - as % of profit - others, specify…				
5	Others, please specify				
	Total		30,30,540		30,30,540

VII. PENALTIES/ PUNISHMENT/ COMPOUNDING OF OFFENCES:

Type	Section of The Companies Act	Brief Description	Details of Penalty/ Punishment/ Compounding fees imposed	Authority [RD/ NCLT/ COURT]	Appeal made, if any (give Details)
Penalty	NIL				
Punishment					
Compounding					
Other Officers in Default					
Penalty					
Punishment					
Compounding					

Annexure–VII

7.1 Conservation of Energy

Energy Conservation (ENCON) is an important thrust area in BHEL. Following main activities were performed during FY 2016-17:

Implementation of Energy Management System (ISO 50001: 2011) enables the organization to establish the systems & processes necessary to improve energy performance, including energy efficiency, use and consumption. Five manufacturing units (HEP-Bhopal, HEEP-Haridwar, HPBP-Trichy Unit#1, HPEP-Hyderabad, and EPD-Bengaluru) were certified with ISO 50001:2011 (Energy Management System).

Energy Audit of manufacturing units is conducted periodically in a phased manner to identify the Opportunities for Improvements (OFIs). Energy Audit was conducted at HEEP-Haridwar and PPPU-Thirumayam units in FY 2016-17. 64 ENCON projects were implemented across the company. These projects were related to installation of Automatic Power Factor Correction to improve Power Factor, door latching system in Furnaces, FRP/ Polycarbonate sheets on rooftop to harness natural light at shop floor, replacement of old inefficient Air conditioners with energy efficient star rated ACs etc. ENCON projects are undertaken based on the recommendations of Energy Audit.

A target of 4% reduction in Energy/Fuel units in Mn.kcal/ Metric Tonne (MT) over FY 2015-16 was undertaken for Trichy and CFFP-Haridwar units. Actual achievement was 4.28% and 5.14% respectively.

To bring the competitive spirit amongst manufacturing units, a Trophy for Energy Efficient Unit was instituted. BAP-Ranipet Unit was declared winner for the second consecutive year.

7.2 Technology Absorption and Research & Development

Research & Development

- Specific areas in which R&D carried out by the Company
- Benefits derived as a result of the above R&D
- Future Focus areas:

} Given in the Directors' Report under **Annexure- V** "R&D and Technological Achievements"

The following are the major thrust areas for R&D and technology:

- Conventional thermal power plants with higher efficiencies using supercritical parameters
- Conventional thermal power plants with higher efficiencies using Advanced Ultra supercritical (Ad-USC) parameters
- Advanced control and instrumentation platform for thermal power plant and industrial application
- Coal research for refinement of understanding Indian coal characteristics
- Atmospheric and Circulating Fluidized Bed Combustion (CFBC) boilers
- Flue Gas Desulphurization (FGD) systems
- Enhancing efficiency of the existing products
- Higher rating Industrial steam turbines
- Large size hydro power plants with higher efficiency and longer life
- Advanced transmission systems like ±800kV HVDC, 765 kV, 1200 kV Transmission systems/ products
- Flexible AC Transmission systems, including devices such as Thyristor Controlled Series Compensation, phase shifting transformer, static synchronized compensator (STATCOM), controlled shunt reactor, etc.
- Gas insulated switchgear upto 765 kV rating
- Efficient, reliable and cost effective transportation solutions including IGBT – based applications, three-phase AC drive system for diesel electric locos, MEMU, High speed train-sets
- Grid connected renewable energy systems such as solar PV, solar thermal, wind etc.
- Simulators
- Advanced Fabrication Technologies
- Surface coatings including ceramic applications
- Residual life assessment studies

- Vibration and noise reduction
- Deployment of new technologies including deployment Intelligent machines & robotics, for reducing cycle time and cost
- Specialized engineering software applications
- Knowledge Management
- Total Engineering solutions with focus on design automation/ KBE/ PLM
- Applications based on high temperature Superconductors
- Desalination and Water Treatment Plants
- Nano-technology applications
- Hydrogen energy and fuel cells
- Defence products
- Motors & IGBT Controllers and Batteries for E-Mobility

Expenditure on R&D

	Total	....	₹ 793.62 Crore
a)	Recurring	....	₹ 788.18 Crore
b)	Capital		₹ 5.44 Crore
	Expenditure as a percentage of total turnover	....	2.75 %

7.3 Technology Absorption and Adoption

Details of technology imported during the last 5 years:

Technology	Year of import	Absorption status
Flue Gas Desulphurization (FGD) systems	2013	Technology absorption in progress

7.4 Foreign Exchange Earnings and Outgoings

(₹ in Crore)

		2016-17	2015-16
(i)	Foreign Exchange Used	3335	4193
(ii)	Foreign Exchange Earned	2490	3650

For and on behalf of the Board of Directors of

BHARAT HEAVY ELECTRICALS LTD.

Atul Sobti

Chairman & Managing Director

Place : New Delhi
Dated : July 19, 2017

Annexure–VIII

Form AOC- I

(Pursuant to first proviso to sub-section (3) of section 129 read with rule 5 of Companies (Accounts) Rules, 2014)

Statement containing salient features of the financial statement of subsidiaries/ associate Companies/joint ventures

Part "A": Subsidiaries

1.	Sl. No.	01
2.	Name of the subsidiary	BHEL ELECTRICALS MACHINES LIMITED
3.	Reporting period for the subsidiary concerned, if different from the holding company's reporting period	N.A.
4.	Reporting currency and Exchange rate as on the last date of the relevant Financial year in the case of foreign subsidiaries.	N.A.
5.	Share capital	10.50
6.	Reserves & surplus	-12.73
7.	Total assets	26.57
8.	Total Liabilities	28.80
9.	Investments	NIL
10.	Turnover (Gross)	32.07
11.	Profit before taxation	-5.82
12.	Provision for taxation	-1.58
13.	Profit after taxation	-4.24
14.	Total Comprehensive Income	-3.79
15.	Proposed Dividend	NIL
16.	% of shareholding	51%
Notes: The following information shall be furnished at the end of the statement:		
1.	Names of subsidiaries which are yet to commence operations	NIL
2.	Names of subsidiaries which have been liquidated or sold during the year.	NIL

Part "B": Associates and Joint Ventures

Statement pursuant to Section 129 (3) of the Companies Act, 2013 related to Associate Companies and Joint Ventures

	Name of Joint Ventures	BHEL-GE Gas Turbine Services Pvt Ltd.	NTPC BHEL Power Projects Pvt Ltd	Dada Dhuniwale Khandwa Power Ltd	Raichur Power Corporation Ltd.
1.	Latest Audited Balance Sheet Date	31.03.17	31.03.17#	31.03.17#	31.03.17#
2.	Shares of JVs held by BHEL on the year end				
	No.	2379999	50000000	22500000	589316000
	Amount of investment	2.38	50.00	22.50	589.32
	Extent of Holding %	50% minus one share	50%	50%	27.34%
3.	Description of how there is significant influence	Jointly controlled entities			
4.	Reason why the associate/ JV is not consolidated	N.A.	N.A.	N.A.	N.A.
5.	Net worth attributable to Shareholding as per latest audited Balance Sheet	129.31	21.32	18.19	584.39
6.	Profit/ Loss for the year	As per equity method			
	i. Considered in consolidation	21.38	-38.46	-1.55	-4.93
	ii. Not considered in Consolidation	-	-	-	-
7.	Other Comprehensive income considered in Consolidation	-0.14	-	-	-

Unaudited

Raichur Power Corporation Limited has been promoted 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. COD of Unit I and Unit II of Yeramarus TPP achieved in March 2017 and April 2017 respectively.

Dada Dhuniwale Khandwa Power Limited has been promoted for setting up of a 2x800 MW supercritical thermal power plant at Khandwa, Madhya Pradesh on build, own and operate basis. Considering that coal linkage was not available and land acquisition problem, the promoter had decided to wind up.

M/s Latur Power Company Ltd. and M/s Power Plant Performance Improvement Ltd. are under liquidation. Hence, both these JVs were not considered in consolidation.

For and on behalf of Board of Directors

(I. P. Singh)
Company Secretary

(T. Chockalingam)
Director (Finance)

(Atul Sobti)
Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta
Chartered Accountants
FRN-002263N

(CA Y.K. Gupta)
Partner
M.No. 016020

For DSP & Associates
Chartered Accountants
FRN-006791N

(CA Sanjay Jain)
Partner
M.No. 084906

For S B A & Company
Chartered Accountants
FRN-004651C

(CA. Sita Ram Soni)
Partner
M.No. 072381

Place: New Delhi
Date: May 29, 2017

FORM AOC-2

(Pursuant to clause (h) of sub-section (3) of section 134 of the Act and Rule 8(2) of the Companies (Accounts) Rules, 2014)

Form for disclosure of particulars of contracts/arrangements entered into by the company with related parties referred to in sub-section (1) of section 188 of the Companies Act, 2013 including certain arm's length transactions under third proviso thereto

1.	**Details of contracts or arrangements or transactions not at arm's length basis:**		
(a)	Name(s) of the related party and nature of relationship	:	NIL
(b)	Nature of contracts/arrangements/transactions	:	NIL
(c)	Duration of the contracts / arrangements/transactions	:	NIL
(d)	Salient terms of the contracts or arrangements or transactions including the value, if any	:	NIL
(e)	Justification for entering into such contracts or arrangements or transactions	:	NA
(f)	Date(s) of approval by the Board	:	NIL
(g)	Amount paid as advances, if any	:	NIL
(h)	Date on which the special resolution was passed in general meeting as required under first proviso to section 188	:	NIL
2.	**Details of material contracts or arrangement or transactions at arm's length basis:**		
(a)	Name(s) of the related party and nature of relationship	:	NIL
(b)	Nature of contracts/arrangements/transactions	:	NIL
(c)	Duration of the contracts / arrangements/transactions	:	NIL
(d)	Salient terms of the contracts or arrangements or transactions including the value, if any	:	NA
(e)	Date(s) of approval by the Board, if any	:	NIL
(f)	Amount paid as advances, if any	:	NIL

For and on behalf of the Board of Directors of

BHARAT HEAVY ELECTRICALS LTD.



Atul Sobti

Chairman & Managing Director

Place : New Delhi

Dated : July 19, 2017

Annexure – IX

INDEPENDENT AUDITORS' REPORT

To

the Members of

Bharat Heavy Electricals Limited

Report on the Standalone Ind AS Financial Statements

We have audited the accompanying standalone Ind As financial statements of **Bharat Heavy Electricals Limited** ("the Company"), which comprise the Balance Sheet as at March 31, 2017, and the Statement of Profit and Loss (including Other Comprehensive Income), the Cash Flow Statement and the Statement of Changes in Equity for the year then ended, and a summary of significant accounting policies and other explanatory information in which are incorporated the returns for the year ended on that date audited by us for 16 branches and 17 branches audited by the branch auditors of the company.

Management's Responsibility for the Standalone Financial Statements

The Company's Board of Directors is responsible for the matters stated in Section 134(5) of the Companies Act, 2013 ("the Act") with respect to the preparation of these standalone Ind AS financial statements that give a true and fair view of the financial position, financial performance including other comprehensive income, cash flows and changes in equity of the Company in accordance with the accounting principles generally accepted in India, including the Accounting Standards (Ind AS) prescribed under Section 133 of the Act, read with Rule 7 of the Companies (Accounts) Rules, 2014.

This responsibility also includes maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Company and for preventing and detecting frauds and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these standalone Ind AS financial statements based on our audit.

We have taken into account the provisions of the Act, the accounting and auditing standards and matters which are required to be included in the audit report under the provisions of the Act and the Rules made thereunder.

We conducted our audit of the standalone Ind AS financial statements in accordance with the Standards on Auditing specified under Section 143(10) of the Act. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the standalone Ind AS financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the standalone Ind AS financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the standalone Ind AS financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Company's preparation of the standalone Ind AS financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Company's Directors, as well as evaluating the overall presentation of the standalone Ind AS financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the standalone Ind AS financial statements.

Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid standalone Ind AS financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India including the Ind AS:

(a) In the case of the Balance Sheet, of the state of affairs (financial position) of the company as at March 31, 2017;

(b) In the case of the Statement of Profit and Loss, of the profit (financial performance including other comprehensive income) for the year ended on that date; and

(c) In the case of the Cash Flow Statement, of the cash flows for the year ended on that date.

(d) In the case of Statement of changes in Equity, of the change in equity for the year ended on that date.

Other Matters

The comparative financial information of the company for the year ended 31st March 2016 and the transition date opening balance sheet as at 1st April 2015 included in these standalone Ind AS financial statements, are based on the previously issued statutory financial statements prepared in accordance with the Companies (Accounting Standards) Rules, 2006 audited by the predecessor auditors/by us and their report for the year ended 31st March 2016 and 31st March 2015 dated 27th May 2016 and 26th May 2015 respectively expressed an unmodified opinion on those standalone financial statements, as adjusted for the differences in the accounting principles adopted by the Company on transition to the Ind AS, which have been audited by us.

We did not audit the financial statements/information of 17 (seventeen) branches included in the standalone Ind AS financial statements of the Company whose financial statements / financial information reflect total assets of ₹ 41,762.31 Crore as at 31st March, 2017 and total revenue of ₹ 19,188.82 Crore for the year ended on that date, as considered in the standalone Ind AS financial statements. The financial statements/information of these branches have been audited by the branch auditors whose reports have been furnished to us, and our opinion in so far as it relates to the amounts and disclosures included in respect of these branches, is based solely on the report of such branch auditors.

Our opinion is not modified in respect of these matters.

Report on Other Legal and Regulatory Requirements

(1) As required by the Companies (Auditor's Report) Order, 2016 ("the Order") issued by the Central Government of India in terms of sub-section (11) of section 143 of the Act, we give in the "Annexure A" a statement on the matters specified in paragraphs 3 and 4 of the Order, to the extent applicable.

(2) As required by Section 143 (3) of the Act, we report that:

(a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit.

(b) In our opinion, proper books of account as required by law have been kept by the Company so far as it appears from our examination of those books and proper returns adequate for the purposes of our audit have been received from the branches not visited by us;

(c) The reports on the accounts of the branch offices of the Company audited under Section 143(8) of the Act by branch auditors have been sent to us and have been properly dealt with by us in preparing this report.

(d) The Balance Sheet, the Statement of Profit and Loss including other comprehensive income, the Cash Flow Statement and Statement of Changes in Equity dealt with by this Report are in agreement with the books of account and with the returns received from the branches not visited by us.

(e) In our opinion, the aforesaid standalone Ind AS financial statements comply with the Indian Accounting Standards prescribed under Section 133 of the Act, read with Rule 7 of the Companies (Accounts) Rules, 2014.

(f) Being a Government Company, Section 164(2) of the Companies Act, 2013 regarding 'whether any director is disqualified from being appointed as a director' is not applicable to the Company in view of Notification no. G.S.R. 463(E) dtd. 05-06-2015.

(g) With respect to the adequacy of the internal financial controls over financial reporting of the Company and the operating effectiveness of such controls, refer to our separate Report in "Annexure B".

(h) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditors) Rules, 2014, in our opinion and to the best of our information and according to the explanations given to us:

i. The Company has disclosed the impact of pending litigations on its financial position in its Ind AS financial statements – Refer Note 39 (2) to the financial statements.

ii. The Company has made provision, as required under the applicable law or accounting standards, for material foreseeable losses, if any, on long-term contracts – Refer Note 39 (17) to the financial statements.

iii. There has been no delay in transferring

amounts, required to be transferred, to the Investor Education and Protection Fund by the Company.

iv. The Company has provided requisite disclosures in the financial statements as to holdings as well as dealings in specified Bank Notes during the period from 8th November, 2016 to 30th December 2016. based on audit procedures and relying on the management representation we report that the disclosures are in accordance with books of account maintained by the company and as produced by the management –Refer Note 39 (19) to the Ind AS financial statements.

(3) As required by section 143(5) of the Act, we have considered the directions issued by the Comptroller and Auditor General of India, the action taken thereon and its impact on the accounts and financial statements of the company –Refer Annexure C attached.

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Annexure-A

to the Independent Auditors' Report

(Referred to in Paragraph 1 under the heading "Report on Other Legal and Regulatory Requirements" of our report of even date on the accounts of Bharat Heavy Electricals Limited ("the Company"), for the year ended March 31, 2017)

i) (a) The Company has maintained proper records showing full particulars including quantitative details and situation of its fixed assets.

(b) According to the information and explanations given to us, physical verification of fixed assets is being conducted in a phased manner by the management under a programme designed to cover all the property, plant and equipment including intangible assets over a period of three years, which, in our opinion, is reasonable having regard to the size of the Company and nature of its business and no material discrepancies were noticed on such verification to the extent verification was made during the year.

(c) The details of title deeds of immovable properties not held in the name of the company are given in note no. 2 (a to f) to the Ind AS Financial Statements.

ii) As explained to us physical verification of inventory has been conducted by the management under Perpetual Inventory Programme at regular intervals during the year except for stock of work in progress and finished goods in few units where these are verified at the year end with reference to the inspection reports and production reports of the Production Planning Department of such units. In regard to stocks lying with contractors/fabricators and other parties, confirmations were received in few cases only. In our opinion the frequency of verification is reasonable.

iii) According to the information given to us, the Company has not granted any loans, secured or unsecured to companies, firms, Limited Liability Partnerships or other parties covered in the register maintained under section 189 of the Companies Act, 2013. Therefore clauses (iii) (a), (iii) (b) and (iii)(c) of Paragraph 3 of the Order are not applicable to the Company.

iv) The Company has complied with the provisions of the section 185 and 186 of the Companies Act, 2013 in respect of loans, investments, guarantees, and security.

v) According to the information and explanations given to us, the Company has not accepted any deposits from public during the year within the meaning of sections 73 to 76 or any other relevant provisions of the Companies Act, 2013 and the Companies (Acceptance of Deposits) Rules 2014.

vi) We have broadly reviewed the books of account and records maintained by the Company pursuant to the Companies (Cost Records and Audit) Rules 2014 prescribed by the Central Government under section 148(1) of the Companies Act, 2013 and are of the opinion that prima facie the prescribed accounts and records have been made and maintained. We have, however, not made a detailed examination of the cost records with a view to determine whether they are accurate and complete.

vii) (a) According to the information and explanations given to us, in our opinion, the Company is generally regular in depositing with appropriate authorities undisputed statutory dues including Provident Fund, Employees' State Insurance, Income Tax, Sales Tax, Service Tax, duty of Customs, duty of Excise, Value Added Tax, Cess and any other statutory dues as applicable to it .

(b) According to the information and explanations given to us, no undisputed amounts payable in respect of Provident Fund, Employees State Insurance, Income Tax, Sales Tax, Service Tax, duty of Customs, duty of Excise, Value Added Tax, Cess and any other statutory dues were outstanding as at March 31, 2017 for a period of more than six months from the date they became payable.

(c) According to the information and explanations given to us, the particulars of Income Tax, Sales Tax, Service Tax, duty of Customs, duty of Excise and Value Added Tax which have not been deposited on account of dispute are as under:

(₹ in Crore)

Sl. No.	Name of the Statute	Nature of the Dues	Pending Amount	Amount paid under protest	Forum where dispute is pending
1	Central Sales Tax Act, Value Added Tax and Sales Tax Act of various States	Sales Tax, VAT	18.49	6.12	Assessing Officer
			441.18	65.90	Dy. Commissioner / Jt. Commissioner / Commissioner (Appeals)
			416.67	167.81	Appellate Tribunal
			380.5	19.87	High Court
			2.87	2.83	Supreme Court
			603.04	37.5	Various Appellate Authorities
2	Income Tax Act, 1961	Income Tax	0.22	-	Assessing Officer
			0.05	-	Commissioner(Appeals)
			12.46	-	High Court
3	Central Excise Act, 1944	Excise Duty	80.91	7.93	Commissioner (Appeals)
			309.24	10.55	Appellate Tribunal
			29.35	5.14	High Court
			0.55	0.55	Supreme Court
			62.87	-	Various Appellate Authorities
4	Service Tax under the Finance Act, 1994	Service Tax	111.62	3.80	Commissioner (Appeals)
			379.93	3.59	Appellate Tribunal
			16.12	-	High Court

viii) According to the records of the Company examined by us and the information and explanations given to us, the Company has not defaulted in repayment of loans or borrowings to financial institutions, banks or government. The company has not issued any debentures.

ix) Provisions of clause no. (ix) relating to utilization of moneys raised by way of initial public offer or further public offer including debt instruments and term loans is not applicable to the Company as no such moneys raised and outstanding during the year.

x) During the course of our examination of the books and records of the Company, carried out in accordance with the generally accepted auditing practices in India, and according to the information and explanations given to us, no fraud by the Company or any fraud on the Company by its officers or employees has been noticed or reported during the year.

xi) Being a Government Company, provision of clause no. (xi) regarding section 197 of the Companies Act, 2013 relating to managerial remuneration is not applicable to the Company in view of Notification no. G.S.R. 463(E) dtd. 05-06-2015.

xii) Provisions of clause no. (xii) regarding Nidhi Company is not applicable to the Company;

xiii) According to the records of the Company examined by us and the information and explanations given to us, the related party transactions are in compliance with section 177 and 188 of the Companies Act, 2013 and have been disclosed in the Ind AS Financial Statements.

xiv) Provision of clause no. (xiv) regarding preferential allotment or private placement of shares or fully or partly convertible debentures during the year is not applicable to the Company as no such preferential allotment or private placement took place during the year.

xv) The company has not entered into any non-cash transactions with directors or persons connected with him.

xvi) The Company is not required to be registered under section 45-IA of the Reserve Bank of India. Act, 1934.

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Annexure–B

to the Independent Auditor's Report of Even Date on the Standalone Ind AS Financial Statements of Bharat Heavy Electricals Limited

Report on the Internal Financial Controls under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")

We have audited the internal financial controls over financial reporting of M/s Bharat Heavy Electricals Limited ("the Company") as of March 31, 2017 in conjunction with our audit of the standalone Ind AS financial statements of the Company for the year ended on that date.

Management's Responsibility for Internal Financial Controls

The Company's management is responsible for establishing and maintaining internal financial controls based on the internal control over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls over Financial Reporting issued by the Institute of Chartered Accountants of India. These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Companies Act, 2013.

Auditors' Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls over financial reporting based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting (the "Guidance Note") and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both applicable to an audit of Internal Financial Controls and, both issued by the Institute of Chartered Accountants of India. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls over financial reporting was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial controls system over financial reporting and their operating effectiveness. Our audit of internal financial controls over financial reporting included obtaining an understanding of internal financial controls over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls system over financial reporting.

Meaning of Internal Financial Controls Over Financial Reporting

A company's internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Financial Controls Over Financial Reporting

Because of the inherent limitations of internal financial controls over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls over financial reporting to future periods are subject to the risk that the internal financial control over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion, the Company has, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial reporting were operating effectively as at March 31, 2017, based on the internal control over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by the Institute of Chartered Accountants of India.

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Annexure C
to the Independent Auditor's Report

Directions indicating the areas to be examined by the Statutory Auditors during the course of audit of annual accounts of Bharat Heavy Electricals Limited (Standalone) for the year 2016-17 issued by the Comptroller & Auditor General of India under Section 143(5) of the Companies Act, 2013

Sl. No.	Areas Examined	Replies
1	Whether the Company has clear title/lease deeds for freehold and leasehold land respectively? If not, please state the area of freehold and leasehold land for which title / lease deeds are not available.	a) Clear Title/lease deeds : - No b) If answer to (a) above is No, then : (i) Freehold area (Acres) : 7721.34 (ii) Leasehold area (Acres) : 476.66 (Note :In respect of freehold land as above, almost in all cases, the same is acquired from State Government on right to use basis and is categorized under freehold)
2	Whether there are any cases of waiver/write off of debts/ loans/ interest etc. If yes, the reasons thereof and amount involved.	Debtors amounting to ₹ 157.55 Crore have been written-off during the FY 2016-17 on account of LD levied & recovered by the customers and due to various disallowance/ recoveries made by customer. These are old cases and necessary approval for write off have been taken from competent authorities.
3	Whether proper records are maintained for inventories lying with third parties and assets received as gift/grant(s) from the Govt. or other authorities.	Proper records are being maintained for the inventories lying with third parties & assets received as gift/grant(s) from Govt. or other authorities. However, during the year there is no case of assets received as gift/grant(s) from Govt. or other authorities.

For Wahi & Gupta
Chartered Accountants
FRN-002263N

(CA Y.K. Gupta)
Partner
M.No. 016020

For DSP & Associates
Chartered Accountants
FRN-006791N

(CA Sanjay Jain)
Partner
M.No. 084906

For S B A & Company
Chartered Accountants
FRN-004651C

(CA. Sita Ram Soni)
Partner
M.No. 072381

Place: New Delhi
Date: May 29, 2017

सेवामें



दिनांक: 13/11/2017

सेवा में

विषय: 31 मार्च 2017 को समाप्त वर्ष के लिये मेसर्स इंडोस्टेलस लिमिटेड, नई दिल्ली के वार्षिक लेखाओं पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) के अन्तर्गत भारत के नियंत्रक-महालेखा परीक्षक की टिप्पणियां।

महोदय,

मैं मेसर्स इंडोस्टेलस लिमिटेड, नई दिल्ली के 31 मार्च 2017 को समाप्त वर्ष के लेखाओं पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) के अन्तर्गत भारत के नियंत्रक-महालेखापरीक्षक की टिप्पणियां अनुबंध एक में संलग्न करने का निदेश हुआ है।

धन्यवाद,

भवदीय,

(दिनेश भाटिया)
प्रधान निदेशक

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) OF THE COMPANIES ACT, 2013 ON THE FINANCIAL STATEMENTS OF BHARAT HEAVY ELECTRICALS LIMITED FOR THE YEAR ENDED 31 MARCH 2017

The preparation of financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2017 in accordance with the financial reporting framework prescribed under the Companies Act, 2013(Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under Section139(5) of the Act are responsible for expressing opinion on the financial statements under Section 143 of the Act based on independent audit in accordance with standards on auditing prescribed under Section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 29 May 2017.

I, on the behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit under Section 143(6)(a) of the Act of the financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2017. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records. On the basis of my audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report.

For and on behalf of the
Comptroller & Auditor General of India

Ritika Bhatia

(Ritika Bhatia)
Principal Director of Commercial Audit &
Ex-officio Member, Audit Board – III,
New Delhi

Place: New Delhi
Dated: 13 July 2017



FINANCIAL STATEMENT

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Balance Sheet

as at 31.03.2017

(₹ in Crore)

Particulars	Note No.	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
I. ASSETS							
(1) Non Current Assets							
(a) Property, Plant and equipment	**2 (a)**		**3491.12**		3825.12		3979.91
(b) Capital work-in-progress	**2 (b)**		**159.51**		309.50		502.03
(c) Intangible assets	**3 (a)**		**104.76**		137.36		158.30
(d) Intangible assets under development	**3 (b)**		**8.83**		8.38		17.30
(e) Financial assets							
(i) Investments	**4**	**661.42**		664.16		420.47	
(ii) Trade receivables	**5**	**9787.73**		11127.27		11239.38	
(iii) Loans	**6**	**78.04**		65.62		104.26	
(iv) Others	**7**	**0.16**	**10527.35**	0.62	11857.67	2.15	11766.26
(f) Deferred tax assets (net)	**8**		**3841.37**		3659.23		2813.59
(g) Other non-current assets	**9**		**203.30**		240.40		528.49
			18336.24		20037.66		19765.88
(2) Current assets							
(a) Inventories	**10**		**7372.38**		9602.15		10103.70
(b) Financial Assets							
(i) Trade receivables	**11**	**22075.56**		22430.12		23967.74	
(ii) Cash and Cash equivalents	**12**	**1489.76**		1966.09		2800.01	
(iii) Bank balances other than (ii) above	**13**	**9002.03**		8119.90		7011.86	
(iv) Loans	**14**	**138.88**		176.61		90.95	
(v) Others	**15**	**216.98**	**32923.21**	157.62	32850.34	214.91	34085.47
(c) Current Tax Assets (Net)	**16**		**873.08**		582.93		628.39
(d) Other current assets	**17**		**1725.29**		2089.86		2145.63
			42893.96		45125.28		46963.19
TOTAL ASSETS			**61230.20**		65162.94		66729.07
II. EQUITY AND LIABILITIES							
Equity							
(a) Equity Share capital	**18**		**489.52**		489.52		489.52
(b) Other Equity (refer SOCIE)			**31804.92**		31691.56		32660.18
Total Equity			**32294.44**		32181.08		33149.70

(₹ in Crore)

Particulars	Note No.	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
LIABILITIES							
(1) Non-current liabilities							
(a) Financial Liabilities							
(i) Borrowings	**19**	**89.55**		126.29		61.00	
(ii) Trade Payables	**20**	**631.12**		746.22		644.85	
(iii) Other financial liabilities	**21**	**104.71**	**825.38**	123.51	996.02	90.16	796.01
(b) Provisions	**22**		**5001.35**		7624.50		6330.61
(c) Other non-current liabilities	**23**		**2983.36**		3637.78		4559.44
			8810.09		12258.30		11686.06
(2) Current Liabilities							
(a) Financial Liabilities							
(i) Trade payables	**24**	**8709.16**		8698.34		8798.28	
(ii) Other financial liabilities	**25**	**1531.45**	**10240.61**	1643.82	10342.16	1699.26	10497.54
(b) Other current liablities	**26**		**5693.50**		7045.50		7414.55
(c) Provisions	**27**		**4191.56**		3335.90		3981.22
			20125.67		20723.56		21893.31
TOTAL EQUITY AND LIABILITIES			**61230.20**		65162.94		66729.07
Significant Accounting Policies	**1**						
Other Notes to Accounts	**39**						

See Accompanying Notes to the financial statements.

For and on behalf of Board of Directors

(I. P. Singh)
Company Secretary

(T. Chockalingam)
Director (Finance)

(Atul Sobti)
Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Statement of Profit and Loss

for the period ended 31st March, 2017

(₹ in Crore)

Particulars		Note No.	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
I.	**Revenue from operations**	**28**		**29474.99**		26638.37
II.	**Other income**	**29**		**996.09**		1497.72
III.	**Total Income (I to II)**			**30471.08**		28136.09
IV.	**Expenses**					
	Cost of material consumption, erection and engineering expenses	**30**		**16566.14**		16377.13
	Changes in inventories of finished goods and work in progress	**31**		**994.48**		210.49
	Employee benefits expenses	**32**		**5399.92**		5379.75
	Depreciation & amortisation expense	**2.1/3.1**		**848.84**		935.74
	Other expenses of manufacture, administration, selling and distribution	**33**		**4435.55**		4033.81
	Provisions (net)	**34**		**1272.75**		2050.43
	Finance costs	**35**		**350.61**		359.48
	Less: Cost of jobs done for internal use			**25.04**		46.57
	Total expenses (IV)			**29843.25**		29300.26
V.	**Profit /(loss) before exceptional items and tax (III- IV)**			**627.83**		-1164.17
VI.	**Add/ Less : Exceptional items**			**0.00**		0.00
VII.	**Profit (loss) before tax (V-VI)**			**627.83**		-1164.17
VIII.	**Tax expense**	**36**				
	a) Current Tax		**298.35**		391.08	
	b) Deferred Tax		**-166.38**	**131.97**	-845.65	-454.57
IX.	**Profit (loss) for the period from continuing operations (VII- VIII)**			**495.86**		-709.60
X	**Other Comprehensive income**	**37**				
	Items that will not be reclassifed to profit or loss (Net of Tax)			**-29.00**		-76.38
XI	**Total comprehensive income for the period (IX+X)**			**466.86**		-785.98
	(comprising profit (loss) and other comprehensive income for the period)					

(₹ in Crore)

Particulars		Note No.	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
XII	**Earnings per equity share (for continuing operations)**			
	(1) Basic	**38**	**2.03**	-2.90
	(2) Diluted		**2.03**	-2.90
	Face value per share in (INR)		**2.00**	2.00
	Significant Accounting Policies	**1**		
	Other notes to accounts	**39**		

See Accompanying Notes to the financial statements.

For and on behalf of Board of Directors

(I. P. Singh)
Company Secretary

(T. Chockalingam)
Director (Finance)

(Atul Sobti)
Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta
Chartered Accountants
FRN-002263N

(CA Y.K. Gupta)
Partner
M.No. 016020

For DSP & Associates
Chartered Accountants
FRN-006791N

(CA Sanjay Jain)
Partner
M.No. 084906

For S B A & Company
Chartered Accountants
FRN-004651C

(CA. Sita Ram Soni)
Partner
M.No. 072381

Place: New Delhi
Date: May 29, 2017

Statements of changes in Equity (SOCIE)

as at 31st March, 2017

(₹ in Crore)

a. Equity Share Capital

Equity shares of INR 2 each issued, subscribed and fully paid	Number of shares			
	2016-17	2015-16	2016-17	2015-16
Balance as at the beginning of the period	**2,447,600,000**	2,447,600,000	**489.52**	489.52
Issue of share capital	**-**	-	**-**	-
Balance as at the end of the period	**2,447,600,000**	2,447,600,000	**489.52**	489.52

b. Other Equity

For the year ended 31st March 2017 (₹ in Crore)

	Reserves and surplus			Other items of Other Comprehensive Income	Total Other Equity
	Capital Reserve	General Reserves	Retained Earnings		
Opening Balance as at 01.04.2016 (as per Ind AS)	**35.18**	**32,349.72**	**(616.96)**	**(76.38)**	**31,691.56**
Add/(less) Total Comprehensive Income for the year			495.86	(29.00)	466.86
Less: Dividend (interim dividend ₹ 195.81 Crore)			293.71		293.71
Less: Corporate dividend tax (tax on interim dividend ₹ 39.86 Crore)			59.79		59.79
Less :Transfer to general reserve			-		-
Balance as at 31 March, 2017	**35.18**	**32,349.72**	**(474.60)**	**(105.38)**	**31,804.92**

For the year ended 31st March 2016 (₹ in Crore)

	Reserves and surplus			Other items of Other Comprehensive Income	Total Other Equity
	Capital Reserve	General Reserves	Retained Earnings		
Opening Balance as at 01.04.2015 (as per Ind AS)	**35.18**	**32,349.72**	**275.28**		**32,660.18**
Add/(less) Total Comprehensive Income for the year			(709.60)	(76.38)	(785.98)
Less: Dividend (interim dividend ₹ Nil)			151.75		151.75
Less: Corporate dividend tax (tax on interim dividend ₹ Nil)			30.89		30.89
Less: Transfer to general reserve					-
Balance as at 31 March, 2016 (as per Ind AS)	**35.18**	**32,349.72**	**(616.96)**	**(76.38)**	**31,691.56**

As at transition date 1st April, 2015 (₹ in Crore)

	Reserves and surplus			Other items of Other Comprehensive Income	Total Other Equity
	Capital Reserve	General Reserves	Retained Earnings		
Balance as at 31 March, 2015 (as per IGAAP)	**36.56**	**32,349.72**	**1,208.80**		**33,595.08**
Add: Proposed Dividend adjustment			182.64		182.64
Add/ (less): Transition Impact due to Ind AS adjustment	(1.38)		(1,116.16)		(1,117.54)
Opening Balance as at 01.04.2015 (as per Ind AS)	**35.18**	**32,349.72**	**275.28**	**-**	**32,660.18**

For and on behalf of Board of Directors

(I. P. Singh)	**(T. Chockalingam)**	**(Atul Sobti)**
Company Secretary	Director (Finance)	Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Statement of Cash flow

for the year ended 31.03.2017

(₹ in Crore)

		2016-17	2015-16
A.	**Cash Flow from Operating Activities**		
	Profit for the year (Before Tax)	**627.83**	**-1164.17**
	Adjustment for		
	Depreciation and Amortisation	**848.84**	935.74
	Bad Debts & LD written off and unrealised gain/loss	**173.89**	25.63
	Dividend Income	**-33.87**	-34.14
	Finance Income	**-677.22**	-762.99
	Profit/Loss on disposal of property, plant and equipment	**-2.36**	-5.75
	Finance cost (including unwinding of interest)	**350.61**	359.48
	Fair value adjustment	**-20.02**	-69.27
	Provisions (Net)	**1272.75**	2050.43
	Operating Profit before Working Capital changes	**2540.45**	**1334.96**
	Adjustment for		
	Trade Receivables	**54.87**	-217.56
	Financial Assets- Loans & others	**28.02**	-40.36
	Other Assets	**407.20**	343.57
	Inventories	**2229.77**	501.55
	Trade Payable	**-87.92**	24.03
	Other financial liabilities	**-113.40**	-42.40
	Other liabilities & provisions	**-3908.04**	-1251.51
	Cash generated from operations	**1150.95**	**652.28**
	Direct Taxes Paid (Net of refund)	**-588.92**	-305.35
	Net Cash Inflow/(Outflow) from Operating Activities	**562.03**	**346.93**
B.	**Cash Flow from Investing Activities**		
	Purchase of property, plant and equipment	**-355.59**	-584.84
	Proceeds from Sale of property, plant and equipment	**19.73**	32.33
	Investment in Subsidiary & Joint Ventures (net)	**0.00**	-245.73
	Interest & Dividend income	**649.48**	849.29
	Net Cash used in Investing Activities	**-313.62**	**-51.05**
C.	**Cash Flow from Financing Activities**		
	Proceeds/Repayment of Short term & Long term Borrowings	**-52.58**	84.61
	Dividend Paid (including tax on dividend)	**-353.67**	-183.09
	Finance cost	**-63.60**	-25.38
	Net Cash used in Financing Activities	**469.85**	**123.86**
D.	**Net Increase/(Decrease) in Cash and Cash Equivalents**	**405.80**	**274.12**
	Opening Balance of Cash and Cash Equivalents	**10085.99**	9811.87
	Closing Balance of Cash and Cash Equivalents (Refer Note no.12 & 13)	**10491.79**	10085.99

Note:

1 : Cash & Cash Equivalents consists of cash and bank balance.

2 : Previous year's figures have been regrouped/rearranged whereever necessary.

3 : Cash & Cash Equivalents includes ₹ **3.10 Crore** (previous year ₹ 3.27 Crore) unclaimed dividend lying in designated bank accounts

For and on behalf of Board of Directors

(I. P. Singh)	**(T. Chockalingam)**	**(Atul Sobti)**
Company Secretary	Director (Finance)	Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Note No. 1

Significant Accounting Policies

1. Basis of preparation of Financial Statements

a) Statement of Compliance

The financial statements have been prepared in accordance with Indian Accounting Standards (Ind-AS) as notified by Ministry of Corporate Affairs under the Companies (Indian Accounting Standards) Rules, 2015 and subsequent amendments thereof as well as with the additional requirements applicable to financial statements as set forth in Companies Act, 2013.

b) Basis of measurement

The financial statements have been prepared on a going concern basis and on an accrual method of accounting. Historical cost is used in preparation of the financial statements except as otherwise mentioned in the policy.

c) Functional and presentation currency

The financial statements are prepared in INR, which is the Company's functional currency.

d) Use of Estimates and Judgments

The preparation of the financial statements in conformity with Ind AS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

Critical estimates and judgements in applying accounting policies

Estimates and judgements made in applying accounting policies that have significant effect on the amounts recognized in the financial statements are as follows:

i) Revenue

The Company uses the percentage-of-completion method in accounting the revenue in respect of construction contracts. Use of the percentage-of-completion method requires the Company to estimate total contract revenue, and remaining cost to complete the contract at the end of each reporting date. The financial reporting of these contracts depends on estimates that are assessed continually during the term of these contracts, therefore recognized revenue and profit are subject to change as the contract progresses to completion.

ii) Property, plant and equipment

The charge in respect of periodic depreciation is derived after estimating the asset's expected useful life and the expected residual value at the end of its life. The depreciation method, useful lives and residual values of Company's assets are estimated by management at the time the asset is acquired and reviewed during each financial year.

iii) Employee Benefit Plans

Employee defined benefit plans and long term benefit plans are measured on the basis of actuarial assumptions. However, any changes in these assumptions may have impact on the reported amount of obligation and expenses.

iv) Provisions and contingencies

Assessments undertaken in recognising provisions and contingencies have been made as per the best judgement of the management based on the current available information.

2. Property Plant & Equipment (PPE)

Property, plant and equipment are carried at cost less accumulated depreciation and accumulated impairment losses, if any.

Depreciation on property, plant and equipment (other than those used abroad under contract) is charged on straight-line method as per the useful life prescribed in Schedule II of the Companies Act, 2013, except where estimated useful life is shorter based on technically assessed estimated useful life as shown hereunder:-

	(Years)		
	Single shift	Double Shift	Triple shift
General plant & machinery	12.5	8.33	6.25
Automatic/semi-automatic machines	10	6.67	5
Erection equipment, Capital tools & tackles	5		
Railway sidings, Locomotives & wagons	12.5		
Drainage, sewerage & water supply	30		
Servers and networks	5		
Solar Power Generation Plant	25		

Depreciation methods, useful lives and residual values are reviewed in each financial year and changes, if any, are accounted for prospectively. Leased assets are depreciated over the shorter of the lease term and their useful lives unless it is reasonably certain that the Company will obtain ownership by the end of the lease term. Freehold land is not depreciated.

Property Plant & Equipment costing ₹ 10,000/- or less and those whose written down value as at the beginning of the year is ₹ 10,000/- or less, are depreciated fully.

At erection/project sites: The cost of roads, bridges and culverts is fully amortized over the tenure of the contract, while sheds, railway sidings, electrical installations and other similar enabling works (other than temporary structures) are depreciated over the tenure of the contract after retaining residual value, if any.

Assets used outside India pursuant to long term contracts are depreciated over the duration of the initial contract.

Temporary structures are fully depreciated in the year of construction.

Significant components with different useful lives are accounted for and depreciated separately.

3. Leases

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease.

Upon initial recognition, assets taken on finance lease are capitalized at an amount equal to the lower of their fair value and the present value of the minimum lease payments. Minimum lease payments made under finance leases are apportioned between the finance expense and the reduction of the outstanding liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Lease rentals arising under operating leases are recognized in the statement of profit or loss on a straight-line basis over the lease term except where the increment in lease rentals is in line with general rate of inflation.

For assets given on finance lease, the Company recognizes finance income over the lease term using effective interest rate method. Initial direct costs incurred are included in the initial measurement of the finance lease receivable and reduce the amount of income recognized over the lease term.

Lease income arising from operating lease is recognized as income over the lease period on a straight line basis except where the periodic increase in lease rentals is in line with expected general inflation.

4. Intangible assets

Intangible items costing more than ₹ 10000/- are evaluated for capitalization and are carried at cost less accumulated amortization and accumulated impairment, if any.

Intangible assets are amortised in Statement of Profit or Loss on a straight-line method over the estimated useful lives from the date that they are available for use. The estimated useful lives for the intangible assets are as follows:

Software	3 years
Others	10 years.

Intangible assets having WDV ₹ 10000/- or less at the beginning of the year are amortized fully.

Amortization period and amortization methods are reviewed in each financial year and changes, if any, are accounted for prospectively.

Expenditure on research activities is recognized in profit or loss as incurred. Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the company intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalized includes the cost of materials, direct labour, overhead costs that are directly attributable to preparing the asset for its intended use, and borrowing costs, if any.

Assets acquired for purposes of research and development are capitalized.

5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, are added to the cost of such assets.

An asset that necessarily takes a substantial period of time , considered as more than twelve months, to get ready for its intended use or sale is a qualifying asset for the purpose.

All other borrowing costs are recognized in the statement of profit or loss in the period in which they are incurred.

6. Investments in Subsidiaries & Joint ventures

Investments in subsidiaries and joint ventures are accounted at cost less impairment losses, if any.

If the intention of the management is to dispose the investment in near future, it is classified as held for sale and measured at lower of its carrying amount and fair value less costs to sell.

7. Inventories

Inventory is valued at cost or net realizable value, whichever is lower. In respect of valuation of finished goods and work-in-progress, cost means factory cost. In respect of raw material, components, loose tools, stores and spares cost means weighted average cost.

8. Revenue Recognition

Revenue is recognized when it is probable that the economic benefits associated with the transaction will flow to the entity and the amount of revenue can be measured reliably.

A. Construction Contracts

Revenue from construction contracts including long term service contracts are recognized using the "percentage of completion" method. Percentage of completion is determined based on contract costs incurred to date as a percentage of total estimated contract costs required to complete the contract.

B. Other than Construction Contracts

Revenue is recognised when the significant risks and rewards of ownership have been transferred to the customer in accordance with the contract. Revenue from services other than long term service contracts are recognised when services are performed as per contract.

Other Income

- Dividend income is recognized in profit or loss on the date on which the Company's right to receive payment is established.
- Interest Income is recognized using effective interest rate method.
- Claims for export incentives/ duty drawbacks, duty refunds and insurance are accounted for on accrual basis.

9. Foreign currency Translation/Transaction

Transaction in foreign currencies are recorded at the exchange rate prevailing on the date of the transaction.

Foreign currency denominated monetary assets and liabilities are translated into the functional currency at exchange rates in effect at the end of each reporting period. Foreign exchange gains or losses arising from settlement and translations are recognized in the statement of profit or loss.

Non-monetary assets and non-monetary liabilities denominated in a foreign currency and measured at historical cost are translated at the exchange rate prevailing at the date of transaction.

10. Employee Benefits

Defined contribution plans

The Company's contribution to Pension fund including Family Pension Fund for the employees is covered under defined contribution plan and is recognized as employee benefit expense in statement of profit or loss in the periods during which services are rendered by employees.

Defined benefit plans

The Company's gratuity scheme, provident fund scheme, travel claims on retirement and post-retirement medical facility scheme are in the nature of defined benefit plans.

The liability recognized in the balance sheet in respect of these defined benefit plan is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets,if any. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using an appropriate government bond rate that have terms to maturity approximating to the terms of the related liability.

Remeasurements comprising actuarial gains and losses as well as the difference between the return on plan assets and the amounts included in net interest on the net defined benefits liability (asset) are recognized in other comprehensive income, net of income tax.

Other expenses related to defined benefit plans are recognized in statement of profit or loss.

Long term Leave Liability

The Company measures the expected cost of accumulating compensated absences as the additional amount expected to be paid as a result of the unused entitlement that has accumulated at the end of the reporting period. Expense on non-accumulating compensated absences is recognized in the period in which the absences occur. The Company records a liability for accumulated balance based on actuarial valuation determined using projected unit credit method. Remeasurements and other expenses related to long term benefit plans are recognized in statement of profit or loss.

11. Provisions

(i) Claims for liquidated damages against the Company are recognized in the financial statements based on the management's assessment of the probable outcome with reference to the available information supplemented by experience of similar transactions.

(ii) For construction contracts the company provides warranty cost at 2.5% of the revenue progressively as and when it recognises the revenue and maintain the same throughout the warranty period. For other contracts, provision for contractual obligations in respect of contracts under warranty at the year end is maintained at 2.5% of the value of contract. In the case of contracts for supply of more than a single product 2.5% of the value of each completed product is provided.

(iii) When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised immediately.

(iv) Other provisions are recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation.

However, where the effect of time value of money is material, provisions are determined and maintained by discounting the expected future cash flows, wherever applicable.

12. Government Grants

Government grants are recognized only when there is reasonable assurance that the conditions attached to them shall be complied with, and the grants will be received. Non monetary grants are accounted at Fair Value of assets and are treated as deferred income. Deferred income is recognized in the statement of profit or loss on a systematic and rational basis over the useful life of the asset. Government grants related to revenue are recognized on a systematic basis in the statement of profit or loss over the periods necessary to match them with the related costs which they are intended to compensate.

13. Income Taxes

Income tax expense comprises current tax and deferred tax. Income tax expense is recognized in statement of profit or loss except to the extent that it relates to items recognized in other comprehensive income or directly in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates (tax laws) enacted or substantively enacted by the end of the reporting period and includes adjustment on account of tax in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary difference between the carrying amount of an asset or liability in the balance sheet and its tax base.

Deferred tax is measured at the tax rates that are expected to apply when the temporary differences are either realised or settled, based on the laws that have been enacted or substantively enacted by the end of reporting period.

A deferred tax asset is recognized to the extent that it is probable that future taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of Deferred tax assets are reviewed at each reporting period and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Additional Income tax that arise from the distribution of dividends are recognized at the same time when the liability to pay the related dividend is recognized.

14. Impairment of Assets

Impairment of financial assets

The loss allowance in respect of trade receivables and lease receivables are measured at an amount equal to lifetime expected credit losses.

The loss allowance in respect of all other financial assets, which are required to be impaired, are

measured at an amount equal to lifetime expected credit losses if the credit risk on that financial instrument has increased significantly since initial recognition. However, if, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, the loss allowance is measured at an amount equal to 12-month expected credit losses.

Impairment of Non- Financial Assets

The carrying amount of cash generating units is reviewed at each reporting date where there is any indication of impairment. An impairment loss is recognized in the statement of profit and loss where the carrying amount exceeds the recoverable amount of the cash generating units. Impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists.

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

15. Segment Reporting

Revenue and expenses are identified to segments on the basis of their relationship to the operating activities of the segment. Revenue, expenses, assets and liabilities which are not allocable to segments on a reasonable basis, are included under "Unallocated revenue/ expenses/ assets/ liabilities".

16. Financial Instruments

i) Non-derivative financial instruments

Non derivative financial instruments are classified as:

- Financial assets, measured at (a) amortized cost and (b) fair value through Profit and Loss ("FVTPL").
- Financial liabilities carried at amortized cost.

Initially, all financial instruments are recognized at their fair value. Transaction costs are included in determining the carrying amount, if the financial instruments are not measured at FVTPL. Financial assets are derecognized when substantial risks and rewards of ownership of the financial asset have been transferred. In cases where substantial risks and rewards of ownership of the financial assets are neither transferred nor retained, financial assets are derecognized only when the Company has not retained control over the financial asset. Financial liabilities are derecognized when contractual obligations are discharged or cancelled or expired.

Non-derivative financial assets are subsequently measured as below:

A. Amortized cost –

"Financial Instruments at amortized cost" are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is recognized in the profit or loss. The losses arising from impairment are recognized in the profit or loss.

B. FVTPL Category –

Financial instruments classified in this category are subsequently carried at fair value with changes recorded in the statement of profit or loss. Directly attributable transaction costs are recognised in P&L as incurred.

Non-derivative financial liabilities are subsequently measured as below:

Subsequent to initial recognition, non – derivative financial liabilities are measured at amortised cost using the effective interest method.

ii) Derivative financial instruments

Embedded derivatives, if any, having material impact, are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the combined instrument is not measured at fair value through profit or loss.

Derivatives are recognized and measured initially at fair value. Attributable transaction cost are recognized in statement of profit or loss as cost. Subsequent to initial recognition, derivatives are measured at fair value through profit or loss.

17. Cash and Cash Equivalent

Cash and cash equivalents comprise cash at bank and on hand. It includes term deposits and other short-term money market deposits with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Note no. 2

Property, Plant and Equipment (PPE)

(₹ in Crore)

Particulars				Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
(a)	**Tangible assets**					
	Gross block			**5174.44**	4710.91	3979.91
	Less: Accumulated depreciation			**1683.32**	885.79	-
	Net Block			**3491.12**	3825.12	3979.91
	Company has opted exemption under Ind AS 101, and accordingly carrying value as on 31.03.2015 has been considered as deemed cost.					
	Land and buildings includes					
a	i)	Acres of land for which formal transfer/lease deed have not been executed	Acres	**8198.00**	8933.27	8939.61
		Net Block of above	₹ Crore	**73.62**	72.62	74.20
	ii)	Number of flats for which formal transfer/lease deed have not been executed	Nos.	**12**	12	12
		Net Block of above	₹ Crore	**1.28**	1.33	1.37
	iii)	including acres of land for which the cost paid is provisional; registration charges and stamp duty, net of provision already made would be accounted for on payment.	Acres	**528.18**	528.18	528.18
		Net Block of above	₹ Crore	**66.37**	67.09	67.81
b.		acres of land leased to Ministry of Defence, Govt. of India Departments & others	Acres	**30.37**	30.60	30.60
c.		acres of land being used by Ministry of Defence (BEG) for which licencing agreement is valid upto 30.11.2018	Acres	**180.00**	180.00	180.00
d.		acres of land is under adverse possession/ encroachment.	Acres	**759.89**	811.72	586.05
e.		1242.71 acres (P.Y. 1242.71 acres) of land pending mutation at Haridwar for which legal action is in process. It includes land measuring 878.85 acres which is in BHEL's possession but has been wrongly got mutated in the name of SIDCUL Govt of Uttarakhand in the year 2004 & 2007				

	f. Possession of Land admeasuring extant Ac 1-02 Guntas was taken in favour of Railways Vikas Nigam Ltd, a Govt Enterprise by district administration during 2016-17. pending appeal for enhanced compensation the transfer deed of the subject land is not executed.				
	(Cost of land of (b), (c), (d), (e) & (f) above mentioned is not material)				
	The impact of providing 100% depreciation on PPE upto ₹ 10,000/- each on profit, without considering the impact of earlier years is as under :				
	100% depreciation on PPE upto ₹ 10,000/- charged off in the accounting year.	₹ Crore	**6.86**	8.48	8.26
	Normal depreciation on above.	₹ Crore	**1.92**	2.46	1.42
	Excess amount charged.	₹ Crore	**4.94**	6.02	6.84
(b)	**Capital work in progress**				
	Construction work-in-progress -Civil		**40.47**	83.03	72.78
	Construction stores (including in transit)		**2.33**	3.93	2.88
	Plant & machinery and other equipments				
	-Under Erection/ Fabrication/awaiting erection		**84.25**	152.55	353.45
	-In transit		**32.46**	69.99	72.92
			159.51	309.50	502.03

Note no. 3

Intangible assets

(₹ in Crore)

Particulars		Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
(a)	**Intangible assets**			
	Gross block	**198.04**	185.10	158.30
	Less: Accumulated amortisation	**93.28**	47.74	-
	Net block	**104.76**	137.36	158.30
(b)	**Intangible assets under development**	**8.83**	8.38	17.30
		8.83	8.38	17.30

Company has opted exemption under Ind AS 101, and accordingly carrying value as on 31.03.2015 has been considered as deemed cost.

Note 2.1

Property Plant and Equipment

(₹ in Crore)

	Gross Block					Depreciation				Net Block	
	Deemed Cost as on Transition date 01.04.2015 $	Cost as at 01.04.2016	Additions/ Adjustments	Deductions/ Adjustments	Total Cost as at 31.03.2017	Accumulated Depreciation as at 01.04.2016	Depreciation / Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2017	Net Block as at 31.03.2017	Net Block as at 31.03.2016
Factory/ Office Complex											
OWNED											
Freehold land (including development expenses)	25.14	25.14			25.14					25.14	25.14
Roads, bridges & culverts	10.62	10.65	0.05		10.70	4.54	3.02		7.56	3.14	6.11
Buildings	1098.24	1220.78	59.06	1.00	1278.84	82.86	98.00	-0.03	180.83	1098.01	1137.92
Drainage, Sewerage & water supply	15.75	15.75	0.03		15.78	0.74	0.69		1.43	14.35	15.01
Railway Siding	8.73	8.74			8.74	0.93	0.93		1.86	6.88	7.81
Locomotives & Wagons	28.08	28.09	0.25		28.34	3.13	3.14		6.27	22.07	24.96
Plant & Machinery	2176.22	2502.53	309.92	1.56	2810.89	623.33	539.05	-1.58	1160.80	1650.09	1879.20
Electronic Data Processing Equipment	4.29	35.15	18.36		53.51	19.53	6.64	15.66	41.83	11.68	15.62
Electrical Installations	174.94	186.41	18.51		204.92	29.72	30.55	-0.10	60.17	144.75	156.69
Construction Equipment	48.45	61.40	3.28		64.68	23.03	18.76	0.14	41.93	22.75	38.37
Vehicles	6.21	9.22	1.08	0.24	10.06	1.47	1.46	-0.22	2.71	7.35	7.75
Furniture & fixtures	33.54	41.29	10.70	0.37	51.62	7.75	8.13	-0.13	15.75	35.87	33.54
Office and Other equipments	60.24	74.75	11.98	0.86	85.87	29.62	21.31	-0.76	50.17	35.70	45.13
Fixed Assets costing upto ₹ 10,000/-		3.93	3.24	0.41	6.76	3.93	3.31	-0.48	6.76		
LEASED											
Leasehold land(including development expenses)	58.60	58.60			58.60	0.64	0.64		1.28	57.32	57.96
Leasehold buildings	1.63	1.63			1.63	0.05	0.06		0.11	1.52	1.58
EDP Equipment	50.66	171.05	9.91	18.51	162.45	36.84	51.32	-18.18	69.98	92.47	134.21
Office & other equipment	1.62	13.04	0.79		13.83	1.87	2.82		4.69	9.14	11.17
Others	0.14	0.10			0.10	0.10			0.10		
Township/ Residential											
OWNED											
Freehold land(including development expenses)	2.54	2.54			2.54					2.54	2.54
Roads, bridges & culverts	1.86	1.92			1.92	0.70	0.49		1.19	0.73	1.22
Buildings	132.64	147.22	11.11		158.33	7.81	5.96		13.77	144.56	139.41
Drainage, Sewerage & water supply	6.86	11.08			11.08	0.55	0.59		1.14	9.94	10.53
Plant & Machinery	10.09	11.26	25.21		36.47	2.24	2.57		4.81	31.66	9.02
Electronic Data Processing Equipment	0.03	0.03			0.03	0.02	0.01		0.03		0.01
Electrical Installations	4.70	5.95	2.02		7.97	1.21	0.80	-0.08	1.93	6.04	4.74
Vehicles	0.02	0.01			0.01					0.01	0.01
Furniture & fixtures	0.64	1.53	0.26		1.79	0.26	0.34		0.60	1.19	1.27
Office & other equipemnts	6.54	8.15	0.88	0.18	8.85	2.46	1.96	-0.14	4.28	4.57	5.69

	Gross Block					Depreciation				Net Block	
	Deemed Cost as on Transition date 01.04.2015 $	Cost as at 01.04.2016	Additions/ Adjustments	Deductions/ Adjustments	Total Cost as at 31.03.2017	Accumulated Depreciation as at 01.04.2016	Depreciation / Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2017	Net Block as at 31.03.2017	Net Block as at 31.03.2016
Fixed Assets costing upto ₹ 10000/-		0.20	0.02		0.22	0.20	0.02		0.22		
Assets taken on lease											
Leasehold land(including development expenses)	10.89	52.25			52.25	0.18	0.76		0.94	51.31	52.07
Office & other equipment		0.52			0.52	0.08	0.10		0.18	0.34	0.44
TOTAL	**3979.91**	**4710.91**	**486.66**	**23.13**	**5174.44**	**885.79**	**803.43**	**-5.90**	**1683.32**	**3491.12**	**3825.12**
Previous year		3979.91	750.67	19.67	4710.91		887.08	-1.29	885.79	3825.12	3979.91
The details of R&D capital items included in Property plant and Equipment & Intangible											
Plant & Machinery & other Equipments	179.96	208.60	22.28	-0.14	231.02	45.96	43.45	-0.94	88.47	142.55	162.64
Building	22.68	22.76			21.27	1.23	1.07		2.30	18.97	21.53

Gross Block as at 31.03.2017 includes assets condemned and retired from active use **₹ 0.12 Crore** (Previous year ₹ 0.37 Crore)

Net Block as at 31.03.2017 includes assets condemned and retired from active use **₹ 0.12 Crore** (Previous year ₹ 0.37 Crore)

Gross Block excludes cost of assets purchased out of grant received from Govt of India for research as executing agency since the property does not vest with the Company.

31.03.2017	31.03.2016
49.31	49.31

There is no impairment loss in Property plant and Equipment & Intangible asset during the year.

$ Gross block as on 31.03.2015 was at ₹ 12146 Crore as per previous Indian GAAP.

Note 3.1
Intangible Assets

(₹ in Crore)

	Gross Block					Depreciation				Net Block	
	Deemed Cost as on Transition date 01.04.2015 $	Cost as at 01.04.2016	Additions/ Adjustments	Deductions/ Adjustments	Total Cost as at 31.03.2017	Accumulated Depreciation as at 01.04.2016	Depreciation / Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2017	Net Block as at 31.03.2017	Net Block as at 31.03.2016
Internally Developed											
-Others	19.97	34.84	7.75		42.59	11.87	12.53		24.40	18.19	23.29
Others											
-Software	18.94	22.03	4.23		26.26	11.63	8.51		20.14	6.12	10.08
-Technical Know-how	109.12	117.96	0.96		118.92	20.39	20.52		40.91	78.01	97.57
-Others	10.27	10.27			10.27	3.85	3.85	0.13	7.83	2.44	6.42
TOTAL	**158.30**	**185.10**	**12.94**		**198.04**	**47.74**	**45.41**	**0.13**	**93.28**	**104.76**	**137.36**
Previous year		158.30	35.91	9.11	185.10		48.66	-0.92	47.74	137.36	158.30

$ Gross block as at 31.03.2015 was at ₹ 442.29 Crore as per previous Indian GAAP.

Note no. 4

Financial Assets - Investments (Non- Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
UNQUOTED (Fully Paid up)						
Investment in Equity Instruments (at fair value through FVTPL):						
1892 (previous year 1892) Equity shares of ₹ 10/- each (previous year ₹ 10/- each) of Engineering Projects (India) Ltd.	*		*		*	
728960 (previous year 728960) Equity shares of ₹ 10/- each of AP Gas Power Corporation Ltd.	**0.91**		0.91		0.91	
5000000 (Previous year 5000000) Equity shares of ₹ 10/- each of Neelachal Ispat Nigam Ltd	**5.00**		5.00		5.00	
	5.91		5.91		5.91	
Add/(less): Fair value adjustment	**(1.98)**	**3.93**	0.76	6.67	2.80	8.71
Shares in subsidiary company						
5355000 (Previous year 5355000) Equity shares of ₹ 10/- each of BHEL- EML	**5.36**		5.36		5.36	
Less: Provision for impairment	**5.36**	**0.00**	5.36	0.00	0.00	5.36
Shares in Joint Ventures						
1999999 (previous year 1999999) Equity Shares of ₹ 10/- each of Powerplant Performance Improvement Ltd.	**2.00**		2.00		2.00	
Less: Provision for impairment	**2.00**	**0.00**	2.00	0.00	2.00	0.00
2379999 (previous year 2379999) Equity Shares of ₹ 10/- each of BHEL-GE Gas Turbine Services Pvt. Ltd.		**2.38**		2.38		2.38
50000000 (previous year 50000000) Equity Shares of ₹ 10/- each of NTPC-BHEL Power Projects Pvt. Ltd.		**50.00**		50.00		50.00
589316000 (previous year 589316000) Equity Shares of ₹ 10/- each of Raichur Power Corporation Ltd.		**589.32**		589.32		331.52
22500000 (previous year 22500000) Equity Shares of ₹ 10/- each of Dada Dhuniwale Khandwa Power Ltd.	**22.50**		22.50		22.50	
Less: Provision for impairment	**6.71**	**15.79**	6.71	15.79	0.00	22.50
# Cooperative Societies						
		661.42		664.16		420.47
* Value of less than ₹ 1 lakh						
Aggregate amount of Unquoted Investment		**675.49**		678.23		422.47
Aggregate amount of impairment in value of investments		**14.07**		14.07		2.00

Equity Share held in various employees cooperatives societies **value is less than ₹ 1 lakh/-**

Note no. 5

Financial Assets -Trade Receivables (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Trade Receivables	**15071.54**		15503.77		14723.86	
Less: Allowances for bad & doubtful debts	**4892.35**		3947.30		3123.23	
Less :Automatic price reduction adjustment	**391.46**	**9787.73**	429.20	11127.27	361.25	11239.38
		9787.73		11127.27		11239.38
Sub classification:						
Unsecured, considered good						
-(**₹ 9787.73 Crore** (previous year ₹ 11127.27 Crore))						
Doubtful						
-(**₹ 5283.81 Crore** (previous year ₹ 4376.50 Crore))						
Non Current Trade receivables include deferred debts (net of provisions)-						
-(**₹ 7989.06 Crore** (previous year ₹ 10041.99 Crore))						
Non Current trade receivables include valuation adjustment-						
-(**₹ 124.63 Crore** (previous year ₹ 187.69 Crore))						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ Nil** (previous year ₹ Nil))						

Note no. 6

Financial Assets - Loans (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Loans to employees	**0.00**		0.01		0.01	
Loans to PSUs	**0.00**		0.00		4.00	
Interest accrued and due on loans	**0.04**		0.11		0.17	
Less: Allowances for bad & doubtful loans	**0.01**	**0.03**	0.01	0.11	0.00	4.18
Sub classification:-						
Unsecured, considered good						
-(**₹ 0.03 Crore** (previous year ₹ 0.11 Crore))						
Doubtful						
-(**₹ 0.01 Crore** (previous year ₹ 0.01 Crore))						
Security Deposits						
Balance with port trust & others	**0.68**		0.25		0.27	
Deposits others	**77.64**		65.37		100.34	
Less: Allowances for bad & doubtful deposits	**0.31**	**78.01**	0.11	65.51	0.53	100.08
Sub classification:-						
Unsecured, considered good						
-(**₹ 78.01 Crore** (previous year ₹ 65.51 Crore))						
Doubtful						
-(**₹ 0.31 Crore** (previous year ₹ 0.11 Crore))						
		78.04		65.62		104.26
Includes:						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ Nil** (previous year ₹ Nil))						

Note no. 7

Financial Assets - Others (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Fixed Deposits more than 12 months maturity period	**0.00**	0.00	0.83
Rent Receivables on leased Assets	**0.16**	0.62	1.32
	0.16	0.62	2.15

Note no. 8

Deferred tax assets (Net)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Provisions	**2982.65**	2876.76	2087.53
Statutary dues	**725.88**	680.55	639.32
Depreciations	**132.18**	104.81	57.48
Others	**56.31**	57.50	78.92
	3897.02	3719.62	2863.25
Deferred Tax Liabilities	**55.65**	60.39	49.66
Net deferred tax assets	**3841.37**	3659.23	2813.59

Note no. 9

Other non-current assets

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Capital advance	**40.36**		34.83		35.12	
Advances for purchases	**58.29**		79.63		366.05	
Others	**58.17**		58.53		58.59	
Less: Allowances for bad & doubtful advances	**23.63**	**133.19**	10.02	162.97	10.03	449.73
Security Deposits						
Balance with customs and other Govt Authorities	**59.99**		62.31		53.46	
Deposits Others	**26.80**		22.95		32.84	
Less: Allowances for bad & doubtful deposits	**16.68**	**70.11**	7.83	77.43	7.54	78.76
		203.30		240.40		528.49
Includes:						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ Nil** (previous year ₹ Nil))						

Note no. 10

Inventories

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Stores & spare parts						
Production	**204.02**		213.41		222.95	
Fuel stores	**8.10**		6.19		5.50	
Miscellaneous	**51.03**	**263.15**	50.80	270.40	46.55	275.00
Raw material & components	**3060.22**		3890.51		4090.04	
Material-in-transit	**257.19**	**3317.41**	552.22	4442.73	467.45	4557.49
Materials with fabricators/contractors		**71.32**		93.85		145.16
Loose tools		**36.37**		33.71		35.29
Scrap (at estimated realisable value)		**73.31**		62.16		71.54
Finished goods	**1293.90**		1568.55		1743.74	
Inter division transfers in transit	**133.44**	**1427.34**	134.32	1702.87	201.99	1945.73
Work-in-progress (including items with sub-contractors)		**2533.69**		3252.97		3210.71
Less: Provision for non-moving inventory		**350.21**		256.54		137.22
		7372.38		9602.15		10103.70

Note:

Write down of Inventories **₹ 136.94 Crore** (previous year ₹ 142.38 Crore)

Less: reversal theroff **₹ 43.27 Crore** (Previous year ₹ 23.06 Crore)

Net: **₹ 93.67 Crore** (Previous year ₹ 119.32 Crore)

Note no. 11

Financial Assets -Trade receivables (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Trade Receivables	**27438.94**	27238.72	27793.09
Less : Allowances for bad & doubtful debts	**5147.60**	4617.66	3574.73
Less : Automatic price reduction adjustment	**215.78**	190.94	250.62
	22075.56	22430.12	23967.74

Sub-classification

Unsecured, considered good

-(**₹ 22075.56 Crore** (previous year ₹ 22430.12 Crore))

Doubtful

-(**₹ 5363.38 Crore** (previous year ₹ 4808.60 Crore))

Current trade receivables include deferred debts (net of provisions)-

-(**₹ 8747.89 Crore** (previous year ₹ 7915.68 Crore))

Current trade receivables include goods despatched pending billing-

-(**₹ 1038.38 Crore** (previous year ₹ 678.80 Crore))

Current trade receivables include valuation adjustment-

-(**₹ 1031.75 Crore** (previous year ₹ 1110.52 Crore))

Current trade receivables include debts outstanding for a period exceeding six months-

-(**₹ 17252.79 Crore** (previous year ₹ 17723.02 Crore))

Includes:

Due from Directors

-(**₹ Nil** (previous year ₹ Nil))

Due from Officers

-(**₹ Nil** (previous year ₹ Nil))

Note no. 12

Financial Assets - Cash & Cash Equivalents (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Cash & cash equivalents			
Balances with Banks			
Corporate liquid term deposits	**599.78**	764.23	720.87
others*	**731.98**	788.64	437.82
Cash & Stamps in on hand	**0.25**	0.49	0.58
Cheques, Demand Drafts on hand	**122.85**	412.73	290.74
Remittances in transit	**34.90**	0.00	0.00
Deposits having maturity 3 month or less	**0.00**	0.00	1350.00
	1489.76	1966.09	2800.01
*** Includes**			
Earmarked against unclaimed dividend	**3.10**	3.27	3.72
Non-repatriable account	**1.77**	4.28	4.11

Note no. 13

Financial Assets - Bank Balances other than above (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Deposits having maturity more than 3 months but not more than 12 months	**9002.03**	8119.90	7011.86
	9002.03	8119.90	7011.86

Note no. 14

Financial Assets -Loans (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Loans						
Loans to Subsidiary Companies	**3.00**		3.00		0.00	
Loans to Employees	**0.00**		0.00		0.01	
Loans to Public Sector Undertakings	**12.00**		12.00		8.00	
Interest accrued and or due on loans	**2.71**		2.78		1.93	
Less: Allowances for bad & doubtful loans	**13.83**	**3.88**	2.62	15.16	0.03	9.91
Sub classification:-						
Secured, considered good						
-(**₹ 0.01 Crore** (previous year ₹ 0.01 Crore))						
Unsecured, considered good						
-(**₹ 3.87 Crore** (previous year ₹ 15.15 Crore))						
Doubtful						
-(**₹ 13.83 Crore** (previous year ₹ 2.62 Crore))						
Security Deposits						
Balance with port trust & others	**1.47**		1.78		1.95	
Others	**137.42**		163.69		85.10	
Less: Allowances for bad & doubtful deposits	**3.89**	**135.00**	4.02	161.45	6.01	81.04
		138.88		176.61		90.95
Sub classification:-						
Secured, considered good						
-(**₹ 50.88 Crore** (previous year ₹ 37.11 Crore))						
Unsecured, considered good						
-(**₹ 84.12 Crore** (previous year ₹ 124.34 Crore))						
Doubtful						
-(**₹ 3.89 Crore** (previous year ₹ 4.02 Crore))						
includes:						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ 0.01 Crore** (previous year ₹ 0.04 Crore))						

Note no. 15

Financial Assets -Others (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Interest Accrued on Banks Deposits and investments	**183.83**		122.08		175.03	
Rent Receivable on leased Assets	**0.56**		0.91		0.93	
Advance to employees	**32.62**	**217.01**	34.71	157.70	39.08	215.04
Less Allowances for bad & doubtful advances		**0.03**		0.08		0.13
		216.98		157.62		214.91
includes:						
Due from Directors						
-(**₹ 0.01 Crore** (previous year ₹ Nil))						
Due from Officers						
-(**₹ 0.11 Crore** (previous year ₹ 0.12 Crore))						

Note no. 16

Current Tax Assets (Net)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Advance Tax & TDS	**4365.14**	6835.24	6537.85
Provision for Taxation	**-3492.06**	-6252.31	-5909.46
	873.08	582.93	628.39

Note no. 17

Other current assets

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Advances						
To subsidiaries	**0.36**		0.28		0.59	
For purchases	**352.54**		495.75		508.96	
To Others	**1009.59**		1127.23		1180.92	
Less Allowances for bad & doubtful advances	**202.75**	**1159.74**	78.65	1544.61	79.87	1610.60
Security Deposits						
Deposit Balance With customs and other govt authorities	**582.26**		537.29		525.56	
Others	**21.38**		25.23		27.06	
Less Allowances for bad & doubtful depsoit	**38.09**	**565.55**	17.27	545.25	17.59	535.03
		1725.29		2089.86		2145.63
Includes:						
Due from Directors						
-(**₹ 0.01 Crore** (previous year ₹ Nil))						
Due from Officers						
-(**₹ 0.04 Crore** (previous year ₹ 0.01 Crore))						

Note no. 18

Share Capital

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
A Equity Share capital						
Authorised						
1000,00,00,000 equity shares of ₹ 2 each (prev year 1000,00,00,000 equity shares of ₹ 2 each)		**2000.00**		2000.00		2000.00
Issued, Subscribed & Paid up Capital		**489.52**		489.52		489.52
244,76,00,000 fully paid equity shares of ₹ 2 each (prev year 244,76,00,000 equity shares of ₹ 2 each)						
a) The reconciliation of the number of equity shares outstanding is set out below:						
	Number	**Amount**	Number	Amount	Number	Amount
Shares outstanding at the beginning of the year	**2447600,000**	**489.52**	2447600,000	489.52	2447600,000	489.52
Shares bought back during the year		**-**		-		-
Shares outstanding at the end of the year	**2447600000**	**489.52**	2447600000	489.52	2447600000	489.52
b) Details of shares held by shareholders holding more than 5% shares at the year end	**No. of shares**	**%**	No. of shares	%	No. of shares	%
President of India	**1543452000**	**63.06%**	1543452000	63.06%	1543452000	63.06%
Life Insurance Corporation of India	**230453920**	**9.42%**	230459320	9.42%	230516784	9.42%
Face Value per share (₹)		**2.00**		2.00		2.00
c) Terms / rights attached to the equity shares:						
The company has only one class of equity shares having a par value of ₹ 2 per share (previous year ₹ 2 per share). Each holder of the equity shares is entitled to one vote per share.						

Note no. 19

Financial Liabilities - Borrowings (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Unsecured			
Long term maturities of finance lease obligations (Refer para 10 of Note no. 39 on leases)	**89.55**	126.29	61.00
	89.55	126.29	61.00

Note no. 20

Financial Liabilities - Trade payables (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Trade payables	**631.12**	746.22	644.85
	631.12	746.22	644.85

Note no. 21

Other financial liabilities (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Deposits from contractors & others	**104.71**	123.51	90.16
	104.71	123.51	90.16

Note no. 22

Provisions (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Contractual Obligation - Long term	**3244.33**	4177.45	3067.59
Provision for employee benefits	**1519.56**	2989.26	2706.52
Other long-term provisions	**218.48**	424.52	511.41
Corporate Social Responsibility*	**18.98**	33.27	45.09
	5001.35	7624.50	6330.61

*(Refer para 16 of Note no. 39 on CSR expenses)

Note no. 23

Other non-current liabilities

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Advances received from customers & others	**2978.80**	3637.78	4559.44
Deferred income- Govt grant **	**4.56**	0.00	0.00
	2983.36	3637.78	4559.44

**Received from Ministry of MNRE for setting up of Solar PV Plant

Note no. 24

Financial Liabilities - Trade Payables (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Trade Payables	**8691.00**	8662.17	8754.17
Acceptances	**18.16**	36.17	44.11
	8709.16	8698.34	8798.28

(Trade payables includes for Micro & small Enterprises **₹ 233.43 Crore** (Previous year ₹ 192.53 Crore)

Refer Para 9 of note no 39 for micro and small entereprises disclosure

Note no. 25

Other financial liabilities (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Current maturities of finance lease obligation#	**60.31**	76.15	56.83
Deposits from Contractors & others	**510.84**	529.14	517.16
Unpaid dividend*	**3.10**	3.27	3.72
Other payables/ liabilities			
- Capex	**116.61**	134.31	193.49
- Employees dues	**187.11**	208.37	322.08
- Other dues	**646.91**	684.25	599.09
Interest accrued but not due	**0.59**	0.57	0.40
Interest accrued & due on loans from:			
State Government Loans	**2.33**	2.33	2.33
Current maturities of finance lease obligations	**3.65**	5.43	4.16
	1531.45	1643.82	1699.26

* There is no amount due & outstanding as at balance sheet date to be transferred to Investor Education & Protection Fund.
# (Refer para 10 of Note no. 39 on leases)

Note no. 26

Other current liabilities

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Advances received from customers & others	**5266.61**	6623.17	6959.92
Deferred income- Govt grant **	**0.26**	0.00	0.00
Other payables /liabilities- Statutory dues	**426.63**	422.33	454.63
	5693.50	7045.50	7414.55

Advances received from customers & others include valuation adjustment-
-(**₹ 2333.52 Crore** (previous year ₹ 2861.41 Crore)

** Received from Ministry of MNRE for setting up of Solar PV Plant

Note no. 27

Provisions (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Contractual obligation	1983.63	1629.67	2511.19
Provision for employee benefits	1490.19	587.25	478.55
Corporate social responsibility##	34.92	56.41	18.51
Other short-term provisions	682.82	1062.57	972.97
##(Refer para 16 of Note no. 39 on CSR expenses)			
	4191.56	3335.90	3981.22

Note no. 28

Revenue from operations

(₹ in Crore)

Particulars				Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
(a)	**Sales less returns**			**23926.05**	21778.43
	(includes excise duty of ₹ 1100.37 Crore Prev year ₹ 958.63 Crore)				
	Income from external erection & other services (Net of service tax of ₹ 534.92 Crore Prev year ₹ 490.00 Crore)			**5009.59**	4321.17
	Less: Fair value adjustment A/c			**95.22**	49.53
	Net Sales		(a)	**28840.42**	26050.07
(b)	**Other Operational Income**				
	Export Incentives			**37.96**	34.24
	Finance income on assets given on finance lease			**0.10**	0.21
	Scrap income			**168.50**	158.56
	Freight & Insurance Income			**298.92**	268.87
	Fair value adjustment (Unwinding) A/c			**98.88**	96.20
	Others			**30.21**	30.22
			(b)	**634.57**	588.30
		TOTAL	(a) + (b)	**29474.99**	26638.37
	Revenue from operations				
a.	Includes based on provisional prices		₹ Crore	**74.10**	47.20
b.	Includes additional claim for despatches made in earlier year in accordance with price settlement with railways during the year.		₹ Crore	**214.65**	204.05
c.	includes for escalation claims raised in accordance with sales contracts, inclusive of escalation claims on accrual basis, to the extent latest indices were available;		₹ Crore	**899.51**	1051.47
d.	includes despatches of equipment valued at held on behalf of customers at their request for which payment has been received by Company ; and		₹ Crore	**3.42**	0.00
e.	excludes for price reduction (net of refund) due to delay in delivery as per the terms of the contract .		₹ Crore	**12.50**	32.20

Note no. 29

Other Income

(₹ in Crore)

Particulars			Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
A.	**Other income**			
	Government Grant		**0.17**	0.00
	Profit from sale of item of PPE		**2.36**	5.75
	Exchange variation (Cr. Balance)		**0.00**	402.73
	Dividend on Investment (Long term-Trade)		**33.87**	34.14
	Others		**282.47**	292.11
		Total (A)	**318.87**	734.73
B.	**Interest Income ***			
	From banks		**671.34**	685.75
	Others		**5.88**	77.24
		Total (B)	**677.22**	762.99
	Total Other Income	**Total (A+B)**	**996.09**	1497.72

*'including TDS ₹ **69.16 Crores** (prev year ₹ 70.53 Crores)

Note no. 30

Cost of material consumption, erection and engineering expenses

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Consumption of raw material & components	**13102.81**	13001.86
Consumption of stores & spares	**425.60**	422.24
Erection and Engineering exp. - payment to subcontractors	**3054.09**	2975.63
Less: PV Adjustment Material/Subcontracting Cost	**16.36**	22.60
	16566.14	16377.13

Note no. 31

Changes in inventories of finished goods and work in progress

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
Work-in-progress				
Closing Balance	**2533.69**		3252.97	
Opening Balance	**3252.97**	**-719.28**	3210.71	42.26
Finished Goods $				
Closing Balance	**1293.90**		1568.55	
Opening Balance	**1568.55**	**-274.65**	1743.74	-175.19
Inter-division transfer in transit		**-0.55**		-77.56
		-994.48		-210.49
NOTE: **$ Element of Excise duty in Finished Goods**				
Closing Balance		**134.25**		154.59
Opening Balance		**154.59**		128.31

Note no. 32

Employee benefits expenses

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Salaries, wages, bonus, allowances & other benefits	**4484.08**	4525.09
Contribution to gratuity fund	**117.24**	110.31
Contribution to provident and other funds	**349.68**	320.00
Group insurance	**11.25**	11.52
Staff welfare expenses	**437.67**	412.83
	5399.92	5379.75

Note no. 33

Other expenses of manufacture, administration, selling & distribution

(₹ in Crore)

Particulars		Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
Royalty, technical, Resident consultant's charges & other consultancy charges			**118.69**		102.15
Rent: Residential		**49.07**		54.77	
Non residential		**25.41**	**74.48**	26.63	81.40
Excise duty			**1252.78**		1155.74
Power & Fuel			**451.19**		499.06
Rates & taxes			**51.41**		68.00
Service tax, Swachh Bharat Cess & other cess			**12.25**		15.24
Exchange variation			**269.69**		0.00
Insurance			**123.87**		135.86
Repairs:					
Buildings			**66.65**		90.64
Plant & machinery			**39.53**		42.73
Others			**114.05**		131.60
Other expenses in connection with exports			**15.72**		21.18
Losses written off			**13.60**		0.01
Bad debts written off during the year			**72.86**		17.00
Carriage outward			**425.21**		371.10
Travelling & conveyance			**124.58**		146.45
Expenditure on Other Sub Contracts			**322.18**		345.37
Miscellaneous expenses			**761.88**		691.56
Liquidated damages charged off			**84.69**		6.58
Corporate social responsibility			**37.50**		110.10
Fair value loss in investment of Equity Share			**2.74**		2.04
			4435.55		4033.81
Payment to the Auditors ('Net of Service Tax & Other Cess)					
Payment to Auditors - as Auditors (Audit Fees)- for the year	₹ Crore		**0.77**		0.65
Audit fees include ....to Auditors abroad	₹ Crore		**0.01**		0.03
Payment to Auditors - Reimbursement of expenses	₹ Crore		**0.12**		0.12
Payment to Auditors - Taxation Matters - for the year	₹ Crore		**0.14**		0.14
Payment to Auditors - Other Services	₹ Crore		**0.39**		0.35
Payment to Cost Auditors (Audit fees) - for the year ('Net of Service Tax, Swachh Bharat Cess & Other Cess)	₹ Crore		**0.13**		0.12
Expenditure on departmental Repair & maintenance which are as under:					

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016
Plant & Machinery	₹ Crore	**206.63**	218.52
Buildings	₹ Crore	**48.32**	56.40
Others	₹ Crore	**35.62**	37.61
Agency Commission on exports included in expenses in connection with exports	₹ Crore	**12.34**	8.21
Expenditure on research & development	₹ Crore	**240.74**	270.63
Rent Residential	₹ Crore	**49.07**	54.77
Expenditure on entertainment	₹ Crore	**5.47**	5.67
Expenditure on foreign travel			
No. of tours		**294**	390
Expenditure in Rupees	₹ Crore	**5.09**	8.75
Expenditure on Publicity and Public relations			
Salaries allowances & other benefits	₹ Crore	**16.20**	11.83
Other expenses	₹ Crore	**8.95**	9.67
Director's Fees	₹ Crore	**0.12**	0.16

Note no. 34

Provisions (Net)

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
Doubtful debts ,Liquidated Damages and Loans, advances & deposits				
Created during the year	**2963.39**		2832.11	
Less: written back during the year	**1491.65**	**1471.74**	941.74	1890.37
Contracutal Obligations				
Created during the year	**619.99**		638.99	
Less: written back during the year	**1446.68**	**-826.69**	692.33	-53.34
Others				
Created during the year	**1564.73**		453.58	
Less: written back during the year	**937.03**	**627.70**	240.18	213.40
		1272.75		2050.43

Note no. 35

Finance costs

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Interest Expense	**61.84**	26.82
Borrowing Cost (on accretion to deferred liabilities)	**30.06**	37.99
Borrowing Costs (Unwinding of Provisions)	**258.71**	294.67
	350.61	359.48
Less: Borrowing Cost capitalised	**0.00**	0.00
	350.61	359.48

Note no. 36

Tax expense

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
a) Current Tax				
For Current Years	**610.11**		396.32	
For earlier years	**-311.76**	**298.35**	-5.24	391.08
b) Deferred Tax				
For Current Years	**-461.53**		-833.39	
For earlier years	**295.15**	**-166.38**	-12.26	-845.65
		131.97		-454.57

Note no. 37

Other Comprehensive Income

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Re measurement of defined employee benefits	**-44.35**	-116.65
Income tax related to above items*	**-15.35**	-40.27
	-29.00	-76.38

* It includes Current Tax **₹ 0.42 Crore** and deferred tax **₹ -15.77 Crore** (previous year Current Tax ₹ -40.27 Crore and deferred tax ₹ nil)

Note no. 38

Earning Per Share

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Profit attributable to equity shareholders	**495.86**	-709.60
Weighted average number of equity shares	**244.76**	244.76
Basic and diluted earnings per share (in INR)	**2.03**	**-2.90**

Note no. 39
Notes to Accounts

Bharat Heavy Electricals Limited ("BHEL" or "the Company") is a public limited company domiciled in India and has its registered office at BHEL House, Siri fort, New Delhi- 110049.

The Company is an integrated power plant equipment manufacturer engaged in the design, engineering, manufacture, erection, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Oil & Gas and Defence.

1 First-time Adoption of Ind AS -101

The company has prepared its first Financial Statements in accordance with Ind AS for the year ended 31st March 2017. For periods up to and including the year ended 31st March 2016, the Company prepared its financial statements in accordance with Indian GAAP, including accounting standards notified under the Companies (Accounting Standards) Rules, 2006 (as amended). The effective date for Company's Ind AS Opening Balance Sheet is 1st April 2015 (the date of transition to Ind AS).

The accounting policies set out in Note 1 have been applied in preparing the financial statements for the year ended 31st March 2017, the comparative information presented in these financial statements for the year ended 31st March 2016 and in the preparation of an opening Ind AS Balance Sheet as at 1st April 2015 (the Company's date of transition). According to Ind AS 101, the first Ind AS Financial Statements must use recognition and measurement principles that are based on standards and interpretations that are effective as at 31st March 2017, the date of first-time preparation of Financial Statements according to Ind AS. These accounting principles and measurement principles must be applied retrospectively to the date of transition to Ind AS and for all periods presented within the first Ind AS Financial Statements.

Any resulting differences between carrying amounts of assets and liabilities according to Ind AS 101 as on 1st April 2015 compared with those presented in the Indian GAAP Balance Sheet as on 31st March 2015, were recognized in equity under retained earnings within the Ind AS Balance Sheet, wherever applicable.

An explanation of how the transition from previous GAAP to Ind AS has affected the company's financial position and financial performance is set out in the following tables and notes.

Exemptions and Exceptions availed

In the Ind AS Opening Balance Sheet as on 1st April 2015, the carrying amounts of assets and liabilities from the Indian GAAP as at 31st March 2015 are generally recognized and measured according to Ind AS in effect as on 31st March 2017. For certain individual cases, however, Ind AS 101 provides for optional exemptions and mandatory exceptions to the general principles of retrospective application of Ind AS. The Company has used the following exemptions and exceptions in preparing its Ind AS Opening Balance Sheet:

Optional Exemptions Availed:

i) Property, plant and equipment & Intangible assets

Ind AS 101 permits a first-time adopter to elect to continue with the carrying value for all of its property, plant and equipment as recognised in the financial statements as at the date of transition to Ind AS, measured as per the previous Indian GAAP (IGAAP) and use that as its deemed cost as at the date of transition after making necessary adjustments for de-commissioning liabilities. This exemption can also be used for intangible assets covered by Ind AS 38, Intangible Assets. Accordingly, the company has elected to measure all of its property, plant and equipment and intangible assets at their erstwhile Indian GAAP carrying value.

ii) Business Combination

Ind AS 101 provides the option to apply Ind AS 103 prospectively from the transition date or from a specific date prior to the transition date. The Company has elected to apply Ind AS 103 'Business Combinations' prospectively from the date of transition. Accordingly, business combinations occurred prior to 1st April 2015 have not been restated.

iii) Investment in subsidiary and joint ventures:

The Company has elected to measure its investments in subsidiary and joint ventures in the separate financial statements at cost. The cost of investment for the purpose of first financial statements shall be previous Indian GAAP carrying amount net of impairment on the date of transition.

Ind AS Mandatory Exceptions:

i) Classification and measurement of financial assets

Ind AS 101 requires an entity to assess classification and measurement of financial assets on the basis of the facts and circumstances that exist as on the date of transition to Ind AS. Accordingly Company has classified and measured all its financial assets on the basis of the facts and circumstances that exist as on the date of transition to Ind AS.

ii) Estimates

An entity's estimates in accordance with Ind AS as on the date of transition to Ind AS shall be consistent with estimates made for the same date in accordance with previous IGAAP (after adjustments to reflect any difference in accounting policies), unless there is objective evidence that those estimates were in error. Ind AS estimates as at 1 April 2015 are consistent with the estimates as on the same date made in conformity with previous GAAP.

Notes to first-time adoption:

i) Classification of Locomotives as finance lease:

Locomotives given on lease prior to 1st April 2001 were accounted for in accordance with the guidance contained for manufacturer dealer lessor and recognised as Fixed assets under previous IGAAP. Under Ind AS, locomotives given on finance lease has been derecognised by the previous IGAAP net carrying value of ₹ 2.25 Crore and corresponding finance lease receivable has been recognised on transition date.

ii) Stores and Spares and retrofitting expenses classified as CWIP:

Stores and spares classified as inventory has been capitalized and depreciated over their useful life amounting to ₹ 1.53 Crore as at April 01, 2015. Further, expenditure on retrofitting works has been capitalised as an item of PPE in FY 2015-16 in line with Ind AS. The net impact is increase in retained earning by ₹ 0.40 Crore as on 01.04.2015 and increase in profit by ₹ 1.83 Crore for 2015-16.

iii) Proposed dividend:

Under Indian GAAP, the Company had accounted for proposed dividends relating to year ended 31st March 2015 in that year, though the approval of that dividend took place after the reporting date. Under Ind AS, proposed dividends do not meet the definition of liability until they have been approved by shareholders at the Annual General Meeting. Company has declared dividend of ₹ 151.75 Crore (₹ 182.64 Crore inclusive of CDT) for the year 2014-15 which is reversed as per Ind AS on transition date, with corresponding effect of increase in retained earnings by ₹ 182.64 Crore. Dividend of ₹ 97.90 Crore (₹ 117.83 Crore inclusive of CDT) for the year 2015-16 declared in 2016-17 is reversed and dividend of ₹ 151.75 Crore (₹ 182.64 Crore including CDT) of 2014-15 declared in 2015-16 is adjusted. The impact is decrease in retained earnings by ₹ 64.81 Crore for 2015-16.

iv) Government grants to be shown as deferred income:

Under Indian GAAP, the Company had recognised government grant received amounting to ₹ 1.38 Crore as capital reserve. Under Ind AS, government grants received for capital assets are to be recognised as deferred income and to be amortized on a systematic basis in line with Ind AS. The amount of ₹ 1.38 Crore has been reclassified from capital reserve to retained earnings on transition date accordingly.

v) Investments in equity securities classified as at Fair Value through P&L (FVTPL):

As per Ind AS, the Company has classified certain investments amounting to ₹ 5.91 Crore as at FVTPL. The fair value of these investments have been calculated at ₹ 8.71 Crore. The gain of ₹ 2.80 Crore is adjusted to retained earnings as on 1st April, 2015. In FY 2015-16, the fair value of these investment has been calculated as ₹ 6.67 Crore and the resultant impact of ₹ 2.04 Crore is accounted through P&L.

vi) Revenue Contracts accounted at percentage of completion method (POCM):

The company has accounted for revenue arising from contracts entered into before 1.4.2003 at POCM as per Ind AS 11. The effect of adjustment is decrease in retained earnings by ₹ 9.60 Crore with consequential impact on trade receivables and provision for warranty obligation as on April 01, 2015. The effect of adjustment is increase in profit by ₹ 8.03 Crore with consequent impact on turnover and warranty obligation for 2015-16.

vii) Recognition of other Long term Provisions at present value:

As per Ind AS, long term provisions are to be accounted at present value where obligation are likely to be settled at later date. Accordingly, other long term provisions, wherever applicable, have been measured at present value and the effect of the adjustment is increase in retained earnings by ₹ 37.22 Crore and decrease in provisions by same amount as on April 01, 2015. The unwinding of interest on these provisions and discounting of provisions with respect to additions made during the year has net impact of decrease in profit by ₹ 20.57 Crore for 2015-16.

viii) Recognition of Long term Contractual Obligation at present value:

In line with Ind AS where the obligations are likely to be settled at later date and the effect of time value is material, the provision are to be accounted at present value. Accordingly, Long term Contractual obligation have been measured at present value and the effect of the adjustment is increase in retained earnings by ₹ 538.93 Crore and decrease in provisions by same amount as on April 01, 2015. The effect of unwinding of interest on these provisions and discounting of provision with respect to additions made during the year is decrease in profit by ₹ 184.06 Crore for 2015-16.

ix) Fair value of consideration:

Ind AS prescribes the revenue recognition in respect of construction contracts at fair value. Generally the transaction value is the fair value of consideration in respect of construction contracts except in certain contracts, where as per contractual payment terms, percentage of advance are lower than deferred debts. The resulted impact has decreased retained earnings by ₹ 193.49 Crore with corresponding reduction in deferred debtors as at April 01, 2015. The net impact resulted in decrease in turnover by ₹ 49.53 Crore and increase in other operating income by ₹ 96.20 Crores, increase in profit by ₹ 46.66 Crore for 2015-16.

x) Discounting of Deferred Liability:

As per Ind AS where a contractual payment terms contain deferred payments and constitutes a time value of money considering advance percentage, such deferred liability are to be recognised at discounted value and subsequently unwinded as a borrowing cost. The effect of the adjustments increase in retained earnings by ₹ 60.80 Crores and decrease in deferred liability by same amount as on April 01, 2015.The effect for 2015-16 is decrease in consumption of material cost / sub-contracting cost by ₹ 22.60 Crore and increase in finance cost by ₹ 37.99 Crore for unwinding of interest on these liabilities, resulted impact in decrease of profit by ₹ 15.39 Crore for 2015-16.

xi) Provisions for expected credit loss:

In respect of trade receivable the impairment loss has been computed using expected credit loss considering regression effect for time value. The effect of the adjustment is decrease in retained earnings by ₹ 2230 Crores as on April 01, 2015. Impact of the adjustment is reversal of provision by ₹ 328 Crore for 2015-16.

xii) Classification adjustment of Advances restatement:

Re-classification of advances adjustment has been carried out from transition date in line with Ind AS 21, the impact on retained earning is increase by ₹ 82.54 Crore as on 01.04.2015 and increase in profit by ₹ 33.43 Crore for 2015-16.

xiii) Deferred Tax:

The impact of transition adjustments together with Ind AS mandate of using balance sheet approach for computation of deferred taxes has resulted in charge to the Reserves, on the date of transition, with consequential impact to the Profit and Loss account for the subsequent periods.

xiv) Other comprehensive income:

Under Indian GAAP, the Company has not presented other comprehensive income (OCI) separately. Items that have been reclassified from statement of profit and loss to other comprehensive income includes remeasurement of defined benefit plans of ₹ 76.38 Crore (net of tax) in 2015-16. Indian GAAP profit or loss is reconciled to total comprehensive income as per Ind AS.

xv) Statement of cash flows:

The transition from Indian GAAP to Ind AS has not had a material impact on the statement of cash flows.

39/2 Reconciliation of Ind AS Compliant Balance Sheet as on Transition Date

Particulars	IGAAP-Reclassified	Ind AS		
	Ind AS compliant Sch III as on 01/04/2015	Transition Adjustments Measurement - Ind AS	Figures as on 01/04/2015	Reason for changes described in stated paras mentioned above
I. ASSETS				
1 Non-current assets				
(a) Property, plant and equipment	3,982.16	-2.25	3,979.91	refer (i)
(b) Capital work in progress	500.50	1.53	502.03	refer (ii)
(c) Intangible assets	158.30		158.30	
(d) Intangible assets under development	17.30		17.30	
(e) Financial assets				
(i) Investments	417.67	2.80	420.47	refer (v)
(ii) Trade receivables	11,598.33	-358.95	11,239.38	refer (vi), (ix) & (xi)
(iii) Loans	104.26		104.26	
(iv) Others	0.83	1.32	2.15	refer (i)
(f) Deferred tax assets (net)	2,220.73	592.86	2,813.59	refer (xiii)
(g) Other non-current assets	498.56	29.93	528.49	refer (xii)
Total non-current assets	**19,498.64**	**267.24**	**19,765.88**	
2 Current assets				
(a) Inventories	10,104.84	-1.14	10,103.70	refer (ii)
(b) Financial assets				
(i) Trade receivables	26,038.98	-2071.24	23,967.74	refer (vi), (ix) & (xi)
(ii) Cash and cash equivalents	2,800.01		2,800.01	
(iii) Bank Balances	7,011.86		7,011.86	
(iv) Loans	90.95		90.95	
(v) Others	213.98	0.93	214.91	refer (i)
(c) Current Tax Assets(Net)	628.39		628.39	
(d) Other current assets	2,100.88	44.75	2,145.63	refer (vi) & (xii)
Total current assets	**48,989.89**	**-2026.70**	**46,963.19**	
TOTAL ASSETS	**68,488.53**	**-1759.46**	**66,729.07**	
II. EQUITY AND LIABILITIES				
3 Equity				
(a) Equity share capital	489.52		489.52	
(b) Other Equity	33,595.08	-934.90	32,660.18	
Total Equity	**34,084.60**	**-934.90**	**33,149.70**	

Particulars			IGAAP-Reclassified	Ind AS		
			Ind AS compliant Sch III as on 01/04/2015	Transition Adjustments Measurement - Ind AS	Figures as on 01/04/2015	Reason for changes described in stated paras mentioned above
	LIABILITIES					
4	**Non-Current Liabilities**					
	(a)	Financial Liabilities				
		(i) Borrowings	61.00		61.00	
		(ii) Trade Payables	705.65	-60.80	644.85	refer (vi) & (x)
		(iii) Other financial liabilities	90.16		90.16	
	(b)	Provisions	6,898.29	-567.68	6,330.61	refer (vi), (vii) & (viii)
	(c)	Other non-current liabilities	4,563.06	-3.62	4,559.44	refer (xii)
			12,318.16	**-632.10**	**11,686.06**	
5	**Current liabilities**					
	(a)	Financial Liabilities				
		(i) Trade payables	8,798.28		8,798.28	
		(ii) Other financial liabilities	1,699.34	-0.08	1,699.26	refer (xii)
	(b)	Other current liabilities	7,424.29	-9.74	7,414.55	refer (vi) & (xii)
	(c)	Provisions	4,163.86	-182.64	3,981.22	refer (iii)
			22,085.77	**-192.46**	**21,893.31**	
		TOTAL EQUITY AND LIABILITIES	**68,488.53**	**-1759.46**	**66,729.07**	

39/3 Reconciliation of Statement of Profit and Loss for the Year Ended 31/03/2016

(₹ in Crore)

Particulars		IGAAP-Reclassified	Ind AS		
		Ind AS compliant Sch III for the reporting period 31/03/2016	Transition Adjustments Measurement - Ind AS	Figures for the reporting period 31/03/2016	Reason for changes described in stated paras mentioned above
I.	Revenue from operations	26583.30	55.07	26638.37	refer (vi & ix)
II.	Other income	1454.71	43.01	1497.72	refer (xii)
III.	**Total Income (I+II)**	**28038.01**	**98.08**	**28136.09**	
IV	**Expenses**				
	Cost of material consumption, erection and engineering expenses	16399.73	-22.60	16377.13	refer (x)
	Changes in inventories of finished goods and work in progress	210.49		210.49	
	Employee benefits expense	5496.40	-116.65	5379.75	refer (xiv)
	Depreciation and amortisation expense	935.59	0.15	935.74	refer (i) & (ii)
	Other expenses of manufacture, administration, selling and distribution	4037.27	-3.46	4033.81	refer (i) & (xii)
	Provisions (net)	2454.10	-403.67	2050.43	refer (vi), (vii), (viii), (xi) & (xii)
	Finance costs	27.71	331.77	359.48	refer (vii), (viii) & (x)
	Less: Cost of jobs done for internal use	46.57		46.57	
	Total Expenses (IV)	**29514.72**	**-214.46**	**29300.26**	
V.	**Profit/(loss) before exceptional items and tax (III-IV)**	**-1476.71**	**312.54**	**-1164.17**	
VI.	**Exceptional Items**				
VII.	**Profit/(loss) before tax (V-VI)**	**-1476.71**	**312.54**	**-1164.17**	
VIII.	**Tax expense**				
	a) Current tax	350.81	40.27	391.08	
	b) Deferred tax	-914.10	68.45	-845.65	refer (xiii)
		-563.29	**108.72**	**-454.57**	
IX.	**Profit/(loss) for the period from continuing operations (VII-VIII)**	**-913.42**	**203.82**	**-709.60**	
X.	**Other comprehensive income**				
	(i) Items that will not be reclassified to profit or loss	0.00	-116.65	-116.65	refer (xiv)
	(ii)Less: Income tax relating to items that will not be reclassified to profit or loss	0.00	-40.27	-40.27	
XI.	**Total comprehensive income for the period (IX+X)** (Comprising Profit (Loss) and Other Comprehensive Income for the period)	**-913.42**	**127.44**	**-785.98**	

39/4 Reconciliation of Ind AS Compliant Balance Sheet as on 31/03/2016

(₹ in Crore)

Particulars	IGAAP-Reclassified	Ind AS			
	Ind AS compliant Sch III as on 31/03/2016	Transition Adjustments Measurement - Ind AS on transition date	Transition Adjustments Measurement - Ind AS for 15-16	Figures as on 31/03/2016	Reason for changes described in stated paras mentioned above
I. ASSETS					
1 Non-current assets					
(a) Property, plant and equipment	3826.22	-2.25	1.15	3825.12	refer (i) & (ii)
(b) Capital work in progress	306.59	1.53	1.38	309.50	refer (ii)
(c) Intangible assets	137.36			137.36	
(d) Intangible assets under development	8.38			8.38	
(e) Financial assets					
(i) Investments	663.40	2.80	-2.04	664.16	refer (v)
(ii) Trade receivables	11376.04	-358.95	110.18	11127.27	refer (vi), (ix) & (xi)
(iii) Loans	65.62			65.62	
(iv) Others	0.00	1.32	-0.70	0.62	refer (i)
(f) Deferred tax assets (net)	3134.82	592.86	-68.45	3659.23	refer (xiii)
(g) Other non-current assets	240.40	29.93	-29.93	240.40	refer (xii)
Total non-current assets	**19758.83**	**267.24**	**11.59**	**20037.66**	
2 Current assets					
(a) Inventories	9615.06	-1.14	-11.77	9602.15	refer (ii), (x) & (xii)
(b) Financial assets					
(i) Investments					
(ii) Trade receivables	24227.01	-2071.24	274.35	22430.12	refer (vi), (ix) & (xi)
(iii) Cash and cash equivalents	1966.09			1966.09	
(iv) Bank Balances	8119.90			8119.90	
(v) Loans	176.61			176.61	
(vi) Others	156.71	0.93	-0.02	157.62	refer (i)
(c) Current Tax Assets(Net)	582.93			582.93	
(d) Other current assets	2085.67	44.75	-40.56	2089.86	refer (vi) & (xii)
Total current assets	**46929.98**	**-2026.70**	**222.00**	**45125.28**	
TOTAL ASSETS	**66688.81**	**-1759.46**	**233.59**	**65162.94**	

(₹ in Crore)

Particulars	IGAAP-Reclassified	Ind AS			
	Ind AS compliant Sch III as on 31/03/2016	Transition Adjustments Measurement - Ind as on transition date	Transition Adjustments Measurement - Ind AS FOR 15-16	Figures as on 31/03/2016	Reason for changes described in stated paras mentioned above
II. EQUITY AND LIABILITIES					
3 Equity					
(a) Equity share capital	**489.52**			**489.52**	
(b) Other Equity	**32563.83**	**-934.90**	**62.63**	**31691.56**	
Total equity	**33053.35**	**-934.90**	**62.63**	**32181.08**	
LIABILITIES					
4 Non-Current Liabilities					
(a) Financial Liabilities					
(i) Borrowings	126.29			126.29	
(ii) Trade Payables	788.63	-60.80	18.39	746.22	refer (vi) & (x)
(iii) Other financial liabilities	123.51			123.51	
(b) Provisions	7986.51	-567.68	205.67	7624.50	refer (vi), (vii) & (viii)
(c) Other non-current liabilities	3675.90	-3.62	-34.50	3637.78	refer (xii)
	12700.84	**-632.10**	**189.56**	**12258.30**	
5 Current liabilities					
(a) Financial Liabilities					
(i) Trade payables	8701.34		-3.00	8698.34	refer (x)
(ii) Other financial liabilities	1646.74	-0.08	-2.84	1643.82	refer (xii)
(b) Other current liabilities	7133.32	-9.74	-78.08	7045.50	refer (vi) & (xii)
(c) Provisions	3453.22	-182.64	65.32	3335.90	refer (iii) & (vi)
	20934.62	**-192.46**	**-18.60**	**20723.56**	
TOTAL EQUITY AND LIABILITIES	**66,688.81**	**-1,759.46**	**233.59**	**65,162.94**	

39/5

I. Reconciliation of Equity as per erstwhile Indian GAAP as previously reported and as per Ind AS

(₹ in Crore)

	Opening Transition date 01.04.2015	As on 31.03.2016	Refer to paras given in Notes to First time adoption
I. Retained Earnings (Other Equity) as per erstwhile Indian GAAP 31.03.2015	**33595.08**	**32563.83**	
Adjustments for the year:			
Capitalisation of stores & spares etc.	0.40	1.83	refer (ii)
Proposed Dividend adjustment	182.64	-64.81	refer (iii)
Effect of measuring equity investment at fair value	2.80	-2.04	refer (v)
Effect of Revenue Recognition (POCM)	-9.60	8.03	refer (vi)
Recognition of other long term provisions at present value	37.22	-20.57	refer (vii)
Recognition of long term contractual obligation at present value	538.93	-184.06	refer (viii)
Fair value of consideration on construction contracts	-193.49	46.66	refer (ix)
Discounting effect on deferred liabilities	60.80	-15.39	refer (x)
Provision for expected credit loss	-2230.00	328.00	refer (xi)
Classification adjustment of Advances restatement	82.54	33.43	refer (xii)
Deferred tax impact on above adjustments	592.86	-68.45	refer (xiii)
Net impact of Ind AS transition	**(-)934.90**	**62.63**	
Opening Ind AS Transition Impact		**(-)934.90**	
Retained Earnings (Other Equity) as per Ind AS (opening as on 01.04.2015)	**32660.18**	**31691.56**	

II. Reconciliation of Total Comprehensive Income as per erstwhile Indian GAAP as previously reported and as per Ind AS 2015-16

(₹ in Crore)

		Refer to paras given in Notes to First time adoption
Net Profit as per erstwhile Indian GAAP 2015-16	**(-)913.42**	
Adjustments for the year, increase/ (-) decrease:		
Capitalisation of stores & spares, retrofitting etc.	1.83	refer (ii)
Effect of measuring equity investment at fair value	-2.04	refer (v)
Effect of Revenue Recognition (POCM)	8.03	refer (vi)
Recognition of other long term provisions at present value	-20.57	refer (vii)
Recognition of long term contractual obligation at present value	-184.06	refer (viii)
Fair value of consideration on construction contracts	46.66	refer (ix)
Discounting effect on deferred liabilities	-15.39	refer (x)
Provision for expected credit loss	328.00	refer (xi)
Classification adjustment of Advances restatement	33.43	refer (xii)
Deferred tax impact on above adjustments	-68.45	refer (xiii)
Total Comprehensive Income as per Ind AS 2015-16	**(-)785.98**	
Net Impact of Ind AS for 2015-16	**127.44**	

2 Contingent liabilities & Commitments to the extent not provided for:

(₹ in Crore)

Particulars		Figures for the current year ended 31.03.2017	Figures for the Previous year ended 31.03.2016
(i)	**Contingent liabilities:**		
1)	Claims against the company not acknowledged as debt :		
a	Income Tax Demands	**12.73**	0.96
	Against which paid under protest.		-
b	Sales Tax Demands	**1846.50**	1,229.44
	Against which paid under protest/ court orders.	**298.34**	269.29
c	Excise Duty demands	**482.92**	467.96
	Against which paid under protest/ court orders.	**24.17**	23.59
d	Custom Duty demands		0.10
	Against which paid under protest/ court orders.		-
e	Court & Arbitration cases	**884.19**	1,029.32
f	Liquidated Damages	**6214.54**	7,836.38
	Amount deducted by customers towards LD included in 1(f) above	**2730.50**	3,161.77
g	Counter Claim by contractors	**0.61**	0.61
h	Service Tax Demand	**507.67**	485.94
	Against which paid under protest/ court orders.	**7.39**	7.34
i	Others (incl. disputed staff cases)	**34.74**	45.86
	(In view of the various court cases, litigations and claims disputed by the company, the outflow of resources is not ascertainable at this stage).		
(ii)	**Commitments**		
a	Estimated amount of contracts, net of advances, remaining to be executed on capital account and not provided for.	**193.93**	251.08
	The above includes for acquisition of intangible assets	**3.96**	0.82
b	Investment in the Joint Venture entities for which the company has restrictions for their disposal for five years from the date of incorporation /commercial operation of the project/first unit of the project/completion of first EPC contract , as the case may be.	**639.32**	639.32
c	Commitments towards additional investment in the JV in case of inability of other JV partner to take up additional equity stake	**111.26**	111.26
d	In view of the nature of business, being long term construction contracts there may be other commitments for purchase of material etc., which has been considered as normal business process, hence not been disclosed.		

3 (i) Cash credit limit from banks aggregating to **₹ 5000 Crore** (previous year ₹ 5000 Crore) and Company's counter guarantee / indemnity obligations in regard to bank guarantee / letters of credit limit aggregating to **₹ 55000 Crore** (previous year ₹ 55000 Crore) sanctioned by the consortium banks are secured by first charge by way of hypothecation of raw materials, components, work in progress, finished goods, stores, trade receivables and other current assets both present and future. The outstanding bank guarantees as at 31.03.2017 is **₹ 40666 Crore** (previous year ₹ 45834 Crore).

(ii) Corporate Guarantees given for own obligations outstanding as on 31.03.2017 is **₹ 1733.80 Crore** (Previous year ₹ 3028.33 Crore).

4 Balance shown under Trade Receivables, Long term Trade Receivables, Trade Payable, contractors' advances, deposits and stock / materials lying with sub-contractors/ fabricators are subject to confirmation, reconciliation & consequential

adjustment, if any. As the Company is in the business of long term construction contracts, bills are raised on the customers as per contract by the units located at various places as per approved billing schedule by the customer and the reconciliation is carried out on ongoing basis & provisions made, wherever considered necessary. Final reconciliation with customer is done on completion of project (Trial Operation and PG Test completed). The total receivables (including long term) are ₹ 42510 Crore, (including deferred debts and other debts of ₹ 20195 Crore presently not due for payment and ₹ 6287 Crore outstanding in respect of completed projects), out of which, the projects reconciled with customers have outstanding debts of ₹ 5497 Crore in respect of completed projects.

5 In line with the EAC/ICAI opinion on "Fair value of consideration for Construction Contracts" under Ind AS 11, retention money, relating to the projects where advance %age is less than retention %age as per the terms of contract, is discounted at the time of recognition of turnover.

Out of total deferred debtors (net) of **₹ 16736.95 Crore** (previous year ₹ 17957.67 Crore), deferred debtors at amortised value representing such retention money as stated above as on 31.03.2017 is **₹ 1797.27 Crore** (previous year ₹ 1256.57 Crore).

6 Amorphous Silicon Solar Cell Plant (ASSCP), Gurgaon was taken on April 1, 1999 from Ministry of New and Renewable Energy (MNRE) on lease for a period of 30 years. The formal lease agreement with the Ministry of New and Renewable Energy (MNRE) is yet to be finalised.

7 Curent Financial liabilities includes a sum of **₹ 100.51 Crore** (previous year ₹ 100.51 Crore) towards guarantee fee demanded by the Government of India in respect of foreign currency loans taken by the Company at the instance of the Government upto 1990-91. The matter for its waiver has been taken up with the Government since there was no stipulation for payment of such guarantee fee at the time the loans (guaranteed by Government) were taken by the company. The Company vide letter dated 09.02.2015 has again requested Department of Heavy Industries (DHI) for waiver of the guarantee fee.

8. Disclosure as per Ind AS 19 on 'Employee benefits'

A. Gratuity

The Company has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 10 Lakhs. The gratuity liability arises on account of future payments, which are required to be made in the event of retirement, death in service or withdrawal. The liability has been assessed using projected unit credit actuarial method.

I. Movement in net defined benefit (asset)/liability on Gratuity plan

(₹ in Crore)

	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	**1939.47**	1909.03	**1939.47**	1909.03	**-**	-
Included in profit or loss:						
Current service cost	**117.25**	111.45			**117.25**	111.45
Interest cost / income	**155.16**	152.72	**155.16**	152.72	**-**	-
Total amount recognised in profit or loss	**272.41**	264.17	**155.16**	152.72	**117.25**	111.45
Included in OCI:						
Remeasurement loss (gain):					**(56.86)**	16.76
Actuarial loss (gain) arising from:	**(55.77)**	15.64				
Return on plan assets excluding interest income			**1.08**	(1.12)		
Total amount recognised in other comprehensive income	**(55.77)**	15.64	**1.08**	(1.12)	**(56.86)**	16.76
Others						
Contributions paid by the employer			**60.39**	128.21	**(60.39)**	(128.21)
Benefits paid	**(224.68)**	(249.37)	**(224.68)**	(249.37)	**-**	-
Closing balance	**1931.43**	1939.47	**1931.43**	1939.47	**-**	-

II. Details of Plan assets

	31 March 2017	31 March 2016
Govt. of India securities (quoted)	**15.94%**	16.27%
State Government securities (quoted)	**31.83%**	30.46%
High quality Corporate bonds (quoted)	**43.41%**	44.02%
Equity shares of listed Companies (quoted)	**0.68%**	0.42%
Funds managed by Insurer	**4.86%**	4.07%
Bank Balance	**3.28%**	4.76%
Total	**100.00%**	**100.00%**

III. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Salary escalation rate	**7.65% P.A. for 1st 4 yrs. & then 6% P.A. thereafter**	8.25% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	100% of IALM (2006-08)	
Withdrawal rate % (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

IV. Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

₹ in Crore

	Gratuity (Funded)			
	31 March 2017		31 March 2016	
	Increase	Decrease	Increase	Decrease
Discount rate (0.50% movement)	**(58.27)**	**63.99**	(58.51)	64.26
Salary escalation rate (0.50% movement)	**63.31**	**(58.22)**	63.57	(58.46)

Sensitivities due to mortality and withdrawals are not material and hence impact of change not calculated.

Sensitivities as to rate of inflation, rate of increase of pensions in payment, rate of increase of pensions before retirement & life expectancy are not applicable being a lump sum benefit on retirement.

The sensitivity analysis above has been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

V. Expected maturity analysis of the gratuity plan in future years

₹ in Crore

	Gratuity (Funded)		
	31 March 2017	31 March 2016	1 April 2015
Less than 1 year	**236.06**	246.36	292.69
Between 1-2 years	**200.13**	221.96	210.91
Between 2-3 years	**145.47**	199.79	210.64
Between 3-4 years	**140.30**	173.56	190.54
Between 4-5 years	**111.40**	136.66	163.70
Between 5-6 years	**98.39**	110.10	126.87
Over 6 years	**999.68**	851.04	713.68
Total	**1,931.43**	**1,939.47**	**1,909.03**

Expected contributions to gratuity plans for the year ending 31st March 2018 are ₹ 118.87 Crore

The weighted average duration of the gratuity defined benefit plan obligation at the end of the reporting period is 14.66 years (31 March 2016: 14.37 years.)

VI. Risk Exposures

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in salary, investment risk, discount rate, mortality, disability and withdrawals.

B. Post Retirement Medical Benefits

The Company has Post-Retirement Medical benefit (PRMB), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company. The liability for the same is recognised annually on the basis of actuarial valuation.

I. Movement in net defined benefit (asset)/liability on Post Retirement Medical Benefit Plan

₹ in Crore

	Defined benefit obligation		Fair value of plan assets		Net defined benefit (asset) liability	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	**1679.37**	1530.44	**-**	-	**1679.37**	1530.44
Included in profit or loss:						
Current service cost	**30.29**	27.47	**-**	-	**30.29**	27.47
Interest cost / income	**134.35**	122.44	**-**	-	**134.35**	122.44
Total amount recognised in profit or loss	**164.64**	149.91	**-**	**-**	**164.64**	149.91
Included in OCI:						
Remeasurement loss (gain):					**67.82**	82.94
Actuarial loss (gain) arising from:						
Demographic assumptions			**-**	-	**-**	-
Financial assumptions	**74.43**	18.95	**-**	-		
Experience adjustment	**(6.61)**	63.99	**-**	-		
Total amount recognised in other comprehensive income	**67.82**	82.94	**-**	**-**	**67.82**	82.94
Others						
Contributions paid by the employer			**1820.70**		**(1820.70)**	
Benefits paid	**(91.13)**	(83.92)	**-**	**-**	**(91.13)**	(83.92)
Closing balance	**1820.70**	1679.37	**1820.70**	**-**	**0.00**	1679.37

The plan assets of the Company are managed by Life Insurance Corporation of India through a trust managed by the Company in terms of an insurance policy taken to fund obligations of the Company.

II. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Salary escalation rate	**7.65% P.A. for 1st 4 yrs. & then 6% P.A. thereafter**	8.25% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	100% of IALM (2006-08)	
Withdrawal rates (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

III. Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is: ₹ in Crore

	Post Retirement Medical Benefit			
	31 March 2017		31 March 2016	
	Increase	Decrease	Increase	Decrease
Discount rate (0.50% movement)	**(89.34)**	**90.14**	(82.47)	83.55
Change in cost (0.50% movement)	**90.94**	**(90.02)**	84.11	(82.99)

Sensitivity due to mortality and withdrawls are not material and hence impact of change not calculated.

The sensitivity analysis above has been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

IV. Expected maturity analysis of the Post retirement medical Benefit plan in future years

₹ in Crore

	Post Retirement Medical Benefit		
	31 March 2017	31 March 2016	1 April 2015
Less than 1 year	**103.44**	101.05	87.59
Between 1-2 years	**105.61**	103.18	89.95
Between 2-3 years	**108.14**	105.65	92.56
Between 3-4 years	**111.28**	108.72	95.52
Between 4-5 years	**115.17**	112.52	99.15
Between 5-6 years	**119.78**	117.02	103.32
Over 6 years	**1,157.28**	1,031.23	962.35
Total	**1,820.70**	**1,679.37**	**1,530.44**

Expected contributions to Post retirement medical benefit plan for the year ending 31 March 2018 are ₹ 32.30 Crore.

The weighted average duration of the post retirement medical benefit plan obligation at the end of the reporting period is 12.57 years (31 March 2016: 13.26 years).

V. Risk Exposure

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in salary, investment risk, discount rate, mortality, disability and withdrawals.

C. Long term Leave Liability (EL/HPL) - Unfunded

The company provides for earned leave benefit and half pay leave to the employees of the company which accrue half yearly at 15 days (maximum) and 10 days respectively. The earned leave is encashable while in service and up to a maximum of 300 days on retirement. Half Pay leave is encashable on superannuation or on separation beyond the age of fifty years subject to the overall ceiling of 480 days. The leave liability has been treated as other long term benefits and has been assessed using projected unit credit actuarial method.

I. Movement in net defined benefit (asset)/liability

₹ in Crore

	Long term Leave Liability	
	31 March 2017	31 March 2016
Opening balance	**1,628.73**	1,479.87
Included in profit or loss:		
Current service cost	**107.77**	60.35
Interest cost (income)	**130.30**	118.39
Actuarial loss (gain)	**226.30**	263.06
Total amount recognised in profit or loss	**464.37**	441.80
Others		
Contributions paid by the employer		
Benefits paid	**323.61**	292.94
Closing balance	**1,769.49**	1,628.73

II. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	Long term Leave Liability	
	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Salary escalation rate	**7.65% P.A. for 1st 4 yrs. & then 6% P.A. thereafter**	8.25% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	100% of IALM (2006-08)	
Withdrawal rates (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

D. Provident Fund Liability

The Company pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. An amount of **₹ 282.46 Crore** (31 March 2016: ₹ 278.88 Crore) for the year is recognised as expense on this account and charged to the Statement of Profit and Loss. The Company has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Company has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented and wherever as per the actuarial valuation certificate liability for likely interest shortfall arises, the same has been provided in the accounts.

₹ in Crore

	31 March 2017	31 March 2016
Excess / (Shortfall) in PF interest liability based on actuarial valuation for the year	**7.73**	3.69
Accumulated provision for shortfall in PF interest liability based on actuarial valuation	**3.53**	11.26
Remeasurement gain/(loss) recognised through other comprehensive income statement	**12.00**	(17.13)
Interest shortfall / (surplus) accounted through Statement of Profit & Loss	**4.27**	(20.82)

The company has PF trusts located at various places covering the employees of the company and managed separately, the details of plan assets and obligations are as follows

₹ in Crore

	Defined benefit obligation		Fair value of plan assets		Surplus / (Shortfall)	
Location	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
New Delhi	830.17	754.18	838.08	762.42	7.91	8.24
Haridwar	1263.70	1186.87	1262.35	1181.28	(1.35)	(5.59)
Ranipet	324.38	326.07	325.95	328.36	1.57	2.29
Chennai	502.23	458.98	500.67	455.71	(1.56)	(3.27)
Hyderabad	873.85	841.86	911.51	879.90	37.66	38.04
Vizag	108.00	88.35	135.82	116.25	27.82	27.90
Bengaluru	507.04	454.15	510.41	453.87	3.37	(0.28)
Trichy	1088.93	1037.84	1088.31	1035.71	(0.62)	(2.13)
Jhansi	344.46	343.35	352.49	349.27	8.03	5.92
Bhopal	1033.79	955.05	1041.21	962.75	7.42	7.70

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Expected Statutory interest rate	**8.65%**	8.80%
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	100% of IALM (2006-08)	
Withdrawal rates (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

9 Micro and Small Enterprises Disclosure

₹ in Crore

Particulars		2016-17	2015-16
i)	The principal amount remaining unpaid to supplier as at the end of the accounting year	**233.43**	192.53
ii)	The interest due thereon remaining unpaid, to supplier as at the end of accounting year.	**0.00**	0.25
iii)	The amount of interest paid in terms of section 16, along with the amounts of the payment made to the supplier beyond appointed day during the year.	**0.07**	0.00
iv)	The amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding interest specified under this Act.	**0.00**	1.52
v)	The amount of interest accrued during the year and remaining unpaid at the end of year.	**0.00**	0.14
vi)	The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowance as a deductible expenditure.	**1.73**	2.29

10 Leases

Operating lease commitments – Company as lessee

The company is in the practice of taking houses for employees, office buildings and EDP equipment etc. on operating lease both as cancellable and non- cancellable. The total of future minimum lease payments under non-cancellable operating leases for each of the following periods was:

₹ in Crore

	2016-17	2015-16
Less than one year	**2.74**	1.02
Between one and five years	**3.12**	1.48
More than five years	**1.03**	1.11
	6.89	3.61

Finance lease commitments - Company as Lessee

The Company has taken Land, building, EDP equipment on finance lease. The future minimum lease payments under non-cancellable leases are as follows:

₹ in Crore

	2016-17	2015-16
Less than one year	**73.88**	95.91
Between one and five years	**104.60**	164.47
More than five years	**0.00**	0.00
	178.48	260.38

Finance lease liabilities are payable as follows

₹ in Crore

	Future minimum lease payments		Interest		Present value of minimum lease payments	
	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16
Less than one year	**73.88**	95.91	**13.57**	19.76	**60.31**	76.15
Between one and five years	**104.60**	164.47	**15.05**	38.18	**89.55**	126.29
More than five years	**0.00**	0.00	**0.00**	0.00	**0.00**	0.00

Finance lease commitments - Company as Lessor

The Company has given locomotives under finance lease. The components of finance lease receivables are as follows:

₹ in Crore

	2016-17	2015-16
Gross investment in lease:		
Less than one year	**0.56**	0.91
Between one and five years	**0.19**	0.75
More than five years	-	-

Net investment in finance receivables

₹ in Crore

	2016-17	2015-16
Unearned finance income	**0.03**	0.13
Net investment in finance receivables	**0.72**	1.53

Present value of minimum lease receivables are as follows:

₹ in Crore

	2016-17	2015-16
Present value of minimum lease payments receivables:		
Less than one year	**0.56**	0.91
Between one and five years	**0.16**	0.62
	0.72	1.53

11 The reconciliation between the provision of Income Tax (Net of Deferred Tax) and amounts computed by applying the Income Tax Rate

₹ in Crore

Particulars	31-Mar-17	31-Mar-16
Total Comprehensive Income / (Loss) before tax (A)	**583.48**	(1,280.82)
Income Tax Rate (B)	**34.608%**	34.608%
Tax Expense - (C) = (A) X (B)	**201.93**	(443.27)
Add Tax effect of the amounts as under:		
a) Expenses - Not Deducted	**13.51**	44.59
b) Tax Exempt Income	**(11.72)**	(11.82)
c) Tax Incentive	**(70.49)**	(66.84)
d) Changes in tax expense - Earlier years	**(16.61)**	(17.50)
Total (D)	**(85.31)**	(51.57)
Net Tax Expense (E) = (C)+(D)	**116.62**	(494.84)
Net Tax Expense (Refer Note 36 & 37) (F)	**116.62**	(494.84)

12. Research and Development Expenditure

The details of Research & Development Expenditure incurred during the year, which is eligible (other than land or building) of deduction under section 35 (2AB) of the Income Tax Act, 1961.

₹ in Crore

		2016-17	2015-16
A.	(i) Land	**0**	0
	(ii) Building	**0**	0.08
B.	Plant & Machinery & Other Equipments	**16.12**	13.56
C.	Revenue Expenditure		
	Salaries/ Wages	**141.81**	133.34
	Material/ Consumables/spares	**18.10**	16.40
	Utilities	**0.55**	0.75
	Other R&D related expenses	**31.82**	33.01
	Total Revenue Expenditure	**192.28**	183.50
D.	Any Receipt/ Income by the R&D Centre	**-4.73**	-3.92
E.	Net amount eligible for deduction (B+C-D)	**203.67**	193.14

13. JOINTLY CONTROLLED ENTITIES AND SUBSIDIARY

Details of entities and BHEL's ownership proportion is as stated below:

(a) Name of the joint ventures	Proportion of ownership		
	Principal place of business	As at 31.03.2017	As at 31.03.2016
Power Plant Performance Improvement Limited	India	One share less than 50%	One share less than 50%
BHEL-GE Gas Turbine Services Private Limited	India	One share less than 50%	One share less than 50%
NTPC-BHEL Power Projects Private Limited	India	50%	50%
Raichur Power Corporation Limited	India	27.34%	27.34%
Dada Dhuniwale Khandwa Power Limited	India	50%	50%
Latur Power Company Ltd. (under liquidation)	India	NIL	NIL

(i) The provision for impairment in value of investment in Powerplant Performance Improvement Limited has been made since the Company is under liquidation and the amount paid as equity is not recoverable.

(ii) The provision for impairment in value of investment in Dada Dhuniwale Khandwa Power Limited has been made to the extent of ₹ 6.71 Crore based on the net financial position since the winding of the company is in process

(b) Name of Subsidiary	Proportion of ownership		
	Principal place of business	As at 31.03.2017	As at 31.03.2016
BHEL Electrical Machines Limited	India	51%	51%

14 Related Parties Transactions

i) Joint Ventures:

Powerplant Performance Improvement Ltd.

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

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

Latur Power Company Ltd.

Raichur Power Corporation Ltd. (RPCL)

Dada Dhuniwale Khandwa Power Ltd.

Subsidiary Company

BHEL Electrical Machines Limited

Central Government controlled entities

Provident fund trusts

Gratuity trusts, PRMB Trust, Pension Trust

ii) Other related parties (Key Management Personnel- Functional Directors: existing & retired and Company Secretary):

CMD : Shri Atul Sobti
Functional Directors : S/Shri D. Bandyopadhyay, Amitabh Mathur, S. Biswas, T. Chockalingam, Akhil Joshi (w.e.f. 10.08.2016) & Company Secretary : Shri IP Singh

iii) Details of Transactions and Balances

₹ in Crore

For the year 2016-17	BGGTS	RPCL	NBPPL	TOTAL (including Others)
Purchase of Goods and Services	0.56	-	1.43	1.99
Sales of Goods and services	187.76	129.91	359.14	676.81
Receiving of Services	-	-	8.06	8.06
Rendering of Services	-	105.55	2.43	107.98
Dividend income	12.85	-	-	12.85
Royalty income	1.47	-	-	1.47
Purchase of shares	-	-	-	
Amounts due to BHEL at the end of the year	42.61	472.18	309.34	824.16
Amounts due from BHEL (incl. advances) at the end of the year	0.16	27.55	91.66	119.37
Provision for Doubtful debts	-	-	0.70	0.72
Provision for Doubtful advances	-	-	11.50	11.50

₹ in Crore

For the year 2015-16	BGGTS	RPCL	NBPPL	TOTAL (including Others)
Purchase of Goods and Services	0.85	-	4.47	5.32
Sales of Goods and services	146.42	157.88	709.13	1013.43
Receiving of Services	-	-	19.00	19.00
Rendering of Services	0.06	241.97	53.15	295.18
Dividend income	21.18	-	-	21.18
Royalty income	1.03	-	-	1.03
Purchase of shares	-	257.79	-	257.79
Sale of shares	-	-	-	
Amounts due to BHEL at the end of the year	41.55	595.99	346.25	983.81
Amounts due from BHEL (incl. advances) at the end of the year	0.29	38.02	125.90	164.4
Provision for Doubtful debts	-	0.05	-	0.07

₹ in Crore

Subsidiary Company	2016-17	2015-16
Purchase of Goods and Services	**0.59**	1.00
Sales of Goods and services	**-**	5.33
Interest income	**0.25**	0.17
Purchase of fixed assets		0.54
Amounts due to BHEL at the end of the year	**3.77**	6.20
Amounts due from BHEL (incl. advances) at the end of the year	**1.18**	0.96

₹in Crore

Key Management Personnel (KMP)	2016-17	2015-16
Payment of Salaries	**2.34**	4.20
Sale of Fixed Assets	**0.00**	0.01
Relatives of KMP		
Amounts due to BHEL at the end of the year	**0.00**	0.01
Payment of Salaries	**0.00**	0.20
Details of transactions		
Short-term employee benefits	**1.92**	3.53
Post-employment benefits	**0.42**	0.67
Total remuneration paid	**2.34**	4.20

The CMD and functional directors have been allowed the use of staff car for both duty and non-duty journeys.The ceiling of non duty journey is 1000 kms p.m against recovery of prescribed amount in accordance with terms and condition of appointment. The monetary value of the perquisite for the use of car, if calculated in accordance with the provisions of I.T. Rules 1962 would amount to **₹ 0.02 Crore** (Previous Year ₹ 0.02 Crore)

The company is a central public sector undertaking under the administrative control of Ministry of Heavy Industries and majority of its stake is held by Government of India. The significant transactions are with other PSUs, State owned utilities, Railways etc. which are also controlled by Govt. of India directly or indirectly. The transactions with such company are based on market driven rates at arms length price.

15 a) Movement In Provisions

₹ in Crore

Liquidated Damages	2016-17	2015-16
Opening	**2985.71**	2187.81
Additions	**1506.04**	1040.71
Usage/ Write off/payment	**-84.69**	-6.58
Withdrawal/adjustments	**-525.22**	-236.23
Closing Balance	**3881.84**	2985.71

₹ In Crore

Contractual Obligation	2016-17	2015-16
Opening	**5807.13**	5578.78
Borrowing Cost	**250.70**	278.91
Additions	**759.15**	733.87
PV Adjustment	**-133.63**	-115.62
Usage/ Write off/payment	**-161.45**	-176.80
Withdrawal/adjustments	**-1288.40**	-513.89
Change in estimate and rates	**-5.53**	21.88
Closing Balance	**5227.97**	5807.13

b) Liquidated damages are provided in line with the Accounting Policy of the Company and the same is dealt suitably in the accounts on settlement or otherwise. Contingent liability relating to liquidated damages is shown in Para 2 of Note 39.

c) The provision for contractual obligation is made at the rate of 2.5% of the contract revenue considering the effect of time value of money in line with significant Accounting Policy No. 11 to meet the warranty obligations as per the terms and conditions of the contract. The same is retained till the completion of the warranty obligations of the contract. The actual expenses on warranty obligation may vary from contract to contract and on year to year depending upon the terms and conditions of the respective contract.

16. As per Section 135 of the Companies Act, 2013 read with guidelines issued by DPE, the Company is required to spend, in every financial year, at least two per cent of the average net profits of the Company made during the three immediately preceding financial years in accordance with its CSR Policy. The details of CSR expenses for the year are as under:

₹ in Crore

Particulars		31 March 2017	31 March 2016
A.	Amount required to be spent during the year	**37.50**	110.10
B.	Amount available from previous year	**88.98**	62.94
C.	**Total (A+B)**	**126.48**	173.04
D.	Amount spent during the year on-		
	- Construction/ acquisition of any asset		
	- On purposes other than (i) above	**72.58**	84.06
Total		**72.58**	84.06
Amount carried forward		**53.90**	88.98

a) Amount spent during the year ended 31 March 2017:

₹ in Crore

Particulars	In cash	Yet to be paid in cash	Total
Construction/acquisition of any asset	-	-	-
On purposes other than (i) above	**26.78**	**10.72**	**37.50**

b) Amount spent during the year ended 31 March 2016:

₹ in Crore

Particulars	In cash	Yet to be paid in cash	Total
Construction/acquisition of any asset	-	-	-
On purposes other than (i) above	56.47	53.63	110.10

17. Disclosure as per Ind AS 11 Construction Contracts

a) The disclosures relating to Construction Contracts as per the requirement of Indian Accounting Standard -11 (IndAS-11) Construction Contracts are as follows:

₹ in Crore

	2016-17	2015-16
Contract revenue recognised for the year	**21757.36**	20020.94
In respect of Contract in progress at the end of year :		
The aggregate amount of Cost incurred and recognised profits (less recognised losses) to date	**280975.13**	278528.82
Amount of advance received	**4447.76**	5883.04
Amount of retentions (deferred debts)	**19099.24**	20185.00
In respect of dues from customers after appropriate netting off		
Gross amount due from customer for the contract work as an asset	**2939.99**	3705.90
Gross amount due to customer for the contract work as a liability	**1169.85**	1569.61

b) The estimates of total costs and total revenue in respect of construction contracts in accordance with IndAS-11 Construction Contracts are reviewed and up dated periodically to ascertain the percentage completion for revenue recognition. However, it is impracticable to quantify the impact of change in estimates.

18 Financial Instruments - Accounting Classifications and Fair value measurements

a The Fair value of cash and cash equivalents, bank balances, loans, trade receivables, trade payables and others approximates their carrying amount. Trade receivables are evaluated after taking into consideration for Expected Credit Losses. Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique.

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

b Financial Assets / Liabilities Classification

₹ in Crore

	Carrying Amount		
	As on 31.03.17	As on 31.03.16	As on 01.04.15
Financial Assets at amortised cost			
Trade Receivables	**31863.29**	33557.39	35207.12
Cash & Cash equivalent	**1489.76**	1966.09	2800.01
Other Bank Balances	**9002.03**	8119.90	7011.86
Loans	**216.92**	242.23	195.21
Other Financial Assets	**217.14**	158.24	217.06
Financial Assets at Fair value through Profit & Loss			
Investments (Equity Instruments)	**3.93**	6.67	8.71
Financial Liabilities at amortised cost			
Finance Lease Obligation	**153.51**	207.87	121.99
Trade Payables	**9340.28**	9444.56	9443.13
Other Financial Liabilities	**1572.20**	1685.75	1728.43

₹ in Crore

Financial assets and liabilities measured at fair value- recurring fair value measurements	Level 3 Heirarchy		
	As on 31.03.17	As on 31.03.16	As on 01.04.15
Financial assets:			
Investment in Unquoted Equity Instruments	**3.93**	6.67	8.71

c Valuation Techniques used to determine fair value

Fair value of unquoted equity instruments is determined using Level 3 inputs which include inputs from the financial statements of the investee Company based on Net asset value per share.

Reconciliation of fair value measurement of unquoted equity shares classified as FVTPL assets

₹ in Crore

As at 1st April 2015	8.71
Changes in fair value	-2.04
As at 31st March 2016	6.67
Changes in fair value	-2.74
As at 31st March 2017	3.93

d Financial Risk Management

Objectives and Policies

The company's Financial Risk Management is an integral part of business strategies. The Company is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk, and the Company's management of capital. Further quantitative disclosures are included throughout these financial statements.

e Risk management framework

BHEL has in place a Board approved Risk Management Charter laying down procedures to inform Board members about the risk assessment & minimization. An important purpose of the Charter is to implement a structured and comprehensive risk management system across the company which ensures that the risks are being properly identified and effectively managed. The risk management process includes risk identification, risk assessment, risk evaluation, risk mitigation and regular review & monitoring of risks. BHEL has in place a Board Level Risk Management Committee (BLRMC) with assigned responsibility of reviewing the company's risk governance structure, risk assessment & risk management framework, guidelines, policies and processes. Besides this, Risk Management Steering Committee (RMSC) leads the risk management initiative across the company. RMSC members comprising of Executive Directors/ Functional Heads from Corporate Functions and Business sectors are responsible for adopting & implementing the risk management framework. At the divisional level, Risk Management Committees at the Business Sectors/Regions/Units/functions are responsible for review of risk profiles & risk mitigation plans and their implementation at the respective Units/Regions. Order book reduction due to increase in competition, excess domestic manufacturing capacities and low businesses sentiments are the key risk which is being mitigated through expanding the offerings, diversified product profile and focus on EPC business.

f Financial Risk management

Credit Risk

Credit risk refers to the risk of default on its obligation by the counterparty resulting in a financial loss. The maximum exposure to the credit risk at the reporting date is primarily from trade receivables. BHEL is a project oriented organisation with significant operations from power projects. The customer profile consists of around 75% from Govt. Sectors (SEB's, PSU's, Railways and other govt. departments). The projects are generally funded by Financial Institutions/ banks or payments are covered by Letter of Credit (LC). In respect of private sectors, the payment terms are mainly through LC. On account of adoption of Ind AS 109, the Company uses expected credit loss model to assess the impairment loss or gain. The disclosure of expected credit losses is made elsewhere.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

₹ in Crore

Particulars	31-Mar-17	31-Mar-16	1-Apr-15
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)			
Loans	**216.92**	242.23	195.21
Cash and Cash Equivalents	**1489.76**	1966.09	2800.01
Other Bank Balances	**9002.03**	8119.90	7011.86
Others	**217.14**	158.24	217.06
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL)			
Trade Receivables	**31863.29**	33557.39	35207.12

Concentration of credit risk- Geographical	Percentage of total revenue	
	2017	2016
Within India	**97.00%**	95.33%
Outside India	**3.00%**	4.67%

The company's exposure to credit risk for trade and other receivables by type of counterparty are as follows –

Note	Percentage of total trade receivables	
	2017	2016
State Electricity Boards	**28.11%**	25.85%
Central Public Sector Undertakings	**45.23%**	46.75%
Railways	**1.09%**	1.29%
Govt. Deptt.	**0.49%**	0.28%
Private Parties	**20.47%**	20.41%
Others	**4.61%**	5.42%
	100%	100%

g Impairment losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The company has assets where the counter- parties have sufficient capacity to meet the obligations and where the risk of default is very low.

The movement in the allowance for impairment in respect of loans during the year was as follows:

	₹ in Crore
Balance as at 1 April 2015	**6.57**
Impairment loss recognised / write off/ withdrawl	0.19
Balance as at 31 March 2016	**6.76**
Impairment loss recognised / write off/ withdrawl	11.28
Balance as at 31 March, 2017	**18.04**

(b) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of trade receivables during the year was as follows:

	₹ in Crore
Balance as at 1 April 2015	**4667.78**
Impairment loss recognised	1785.26
Amounts written off/ withdrawl	669.12
Balance as at 31 March 2016	**5783.92**
Impairment loss recognised	1262.32
Amounts written off/ withdrawl	866.37
Balance as at 31 March, 2017	**6179.87**

The Company believes that, apart from the above, no impairment allowance is necessary in respect of any other assets. Credit risk on cash and cash equivalents is limited as we generally invest in deposits with banks and financial institutions with high credit ratings assigned by credit rating agencies.

h Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash. The Company's approach in managing the same is to ensure, as far as possible, sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions.

The company's principal sources of liquidity are cash and cash equivalents, balances with banks and the cash flow that is generated from operations. The company has no outstanding bank borrowings. The company believes that the working capital is sufficient to meet its current requirements. Accordingly, no liquidity risk is perceived.

The following are the contractual maturities of non-derivative financial liabilities, based on contractual cash flows:

₹ in Crore

Financial Liabilities	As at 31.03.17		As at 31.03.16		As at 01.04.15	
Non-derivative financial liabilities	Within 1 year	exceeding 1 year	Within 1 year	exceeding 1 year	Within 1 year	exceeding 1 year
Trade payables	8709.16	631.12	8698.34	746.22	8798.28	644.85
Finance lease obligations	63.96	89.55	81.58	126.29	60.99	61.00
Deposits from contractors and others	510.84	104.71	529.14	123.51	517.16	90.16
Other Payables/liabilities						
Capex dues	116.61		134.31		193.49	
Employee dues	187.11		208.37		322.08	
Other dues	652.93		690.42		605.54	
Total	**10240.61**	**825.38**	**10342.16**	**996.02**	**10497.54**	**796.01**

i Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Company's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return.

The Company is exposed to foreign currency risk on certain transactions that are denominated in a currency other than the entity's functional currency; hence exposures to exchange rate fluctuations arise. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

j Foreign currency risk exposure -: The company's exposure to foreign currency risk at the end of reporting period, are as follows:

(i) The derivative instruments that are hedged and outstanding as on 31.03.2017 is **Nil** (previous year Nil)

(ii) The foreign currency exposures that are not hedged by a derivative instrument or otherwise are as under:

31-Mar-17

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	In Crore	**47.70**	**50.48**	**0.81**	**0.03**	**-**
Liabilities (including advances)		**17.55**	**10.38**	**1.39**	**-**	**-**
		30.15	**40.10**	**(0.58)**	**0.03**	**-**

31-Mar-16

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	In Crore	49.60	58.22	0.81	0.03	-
Liabilities (including advances)		25.81	18.22	1.36		-
		23.79	40.00	(0.55)	0.03	-

(iii) The currency profile as at March 31, 2017 & March 31, 2016 expressed in ₹ are as below:

31-Mar-17

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	₹ In Crore	**3058.67**	**3462.46**	**36.03**	**4.87**	**149.02**
Liabilities (including advances)		**1065.92**	**716.62**	**63.62**		**148.12**
		1,992.75	**2,745.84**	**(27.59)**	**4.87**	**0.90**

31-Mar-16

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	₹ In Crore	3272.10	4336.11	38.74	5.25	179.83
Liabilities (including advances)		1696.06	1362.25	65.74		121.97
		1,576.04	2,973.86	(27.00)	5.25	57.86

Sensitivity analysis

A strengthening of the Indian Rupee, as indicated below, against the USD, Euro, LYD, Oman Riyal and others at 31 March would have increased (decreased) profit or loss by the amounts shown below. This analysis is based on foreign currency exchange rate variances that the Company considered to be reasonably possible at the end of the reporting period. The analysis is performed on the same basis for previous year, albeit that the reasonably possible foreign exchange rate variances were different, as indicated below.

	Impact on Profit or loss (before tax)	
Effect in ₹ Crore	**Strengthening**	**Weakening**
March 31, 2017		
1% movement		
USD	**19.93**	**(19.93)**
Euro	**27.46**	**(27.46)**
Libyan Dinar	**(0.28)**	**0.28**
Oman Riyal	**0.05**	**(0.05)**
Others	**0.01**	**(0.01)**

Effect in ₹ Crore	Impact on Profit or loss (before tax) Strengthening	Weakening
March 31, 2016		
1% movement		
USD	15.76	(15.76)
Euro	29.74	(29.74)
Libyan Dinar	(0.27)	0.27
Oman Riyal	0.05	(0.05)
Others	0.58	(0.58)

k Capital Management

While managing capital, the Company's objective is to safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders.

The Board of Directors monitors the return on capital, which the Company defines as result from operating activities divided by total shareholders' equity. The Board of Directors also monitors the level of dividends to equity shareholders.

The Company's return on capital is 1.54% as at 31.03.2017 in comparison to -2.21% as at 31.03.2016.

The Company monitors capital, using a medium term view and long term view, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Company is not subject to externally imposed capital requirements. The Company's capital structure is managed against the various financial ratios as required to maintain strong credit ratings.

19 The company held and transacted in cash during the period 08.11.2016 to 30.12.2016 as provided in the Table below:

₹ in Crore

Particulars	SBN	Other Denomination Notes	Total
Closing Cash in hand as on 08.11.2016	0.30	0.11	**0.41**
(+) Permitted Receipts	-	21.49	21.49
(-) Permitted Payments	-	17.89	17.89
(-) Amount Deposited in Banks	0.30	3.41	3.71
Closing Cash in hand as on 30.12.2016	-	0.30	**0.30**

20. Dividends

a) The following dividends were declared and paid during the year:

₹ in Crore

	2016-17	2015-16
Final dividend of **₹ 0.40** (Previous year ₹ 0.62) per qualifying equity share	**97.90**	151.75
Interim dividend of **₹ 0.80** (previous year NIL) per qualifying equity share	**195.81**	0

The above final dividend figures exclude tax on dividend of **₹ 19.93 Crore** (previous year ₹ 30.89 Crore)

The above interim dividend figures exclude tax on dividend of **₹ 39.86 Crore** (previous year ₹ NIL Crore)

b) The company has proposed final dividend @ 39% (₹ 0.78 Per share, amounting to ₹ 190.91 Crore) on paid up share capital of ₹ 489.52 Crore out of profit for the year 2016-17. The total payout on account of dividend (₹ 190.91 Crore) alongwith corporate dividend tax (₹ 38.87 Crore) will be ₹ 229.78 Crore.

c) The Board of Directors has authorised to issue the Financial Statements 2016-17 in its meeting held on 29.05.2017.

21. As per SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, the requisite details of loans and advances in the nature of loans, given by the Company are given below:

i) In respect of Subsidiary Company:

₹ in Crore

BHEL Electrical Machines Ltd.	**2016-17**	**2015-16**
Loans and advances in the nature of loans outstanding	**3.00**	3.00
Maximum amount of loans and advances in the nature of loans outstanding during the year	**3.00**	3.00

ii) No loans have been given (other than loans to employees), wherein there is no repayment schedule or repayment is beyond seven years; and

iii) There are no loans and advances in the nature of loans, to firms/companies, in which directors are interested.

22. Assets and Liabilities are classified between Current and Non-current considering 12 months period as operating Cycle.

23. Pending finalisation of agreement for wage/ salary structure due from 1st January, 2017, a provision of ₹ 961 Crore (including one time cumulative impact on a/c of gratuity and leave liability of ₹ 674 Crore) has been made in financial year 2016-17 based on estimates as per third pay revision committee (PRC) recommendation.

24. Marginal Cost of lending rate (MCLR) as applicable to BHEL as at the year end has been considered for working out fair value of consideration and present value of long term provisions.

25. There are net outstanding debts of ₹ 2119 Crore (after adjustment of advances) pertaining to 27 projects on hold due to various reasons like environment clearance, fuel linkage, land acquisition, fund constraints, force majeure, hold imposed by BHEL due to strategic reasons etc. FG/ WIP of ₹ 777 Crore is also lying in these projects. Provision of ₹ 1618 Crore for outstanding debts and ₹ 180 Crore for inventory has been provided till 31.03.2017 against these projects in line with the guidelines in this regard.

26. Previous year's figures have been regrouped/ rearranged wherever considered necessary.

27. Other information

A. Sales, Opening Stocks & Closing Stocks

(₹ in Crore)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.2017
HEP, Bhopal			
SWITCHGEAR, CONTROLGEAR, RECTIFIER, CAPACITORS			
Switchgear-11 kv to 220 kv high speed air blast circuit breakers	221.86	0.92	0.00
	(144.02)	(1.98)	(0.92)
Control Panels	39.96	0.23	0.01
	(31.26)	(0.28)	(0.23)
Industrial controlgear	5.91	0.00	0.00
	(4.54)	(0.01)	(0.00)
Traction controlgear for AC, DC& diesel system	146.55	0.00	0.00
	(122.78)	(2.43)	(0.00)
Rectifiers with Electronics	68.16	0.11	0.00
	(64.15)	(0.31)	(0.11)
Capacitors	21.51	3.32	2.06
	(18.79)	(1.76)	(3.33)
Bushings	35.27	0.41	0.39
	(20.98)	(0.93)	(0.41)
TRANSFORMERS			
Power transformers upto 400 kv	784.36	30.86	79.45
	(748.40)	(21.82)	(30.86)
Instrument, welding ,transformers and reactors	29.06	4.98	2.80
	(12.69)	(1.68)	(4.98)
INDUSTRIAL AND TRACTION MACHINES			
Traction Motors for AC,DC & diesel system, main/ auxiliary generators	503.99	8.52	0.56
	(503.25)	(4.02)	(8.52)
Industrial machines, AC motors upto 1000 HP, DC motors & generators of all types	178.69	29.61	16.20
	(154.92)	(21.65)	(29.61)
HEAVY ROTATING PLANT & TURBINES			
Large electrical machines above 1000 HP	245.31	33.81	21.80
	(204.71)	(11.25)	(33.81)
Water wheel alternators & water turbines & Mini micro turbines & generators	811.92	22.03	18.87
	287.38	8.76	6.44
	(648.19)	(64.74)	(22.04)
	(360.13)	(71.17)	(8.76)
Turbo Alternators & Steam turbines	427.13	20.83	1.88
	(492.11)	(12.55)	(20.83)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.201 7
Heat Exchangers	93.65	12.29	3.14
	(236.68)	(8.11)	(12.29)
Others	78.61	0.04	0.00
	(70.19)	(4.96)	(0.00)
	3979.32	**176.72**	**153.60**
	(3837.79)	(229.65)	(176.72)
TP, Jhansi			
Power transformers and special transformers	481.54	0.00	0.00
	(354.66)	(13.32)	(0.00)
ESP Transformer	59.58	0.00	0.00
	(65.45)	(0.00)	(0.00)
ACEMU Transformer	-6.90	0.00	0.00
	(15.74)	(0.00)	(0.00)
Freight Loco transformers	92.81	0.00	1.24
	(90.59)	(0.30)	(0.00)
Instrument transformers	18.61	0.00	0.00
	(13.69)	(0.00)	(0.00)
Bus Duct	0.02	0.00	0.00
	-(0.20)	(0.00)	(0.00)
Dry Type Transformer	41.12	0.00	0.00
	(23.42)	(0.00)	(0.00)
Diesel Shunters	36.72	0.00	0.00
	(30.51)	(12.03)	(0.00)
Others/Misc.	25.49	0.00	0.00
	(4.19)	(0.00)	(0.00)
	748.99	**0.00**	**1.24**
	(598.06)	(25.64)	(0.00)
HEEP, Haridwar			
Electrical Machines	0.00	0.10	0.10
	(0.00)	(0.12)	(0.10)
Industrial controls panels		0.00	0.00
	(0.00)	(0.00)	(0.00)
Turbo Sets			
Turbine Modules, Turbogenerator modules	2003.55	274.97	240.71
	(2435.56)	(285.16)	(274.97)
Hydro sets	0.00	0.00	0.00
	(0.16)	(0.00)	(0.00)
Super Rapid Gun Mount	103.87	0.00	4.72
	(43.97)	(0.00)	(0.00)
Gas Turbine	0.00	0.00	0.00
	(2.78)	(0.00)	(0.00)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.2017
Others	914.37	40.69	61.27
	(772.38)	(37.37)	(40.69)
	3021.79	**315.76**	**306.80**
	(3254.84)	(322.65)	(315.76)
HPBP, Trichy			
Boilers	6425.87	561.84	433.94
	(5206.96)	(582.66)	(561.84)
Valves	585.36	62.80	38.21
	(716.34)	(59.41)	(62.80)
ATP	176.68	0.08	0.00
	(40.60)	(0.00)	0.08
Income from testing & other services	9.99	0.00	0.00
	(8.12)	(0.00)	(0.00)
Seamless steel tubes	1.43	1.52	16.82
	(4.44)	(9.49)	(1.52)
	7199.33	**626.24**	**488.97**
	(5976.46)	(651.56)	(626.24)
BAP, Ranipet			
Boiler auxiliaries	1870.48	282.99	207.84
	(1424.89)	(307.08)	(282.99)
Income from testing & other services	9.12	0.00	0.00
	(3.59)	(0.00)	(0.00)
Income from external erection & other services	2.67	0.00	0.00
	(3.59)	(0.00)	(0.00)
	1882.27	**282.99**	**207.84**
	(1432.07)	(307.08)	(282.99)
HPEP, Hyderabad			
Utility Sets (60 MW)	384.54	37.64	3.66
	(186.26)	(40.56)	(37.64)
Small & Medium Sets	223.02	6.53	6.53
	(156.39)	(15.45)	(6.53)
Pumps and heaters	925.12	16.89	15.15
	(774.56)	(34.58)	(16.89)
Compressors	118.66	3.46	3.46
	(245.08)	(3.46)	(3.46)
Gas Turbine	720.44	9.50	9.50
	(368.23)	(9.50)	(9.50)
Bowl Mills	453.15		
	(526.92)	(4.44)	(0.00)
Erection Income	0.00	0.00	0.00
	(38.19)	(0.00)	(0.00)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.2017
Breakers	9.78	0.00	0.00
	(6.79)	(0.00)	(0.00)
Oil Rigs	20.73	0.00	0.00
	(133.56)	(0.00)	(0.00)
Others (Services)	33.47		
	2888.91	**74.02**	**38.30**
	(2435.99)	(107.99)	(74.02)
ISG, Bengaluru			
Other Services	917.34	0.00	0.00
	(804.33)	(0.00)	(0.00)
	917.34	**0.00**	**0.00**
	(804.33)	(0.00)	(0.00)
EDN, Bengaluru			
Power devices	0.04	0.39	0.39
	(0.82)	(0.39)	(0.39)
Photovoltaics	687.33	0.23	4.27
	(424.71)	(13.81)	(0.23)
Control Equipments	1022.24	30.84	17.53
	(955.06)	(10.93)	(30.84)
Simulators (Defence Electronics)	38.71	0.00	0.00
	(0.00)	(0.00)	(0.00)
	1748.32	**31.46**	**22.19**
	(1380.59)	(25.13)	(31.46)
EPD, Bengaluru			
Insulators & bushings	96.96	15.44	8.89
	(83.31)	(9.21)	(15.44)
Ceralin	42.12	7.91	3.17
	(39.13)	(4.56)	(7.91)
Control Panel	85.44	5.17	2.22
	(28.85)	(2.95)	(5.17)
SPV	11.85	0.00	5.86
	(0.00)	(0.00)	(0.00)
Income from testing &	0.24	0.00	0.00
other services	(0.25)	(0.00)	(0.00)
	236.61	**28.52**	**20.14**
	(151.53)	(16.72)	(28.52)
Power Group			
Income from erection & Other services & spares	4748.97	-53.75	-7.06
	(5011.72)	-(5.59)	-(53.75)
	4748.97	**-53.75**	**-7.06**
	(5011.72)	-(5.59)	-(53.75)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.2017
IP, Jagdishpur			
Insulators	88.58	20.22	13.04
	(60.88)	(14.27)	(20.22)
Ceralin	18.81	5.17	0.18
	(28.01)	(2.70)	(5.17)
	107.39	**25.39**	**13.22**
	(88.89)	(16.97)	(25.39)
IVP Goindwal			
Industrial Valves	0.51	14.76	12.06
	(0.00)	(9.17)	(14.76)
Wall Blowers	2.00	0.17	0.09
	(0.00)	(0.06)	(0.17)
Girder Pin Connection	2.11	0.00	0.00
	(0.00)	(0.00)	(0.00)
Fuel Pipe Coupling	0.06	0.00	0.30
	(0.00)	(0.00)	(0.00)
Pipe Collar	0.03	0.00	0.03
	(0.00)	(0.00)	(0.00)
	4.71	**14.93**	**12.48**
	(0.00)	(9.23)	(14.93)
CFP, Rudrapur			
Busduct Project	133.92	12.14	2.71
	(136.74)	(15.41)	(12.14)
Solar Roof Top & Pump	3.62	0.00	0.00
	(0.00)	(0.00)	(0.00)
	137.54	**12.14**	**2.71**
	(136.74)	(15.41)	(12.14)
HERP, Varanasi			
Spares & Repairs for Boiler/ Turbine & Auxiliaries	173.69	4.55	2.60
	(125.12)	(2.91)	(4.55)
	173.69	**4.55**	**2.60**
	(125.12)	(2.91)	(4.55)
Transmission Business Group			
Spares (Including Services)	591.42	2.49	3.33
	(488.93)	(5.84)	(2.49)
	591.42	**2.49**	**3.33**
	(488.93)	(5.84)	(2.49)
EMRP, Mumbai			
Repair & Project work	13.30	0.06	0.06
	(23.44)	(0.07)	(0.06)
	13.30	**0.06**	**0.06**
	(23.44)	(0.07)	(0.06)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.2017
FP, Jagdishpur			
Fabricated items	54.33	0.00	0.60
	(38.62)	(0.00)	(0.00)
	54.33	**0.00**	**0.60**
	(38.62)	(0.00)	(0.00)
CSU, Jagdishpur			
Samplings	0.00	0.00	0.23
	(0.00)	(0.00)	(0.00)
	0.00	**0.00**	**0.23**
	(0.00)	(0.00)	(0.00)
International Operations			
Income from Sales (Revenue Recognition Adjustment)	61.82	0.00	0.00
	(20.54)	-(0.10)	(0.00)
	61.82	**0.00**	**0.00**
	(20.54)	-(0.10)	(0.00)
Industry Sector			
Income from Sales (Revenue Recognition Adjustment)	7.70	-0.12	-0.24
	-(17.68)	-(2.11)	-(0.12)
	7.70	**-0.12**	**-0.24**
	-(17.68)	-(2.11)	-(0.12)
PE&SD			
Industrial sets	0.95	0.00	0.00
	(1.21)	(0.00)	(0.00)
Gas Turbine	2.66	0.00	0.00
	(2.73)	(0.00)	(0.00)
Thermal sets	230.80	0.00	0.64
	(111.64)	(0.00)	(0.00)
Compressors	7.61	0.00	0.00
	(2.55)	(0.00)	(0.00)
	242.02	**0.00**	**0.64**
	(118.13)	(0.00)	(0.00)
RMSG			
DG Sets & Erection services	131.85	0.00	0.00
	(132.50)	(0.00)	(0.00)
	131.85	**0.00**	**0.00**
	(132.50)	(0.00)	(0.00)
HPVP			
Boilers	24.51	26.41	25.28
	(28.55)	(14.05)	(26.41)
Cryogenics			
	0.00	0.00	0.00
	(26.77)	(0.00)	(0.00)

Product	Sales during the year 2016-17	Op. Stock of Fin. Goods 1.4.2016	Cl. Stock of Fin. Goods 31.3.2017
Others	6.50	0.00	0.00
	(4.41)	(0.00)	(0.00)
	31.01	**26.41**	**25.28**
	(59.73)	(14.05)	(26.41)
CFFP Hardwar			
Steel Casting	14.04	0.00	0.97
	(3.14)	(0.00)	(0.00)
NF Castings	0.03	0.00	0.00
	(0.05)	(0.00)	(0.00)
Steel Forging : Medium	0.93	0.74	0.00
	(12.54)	(0.63)	(0.74)
Steel Forging-Heavy	0.00	0.00	0.00
	(2.38)	(0.00)	(0.00)
	15.00	**0.74**	**0.97**
	(18.10)	(0.63)	(0.74)
Others	**-7.98**	**0.00**	0.00
	-(16.82)	(0.00)	(0.00)
Fair Value adjustment	**-95.22**		
	-(49.53)		
	28840.42	**1568.55**	**1293.90**
	(26050.07)	(1743.74)	(1568.55)

B. Value of imports

(₹ in Crore)

Particulars	2016-17	2015-16
CIF basis		
Raw materials	**900.98**	1727.42
Components and spare parts	**2130.31**	2240.63
Capital goods	**152.65**	40.49

C. Expenditure in foreign currency

(₹ in Crore)

	Particulars	2016-17	2015-16
i)	Royalty	**102.81**	88.07
ii)	Know-how	**3.90**	9.93
iii)	Professional consultation fee	**8.72**	14.82
iv)	Interest and others (incl. on foreign sites)	**35.88**	72.08
v)	Dividend :@		
	a) number of non-resident shareholders	**8124**	7051
	b) number of shares held	**363057067**	387021028
	c) gross amount of dividend	**14.52**	24.00
	d) year to which dividend relates	**2015-16**	2014-15
		(Final Dividend)	(Final Dividend)
	Interim Dividend :@		
	a) number of non-resident shareholders	**8314**	0.00
	b) number of shares held	**382818549**	0.00
	c) gross amount of dividend	**30.63**	0.00
	d) year to which dividend relates	**2016-17**	2015-16
		(Interim Dividend)	(Interim Dividend)

'@ The company has not made any remittance of dividend in foreign currency. The payment have been made to the Bankers/ Power of Attorney holders of Non-Resident shareholders and as such the exact amount of dividend remitted by them in foreign currency cannot be ascertained,

D. Value of consumption of raw materials, components, stores & spare parts.

(₹ in Crore)

	2016-17	2015-16
i) #Imported (including custom duty)	**4091.19**	4017.42
ii) Indigenous	**9437.22**	9406.68
iii) Percentage of total consumption		
Imported	**30**	30
Indigenous	**70**	70

E. Earnings in foreign exchange

(₹ in Crore)

	2016-17	2015-16
Export of goods (FOB basis)	**292.52**	286.63
Interest	**0.00**	1.54
Erection & other services	**64.55**	60.85
Miscellaneous	**0.00**	3.22
Foreign exchange on deemed exports (incl. domestic contracts and SEZ export)	**2132.48**	3297.61

Includes canalised items wherever ascertained

F. Statement for raw materials and components consumed

(₹ in Crore)

	2016-17	2015-16
Group of materials		
Ferrous materials	**2021.85**	2311.13
Non-ferrous materials	**277.64**	296.60
Insulating materials	**142.81**	159.08
Insulated cables and Magnet wires	**57.33**	33.14
Components	**5955.69**	5547.26
Others	**4647.49**	4654.65
	13102.81	13001.86

28. Operating Segment

The Segments have been identified as 'Power' and 'Industry' based on the orders booked by the respective business sectors. The order booked by International operation group is taken to Power or Industry as the case may be.

The Compnay's Committee of functional Directors has been identified as Chief Operating Decision maker (CODM).

		For the year ended 31.3.2017			For the year ended 31.3.2016		
		Power	Industry	Total	Power	Industry	Total
I.	**SEGMENT REVENUE**						
a.	Segment Revenue	**22794.78**	**6045.64**	**28840.42**	20222.74	5827.33	26050.07
b.	Operating Revenue-External	**22794.78**	**6045.64**	**28840.42**	20222.74	5827.33	26050.07
II.	**SEGMENT RESULTS**						
a.	Segment Results	**2534.58**	**244.15**	**2778.73**	129.74	-194.95	-65.21
b.	Unallocated expenses (Net of income)			**1800.29**			739.48
c.	Profit before finance cost & Incometax (a) - (b)			**978.44**			-804.69
d.	Finance cost (Includes unwinding of Interest)			**350.61**			359.48
e.	Net Profit before Income Tax (c) - (d)			**627.83**			-1164.17
f.	Income Tax			**131.97**			-454.57
g.	Net Profit after Income Tax			**495.86**			-709.60
III	**ASSETS & LIABILITIES**						
a.	Segment Assets	**37602.38**	**9188.25**	**46790.63**	42020.25	9482.82	51503.07
b.	Common Assets			**14439.57**			13659.87
c.	Total Assets			**61230.20**			65162.94
d.	Segment Liabilities	**23250.32**	**5480.91**	**28731.23**	25973.19	5806.40	31779.59
e.	Common Liabilities			**204.53**			1202.27
f.	Total Liabilities			**28935.76**			32981.86
IV	**OTHER INFORMATION**						
a.	Capital Expenditure	**76.70**	**201.27**		347.33	117.53	
b.	Depreciation & Amortization	**657.83**	**142.15**		697.25	177.04	
c.	Non Cash Expenses (other than depreciation & amortization)	**455.17**	**202.28**		1781.49	506.04	
	GEOGRAPHICAL SEGMENTS						
		Within India	**Outside India**	**Total**	**Within India**	**Outside India**	**Total**
1	Net Sales / Revenue from Operations	**27974.43**	**865.99**	**28840.42**	24834.06	1216.01	26050.07
2	Non- Current Assets (PPE & Intangible Assets)	**3758.37**	**5.85**	**3764.22**	4274.12	6.24	4280.36
3	Capital Expenditure	**329.48**	**2.98**	**332.46**	555.71	0.35	556.06
	Major Customer- Details of Revenue from Single Customer exceeding 10% of total revenue of the BHEL						
		Power	**Industry**	**Total**	Power	Industry	Total
	PSUs	**7050.71**	**1916.08**	**8966.79**	6715.22	988.37	7703.59
	Railways	**0.00**	**987.29**	**987.29**	0.00	793.11	793.11

Independent Auditor's Report

TO

THE MEMBERS OF

BHARAT HEAVY ELECTRICALS LIMITED

Report on the Ind AS Consolidated Financial Statements

We have audited the accompanying consolidated Ind AS financial statements of **BHARAT HEAVY ELECTRICALS LIMITED** hereinafter referred to as "the Holding Company") and its subsidiary (the Holding Company and its one subsidiary together referred to as "the Group") and four jointly controlled entities, comprising of the Consolidated Balance Sheet as at 31st March, 2017, the Consolidated Statement of Profit and Loss (including Other Comprehensive Income), the Consolidated Cash Flow Statement and the Statement of Changes in Equity for the year then ended, and a summary of the significant accounting policies and other explanatory information (hereinafter referred to as "the consolidated financial statements").

Management's Responsibility for the Consolidated Financial Statements

The Holding Company's Board of Directors is responsible for the preparation of these Ind AS consolidated financial statements in terms of the requirements of the Companies Act, 2013 (hereinafter referred to as "the Act") that give a true and fair view of the consolidated financial position, consolidated financial performance (including other comprehensive income), consolidated cash flows and changes in equity of the Group including its Jointly controlled entities in accordance with the accounting principles generally accepted in India, including the Indian Accounting Standards prescribed under Section 133 of the Act, read with Rule 7 of the Companies (Accounts) Rules, 2014. The respective Board of Directors of the companies included in the Group and jointly controlled entities are responsible for maintenance of adequate accounting records in accordance with the provisions of the Act for safeguarding the assets of the Group and for preventing and detecting frauds and other irregularities; the selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and the design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error, which have been used for the purpose of preparation of the consolidated financial statements by the Directors of the Holding Company, as aforesaid.

Auditor's Responsibility

Our responsibility is to express an opinion on these consolidated Ind AS financial statements based on our audit.

While conducting the audit, we have taken into account the provisions of the Act, the accounting and auditing standards and matters which are required to be included in the audit report under the provisions of the Act and the Rules made there under.

We conducted our audit in accordance with the Standards on Auditing specified under Section 143(10) of the Act. Those Standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and the disclosures in the Ind AS consolidated financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the Ind AS consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal financial control relevant to the Holding Company's preparation of the consolidated Ind AS financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of the accounting policies used and the reasonableness of the accounting estimates made by the Holding Company's Board of Directors, as well as evaluating the overall presentation of the consolidated financial statements. We believe that the audit evidence obtained by us and the audit evidence obtained by the other auditors in terms of their reports referred to in sub-paragraph (a) of the Other Matters paragraph below, is sufficient and appropriate to provide a basis for our audit opinion on the consolidated Ind AS financial statements.

Opinion

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid consolidated Ind AS financial statements give the information required by the Act in the manner so required and give a true and fair view in conformity with

the accounting principles generally accepted in India, of the consolidated state of affairs of the Group and its jointly controlled entities as at 31st March, 2017, and their consolidated profit including other comprehensive income, their consolidated cash flows and consolidated changes in equity for the year ended on that date.

Other Matters

(a) The comparative consolidated financial information of the Group for the year ended 31st March 2016 and the transition date opening balance sheet as at 1st April 2015 included in these consolidated Ind AS financial statements, are based on the previously issued statutory consolidated financial statements prepared in accordance with the Companies (Accounting Standards) Rules, 2006 audited by the predecessor auditor / by us and their report for the year ended 31st March 2016 and 31st March 2015 dated 27th May 2016 and 26th May 2015 respectively expressed an unmodified opinion on those consolidated financial statements, as adjusted for the differences in the accounting principles adopted by the Company on transition to the Ind AS, which have been audited by us.

(b) We did not audit the financial statements of one subsidiary, whose financial statements reflect total assets of ₹ 26.57 Crore as at 31st March, 2017, total revenues of ₹ 32.30 Crore and net cash flows amounting to ₹ 0.56 Crore for the year ended on that date. The Consolidated Financial Statements also includes the group's share of net profit of ₹ 24 Crore for the year ended 31st March, 2017 as considered in the Consolidated Financial Statements in respect of one jointly controlled entity. These financial statements have been audited by other auditors whose reports have been furnished to us by the Management and our opinion on the consolidated Ind AS financial statements, in so far as it relates to the amounts and disclosures included in respect of these subsidiary and jointly controlled entity, and our report in terms of sub-sections (3) and (11) of Section 143 of the Act, insofar as it relates to the aforesaid subsidiary and jointly controlled entity , is based solely on the reports of the other auditors.

(c) We did not audit the financial statements of three jointly controlled entities. The Consolidated Financial Statements also includes the group's share of net loss of ₹ 44.92 Crore for the year ended 31st March, 2017 as considered in the Consolidated Financial Statements in respect of these jointly controlled entities. These financial statements are unaudited and have been furnished to us by the Management and our opinion on the consolidated Ind AS financial statements, in so far as it relates to the amounts and disclosures included in respect of these jointly controlled entities, and our report in terms of sub-sections (3) and (11) of Section 143 of the Act in so far as it relates to the aforesaid jointly controlled entities, is based solely on such unaudited financial statements. In our opinion and according to the information and explanations given to us by the Management, these financial statements are not material to the Group.

Our opinion on the consolidated Ind AS financial statements, and our report on Other Legal and Regulatory Requirements below, is not modified in respect of the above matters with respect to our reliance on the work done and the reports of the other auditors and the financial statements certified by the Management.

The accounts of Power plant Performance Improvements Ltd. a Joint Venture of BHEL have not been consolidated as the said company is under liquidation and full amount of equity investment has been provided. The accounts of Latur Power Company Ltd. have not been consolidated as the said company is under liquidation. However full amount of equity investment in Latur Power Company Ltd. has been realized.

Report on Other Legal and Regulatory Requirements

1. As required by Section143 (3) of the Act, we report, to the extent applicable, that:

   (a) We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purposes of our audit of the aforesaid consolidated Ind AS financial statements.

   (b) In our opinion, proper books of account as required by law relating to preparation of the aforesaid consolidated Ind AS financial statements have been kept so far as it appears from our examination of those books and the reports of the other auditors.

   (c) The Consolidated Balance Sheet, the Consolidated Statement of Profit and Loss including other comprehensive income, the Consolidated Cash Flow Statement and Statement of Changes in Equity dealt with by this Report are in agreement with the relevant books of account maintained for the purpose of preparation of the consolidated Ind AS financial statements.

   (d) In our opinion, the aforesaid consolidated Ind AS financial statements comply with the Indian Accounting Standards specified under Section 133 of the Act, read with Rule 7 of the Companies (Accounts) Rules, 2014.

   (e) Being a Government Company, Section 164(2) of the Companies Act, 2013 regarding 'whether any director is disqualified from being appointed

as a director' is not applicable to the Company in view of Notification no. G.S.R. 463(E) dtd. 05-06-2015.

(f) With respect to the adequacy of the internal financial controls over financial reporting of the Group and jointly controlled entities and the operating effectiveness of such controls, refer to our separate Report in "Annexure A".

(g) With respect to the other matters to be included in the Auditor's Report in accordance with Rule 11 of the Companies (Audit and Auditor's) Rules, 2014, in our opinion and to the best of our information and according to the explanations given to us:

i. The consolidated Ind AS financial statements disclose the impact of pending litigations on the consolidated financial position of the Group and jointly controlled entities– Refer Note 40 (2) to the consolidated Ind AS financial statements.

ii. Provision has been made in the consolidated Ind AS financial statements, as required under the applicable law or Indian accounting standards, for material foreseeable losses, if any, on long-term contracts – Refer Note 40 (18) to the consolidated Ind AS financial statements in respect of such items as it relates to the Group and jointly controlled entities and

iii. There has been no delay in transferring amounts, required to be transferred, to the Investor Education and Protection Fund by the Holding Company and its subsidiary companies and jointly controlled companies incorporated in India.

iv. The Group has provided requisite disclosures in the financial statements as to holdings as well as dealings in specified Bank Notes during the period from 8th November , 2016 to 30th December, 2016. Based on audit procedures and relying on the management representation, we report that the disclosures are in accordance with books of account maintained by the company and as produced by the management –Refer Note 40(20) to the Ind AS financial statements .

For Wahi & Gupta	For DSP & Associates	For S B A & Company
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

ANNEXURE "A"

To the Independent Auditor's Report of Even Date on The Consolidated Ind AS Financial Statements of Bharat Heavy Electricals Limited

Report on the Internal Financial Controls under Clause (i) of Sub-section 3 of Section 143 of the Companies Act, 2013 ("the Act")

In conjunction with our audit of the consolidated Ind AS financial statements of the Company as of and for the year ended March 31st, 2017, we have audited the internal financial controls over financial reporting of Bharat Heavy Electricals Limited (hereinafter referred to as "the Holding Company") as of that date. We did not audit the financial statements of one Subsidiary and four Jointly Control Entities out of which one Jointly Control Entity and one Subsidiary have been audited by the other Auditor and three Jointly Control Entities are unaudited.

Management's Responsibility for Internal Financial Controls

The respective Board of Directors of the Holding company, its subsidiary company and jointly controlled companies, which are companies incorporated in India, are responsible for establishing and maintaining internal financial controls based on the internal control over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting issued by the Institute of Chartered Accountants of India (ICAI). These responsibilities include the design, implementation and maintenance of adequate internal financial controls that were operating effectively for ensuring the orderly and efficient conduct of its business, including adherence to the respective company's policies, the safeguarding of its assets, the prevention and detection of frauds and errors, the accuracy and completeness of the accounting records, and the timely preparation of reliable financial information, as required under the Companies Act, 2013.

Auditor's Responsibility

Our responsibility is to express an opinion on the Company's internal financial controls over financial reporting based on our audit. We conducted our audit in accordance with the Guidance Note on Audit of Internal Financial Controls Over Financial Reporting (the "Guidance Note") issued by the ICAI and the Standards on Auditing, issued by ICAI and deemed to be prescribed under section 143(10) of the Companies Act, 2013, to the extent applicable to an audit of internal financial controls, both issued by the Institute of Chartered Accountants of India. Those Standards and the Guidance Note require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether adequate internal financial controls over financial reporting was established and maintained and if such controls operated effectively in all material respects.

Our audit involves performing procedures to obtain audit evidence about the adequacy of the internal financial controls system over financial reporting and their operating effectiveness. Our audit of internal financial controls over financial reporting included obtaining an understanding of internal financial controls over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error.

We believe that the audit evidence we have obtained and the audit evidence obtained by the other auditors in terms of their reports referred to in the Other Matters paragraph below, is sufficient and appropriate to provide a basis for our audit opinion on the Company's internal financial controls system over financial reporting.

Meaning of Internal Financial Controls Over Financial Reporting

A company's internal financial control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal financial control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted

accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorisations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorised acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Inherent Limitations of Internal Financial Controls Over Financial Reporting

Because of the inherent limitations of internal financial controls over financial reporting, including the possibility of collusion or improper management override of controls, material misstatements due to error or fraud may occur and not be detected. Also, projections of any evaluation of the internal financial controls over financial reporting to future periods are subject to the risk that the internal financial control over financial reporting may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Opinion

In our opinion, the Holding Company, its one subsidiary company and four jointly controlled entities, which are entities incorporated in India, have, in all material respects, an adequate internal financial controls system over financial reporting and such internal financial controls over financial reporting were operating effectively as at March 31st, 2017, based on the internal control over financial reporting criteria established by the Company considering the essential components of internal control stated in the Guidance Note on 'Audit of Internal Financial Controls Over Financial Reporting' issued by the Institute of Chartered Accountants of India.

Other Matters

Our aforesaid reports under Section 143(3)(i) of the Act on the adequacy and operating effectiveness of the internal financial controls over financial reporting insofar as it relates to one subsidiary company and four jointly controlled entities, which are companies incorporated in India, is based on the corresponding report of the auditor of one jointly controlled entity and one subsidiary company incorporated in India and management certificate of other three jointly controlled entities incorporated in India.

For Wahi & Gupta Chartered Accountants **FRN-002263N**	**For DSP & Associates** Chartered Accountants **FRN-006791N**	**For S B A & Company** Chartered Accountants **FRN-004651C**
(CA Y.K. Gupta) Partner **M.No. 016020**	**(CA Sanjay Jain)** Partner **M.No. 084906**	**(CA. Sita Ram Soni)** Partner **M.No. 072381**

Place: New Delhi
Date: May 29, 2017

गोपनीय

No./MAB-III/Rep./26-06/CFS-BHEL /2017-18/ 449

भारतीय लेखा एवं लेखा परीक्षा विभाग
कार्यालय
प्रधान निदेशक, वाणिज्यिक लेखा परीक्षा
एवं पदेन सदस्य लेखा परीक्षा बोर्ड-III
नई दिल्ली

Indian Audit & Accounts Department
OFFICE OF THE
PRINCIPAL DIRECTOR OF COMMERCIAL AUDIT
& EX-OFFICIO MEMBER, AUDIT BOARD-III
NEW DELHI

दिनांक/Dated: 13/7/2017

सेवा में,

अध्यक्ष एवं प्रबंध निदेशक,
भारत हैवी इलैक्ट्रिकल्स लिमिटेड,
नई दिल्ली

विषय: 31मार्च 2017 को समाप्त वर्ष के लिय भारत हैवी इलैक्ट्रिकल्स लिमिटेड के Consolidated Financial Statements (CFS) पर कम्पनी अधिनियम 2013 की धारा 143(6)(b) एवं धारा 129(4) के अन्तर्गत भारत के नियंत्रक-महालेखापरीक्षक की टिप्पणियॉं

महोदय,

मै भारत हैवी इलैक्ट्रिकल्स लिमिटेड के 31 मार्च 2017 को समाप्त वर्ष के Consolidated Financial Statements (CFS) पर कंपनी अधिनियम 2013 की धारा 143(6)(b) एवं धारा 129(4) के अंतर्गत भारत के नियंत्रक-महालेखापरीक्षक की टिप्पणियाँ अग्रेषित कर रही हूँ। कृपया इस पत्र की संलग्नकों सहित प्राप्ति की पावती भेजी जाए।

भवदीया,

रितिका

(रितिका भाटिया)
प्रधान निदेशक

संलग्नः यथोपरि

छठा एवंसातवाँ तल, ऐनैक्सीबिल्डिंग, 10,बहादुरशाहज़फरमार्ग,नईदिल्ली- 110002
6th& 7th floor, Annexe Building, 10 Bahadur Shah Zafar Marg, New Delhi -110002
Tel: 23239227, FAX: 23239211 e-mail: mabnewdelhi3@cag.gov.in

COMMENTS OF THE COMPTROLLER AND AUDITOR GENERAL OF INDIA UNDER SECTION 143(6)(b) READ WITH SECTION 129(4) OF THE COMPANIES ACT, 2013 ON THE CONSOLIDATED FINANCIAL STATEMENTS OF BHARAT HEAVY ELECTRICALS LIMITED FOR THE YEAR ENDED 31 MARCH 2017

The preparation of consolidated financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2017 in accordance with the financial reporting framework prescribed under the Companies Act, 2013(Act) is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under Section 139(5) read with Section 129(4) of the Act are responsible for expressing opinion on the financial statements under Section 143 read with Section 129(4) of the Act based on independent audit in accordance with the standards on auditing prescribed under Section 143(10) of the Act. This is stated to have been done by them vide their Audit Report dated 29 May 2017.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit under Section 143(6)(a) read with Section 129(4) of the Act of the consolidated financial statements of Bharat Heavy Electricals Limited for the year ended 31 March 2017. We conducted a supplementary audit of the financial statements of Bharat Heavy Electricals Limited, but did not conduct supplementary audit of the financial statements of subsidiaries, associate companies and jointly controlled entities listed in Annexure I for the year ended on that date. Further, Section 139(5) and 143(6)(b) of the Act are not applicable to BHEL-GE Gas Turbine Services Limited, being private entity for appointment of their statutory auditor nor for conduct of supplementary audit. Accordingly, C&AG has neither appointed the statutory auditor nor conducted the supplementary audit of the company. This supplementary audit has been carried out independently without access to the working papers of the statutory auditors and is limited primarily to inquiries of the statutory auditors and company personnel and a selective examination of some of the accounting records.

On the basis of my audit nothing significant has come to my knowledge which would give rise to any comment upon or supplement to statutory auditors' report.

For and on behalf of the
Comptroller & Auditor General of India

Ritika Bhatia

(Ritika Bhatia)
Principal Director of Commercial Audit &
Ex-officio Member, Audit Board – III,
New Delhi

Place: New Delhi
Date: 13 July 2017

ANNEXURE I

List of subsidiaries, associate companies and jointly controlled entities whose financial statements were not audited by the Comptroller and Auditor General of India

A. Subsidiaries Companies

1. BHEL Electrical Machines Limited

B. Joint Ventures Companies

1. NTPC-BHEL Power Projects Private Limited
2. Dada Dhuniwale Khandwa Power Limited
3. Raichur Power Corporation Limited

Consolidated Balance Sheet

as at 31.03.2017

(₹ in Crore)

Particulars	Note No.	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
I. ASSETS							
(1) Non Current Assets							
(a) Property, Plant and equipment	2 (a)		**3496.43**		3831.35		3987.02
(b) Capital work-in-progress	2 (b)		**159.51**		309.46		501.99
(c) Intangible assets	3 (a)		**104.76**		137.36		158.30
(d) Intangible assets under development	3 (b)		**8.83**		8.38		17.30
(e) Investment accounted for using equity method	4		**753.20**		789.75		537.27
(f) Financial assets							
(i) Investments	4 (a)	**3.93**		6.67		8.71	
(ii) Trade receivables	5	**9789.14**		11128.22		11240.02	
(iii) Loans	6	**78.04**		65.62		104.26	
(iv) Others	7	**0.16**	**9871.27**	0.62	11201.13	2.15	11355.14
(g) Deferred tax assets (net)	8		**3846.19**		3662.72		2816.08
(h) Other non-current assets	9		**203.30**		240.40		528.49
			18443.49		20180.55		19901.59
(2) Current assets							
(a) Inventories	10		**7379.67**		9608.44		10108.77
(b) Financial Assets							
(i) Trade receivables	11	**22077.58**		22438.89		23970.19	
(ii) Cash and Cash equivalents	12	**1490.79**		1966.10		2800.02	
(iii) Bank balances other than (ii) above	13	**9002.76**		8121.10		7012.14	
(iv) Loans	14	**135.78**		173.81		91.22	
(v) Others	15	**219.02**	**32925.93**	159.02	32858.92	215.66	34089.23
(c) Current Tax Assets (Net)	16		**873.09**		582.96		628.48
(d) Other current assets	17		**1725.27**		2089.59		2143.73
			42903.96		45139.91		46970.21
TOTAL ASSETS			**61347.45**		65320.46		66871.80
II. EQUITY AND LIABILITIES							
Equity							
(a) Equity Share capital	18		**489.52**		489.52		489.52
(b) Other Equity (refer SOCIE)			**31899.47**		31824.63		32787.76
Equity attributable to owner of the parent			**32388.99**		32314.15		33277.28
Non-controlling interests (refer SOCIE)			**-1.08**		0.78		2.23
Total Equity			**32387.91**		**32314.93**		**33279.51**

(₹ in Crore)

Particulars	Note No.	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
LIABILITIES							
(1) Non-current liabilities							
(a) Financial Liabilities							
(i) Borrowings	19	**89.55**		126.29		61.00	
(ii) Trade Payables	20	**633.10**		747.69		645.03	
(iii) Other financial liabilities	21	**104.71**	**827.36**	123.51	997.49	90.16	796.19
(b) Provisions	22		**5006.19**		7629.61		6335.02
(c) Other non-currnet liabilities	23		**2983.36**		3637.78		4559.44
			8816.91		12264.88		11690.65
(2) Current Liabilities							
(a) Financial Liabilities							
(i) Borrowings	24	**6.03**		3.53		2.14	
(ii) Trade payables	25	**8715.88**		8708.44		8803.17	
(iii) Other financial liabilities	26	**1532.39**	**10254.30**	1644.64	10356.61	1699.59	10504.90
(b) Other current liablities	27		**5694.55**		7046.43		7414.20
(c) Provisions	28		**4193.78**		3337.61		3982.54
			20142.63		20740.65		21901.64
TOTAL EQUITY AND LIABILITIES			**61347.45**		65320.46		66871.80
Significant Accounting Policies	1						
Other Notes to Accounts	40						

See Accompanying Notes to the Consolidated financial statements.

For and on behalf of Board of Directors

(I. P. Singh)
Company Secretary

(T. Chockalingam)
Director (Finance)

(Atul Sobti)
Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta
Chartered Accountants
FRN-002263N

(CA Y.K. Gupta)
Partner
M.No. 016020

For DSP & Associates
Chartered Accountants
FRN-006791N

(CA Sanjay Jain)
Partner
M.No. 084906

For S B A & Company
Chartered Accountants
FRN-004651C

(CA. Sita Ram Soni)
Partner
M.No. 072381

Place: New Delhi
Date: May 29, 2017

Consolidated Statement of Profit and Loss

for the period ended 31st March, 2017

(₹ in Crore)

Particulars		Note No.	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
I.	**Revenue from operations**	29		**29506.57**		26678.52
II.	**Other income**	30		**983.36**		1476.43
III.	**Total Income (I to II)**			**30489.93**		28154.95
IV.	**Expenses**					
	Cost of material consumption, erection and engineering expenses	31		**16590.68**		16406.72
	Changes in inventories of finished goods and work in progress	32		**992.94**		210.05
	Employee benefits expenses	33		**5408.00**		5387.33
	Depreciation & amortisation expense	2.1/3.1		**849.79**		936.70
	Other expenses of manufacture, administration, selling and distribution	34		**4438.91**		4037.97
	Provisions (net)	35		**1274.22**		2039.91
	Finance costs	36		**351.30**		359.81
	Less: Cost of jobs done for internal use			**25.04**		46.57
	Total expenses (IV)			**29880.80**		29331.92
V.	**Profit /(loss) before exceptional items and tax (III- VI)**			**609.13**		-1176.97
VI.	**Share of net profit of Joint Ventures accounted for using equity method**			**-23.56**		15.84
VII.	**Add/ Less : Exceptional items**			**0.00**		0.00
VIII.	**Profit (loss) before tax (V+VI-VII)**			**585.57**		-1161.13
IX.	**Tax expense**	37				
	a) Current Tax		**298.35**		391.08	
	b) Deferred Tax		**-167.96**	**130.39**	-846.63	-455.55
X.	**Profit (loss) for the period from continuing operations (VIII-IX)**			**455.18**		-705.58
XI.	**Other Comprehensive income**	38				
	Items that will not be reclassifed to profit or loss (Net of Tax)			**-28.56**		-76.38
	Share of OCI of JV accounted for using equity method			**-0.14**		0.02
XII.	**Total comprehensive income for the period (X+XI)**			**426.48**		-781.94
	(comprising profit (loss) and other comprehensive income for the period)					
	Attributable to:					
	Equity holders of the parent			**428.34**		-780.49
	Non-controlling interest			**-1.86**		-1.45
				426.48		-781.94

(₹ in Crore)

Particulars		Note No.	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
XIII	**Total Other comprehensive income for the year (XI)**			
	Attributable to:			
	Equity holders of the parent		**-28.92**	-76.36
	Non-controlling interest		**0.22**	0.00
			-28.70	-76.36
XIV	**Total profit for the year (X)**			
	Equity holders of the parent		**457.26**	-704.13
	Non-controlling interest		**-2.08**	-1.45
			455.18	-705.58
XV	**Earnings per equity share (for continuing operations) attributable to equity holders of parent**			
	(1) Basic	39	**1.86**	-2.88
	(2) Diluted		**1.86**	-2.88
	Face value per share in (INR)		**2.00**	2.00
	Significant Accounting Policies	1		
	Other notes to accounts	40		

See accompanying notes to the Consolidated Financial Statements.

For and on behalf of Board of Directors

(I. P. Singh)	**(T. Chockalingam)**	**(Atul Sobti)**
Company Secretary	Director (Finance)	Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Consolidated Statements of changes in Equity (SOCIE)

as at 31st March, 2017

a. Equity Share Capital

(₹ in Crore)

Equity shares of INR 2 each issued, subscribed and fully paid	Number of shares			
	2016-17	2015-16	2016-17	2015-16
Balance as at the beginning of the period	**2,447,600,000**	2,447,600,000	**489.52**	489.52
Issue of share capital	**-**	-	**-**	-
Balance as at the end of the period	**2,447,600,000**	2,447,600,000	**489.52**	489.52

b. Other Equity

For the year ended 31st March, 2017

(₹ in Crore)

	Attributable to owner of the parent					
	Reserves and surplus			Other items of Other Comprehensive Income	Total Other Equity	Non Controlling Interest
	Capital Reserve	General Reserves	Retained Earnings			
Opening Balance as at 01.04.2016 (as per Ind AS)	**35.18**	**32,349.72**	**(483.91)**	**(76.36)**	**31,824.63**	**0.78**
Add/(less) Total Comprehensive Income for the year			457.26	(28.92)	**428.34**	(1.86)
Less: Dividend (interim dividend ₹ 195.81 Crore)			293.71		**293.71**	
Less: Corporate dividend tax (tax on interim dividend ₹ 39.86 Crore)			59.79		**59.79**	
Less :Transfer to general reserve			-		-	
Balance as at 31st March, 2017	**35.18**	**32,349.72**	**(380.15)**	**(105.28)**	**31,899.47**	**(1.08)**

For the year ended 31st March, 2016

(₹ in Crore)

	Reserves and surplus			Other items of Other Comprehensive Income	Total Other Equity	Non Controlling Interest
	Capital Reserve	General Reserves	Retained Earnings			
Opening Balance as at 01.04.2015 (as per Ind AS)	**35.18**	**32,349.72**	**402.86**		**32,787.76**	**2.23**
Add/(less) Total Comprehensive Income for the year			(704.13)	(76.36)	(780.49)	(1.45)
Less: Dividend (interim dividend ₹ Nil)			151.75		151.75	

Less: Corporate dividend tax (tax on interim dividend ₹ Nil)			30.89		30.89	
Less :Transfer to general reserve					-	
Balance as at 31st March, 2016 (as per Ind AS)	**35.18**	**32,349.72**	**(483.91)**	**(76.36)**	**31,824.63**	**0.78**

As at transition date 01st April, 2015

(₹ in Crore)

	Reserves and surplus			Other items of Other Comprehensive Income	Total Other Equity	Non Controlling Interest
	Capital Reserve	General Reserves	Retained Earnings			
Balance as at 31 March, 2015 (as per IGAAP)	**36.56**	**32,383.12**	**1,297.40**		**33,717.08**	**2.23**
Add: Proposed Dividend adjustment			182.64		182.64	
Add/ (less) :Transition Impact due to Ind AS adjustment	(1.38)		(1,116.18)		(1,117.56)	
Add/(less): Transition Impact of JVs & subsidiary		(33.40)	39.00		5.60	
Opening Balance as at 01.04.2015 (as per Ind AS)	**35.18**	**32,349.72**	**402.86**	**-**	**32,787.76**	**2.23**

For and on behalf of Board of Directors

(I. P. Singh)
Company Secretary

(T. Chockalingam)
Director (Finance)

(Atul Sobti)
Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Consolidated Statement of Cash flow

for the year ended 31.03.2017

(₹ in Crore)

		2016-17	2015-16
A.	**Cash Flow from Operating Activities**		
	Profit for the year (Before Tax)	**585.57**	-1161.13
	Adjustment for		
	Depreciation and Amortisation	**849.79**	936.70
	Bad Debts & LD written off and unrealised gain/loss	**173.89**	25.63
	Dividend Income	**-21.02**	-12.97
	Finance Income	**-677.34**	-762.87
	Profit/Loss on disposal of property, plant and equipment	**-2.36**	-5.75
	Finance cost (including unwinding of interest)	**351.30**	359.81
	Fair value adjustment	**-20.02**	-69.27
	Provisions (Net)	**1274.22**	2039.91
	Operating Profit before Working Capital changes	**2514.03**	**1350.06**
	Adjustment for		
	Trade Receivables	**60.36**	-225.09
	Financial Assets- Loans & others	**27.41**	-38.09
	Other Assets	**406.95**	341.94
	Inventories	**2228.77**	500.33
	Trade Payable	**-90.79**	30.53
	Other financial liabilities	**-113.28**	-41.91
	Other liabilities & provisions	**-3908.48**	-1238.04
	Cash generated from operations	**1124.97**	**679.73**
	Direct Taxes Paid (Net of refund)	**-588.90**	-305.29
	Net Cash Inflow/(Outflow) from Operating Activities	**536.07**	**374.44**
B.	**Cash Flow from Investing Activities**		
	Purchase of property,plant and equipment	**-355.67**	-584.99
	Proceeds from Sale of property, plant and equipment	**19.73**	32.39
	Investment in Joint Ventures (net) (Including adjustment)	**36.55**	-252.48
	Interest & Dividend income	**637.02**	828.15
	Net Cash used in Investing Activities	**-337.63**	**-23.07**
C.	**Cash Flow from Financing Activities**		
	Proceeds/Repayment of Short term & Long term Borrowings	**-50.08**	86.00
	Dividend Paid (including tax on dividend)	**-353.67**	-183.09
	Finance cost	**-63.60**	-25.38
	Net Cash used in Financing Activities	**467.35**	**122.47**
D.	**Net Increase/(Decrease) in Cash and Cash Equivalents**	**406.35**	**275.04**
	Opening Balance of Cash and Cash Equivalents	**10087.20**	9812.16
	Closing Balance of Cash and Cash Equivalents (Refer Note no.12 & 13)	**10493.55**	10087.20

Note:

1: Cash & Cash Equivalents consists of cash and bank balance

2: Previous year's figures have been regrouped/rearranged whereever necessary.

3: Cash & Cash Equivalents includes **₹ 3.10 Crore** (previous year ₹ 3.27 Crore) unclaimed dividend lying in designated bank accounts

For and on behalf of Board of Directors

(I. P. Singh)	**(T. Chockalingam)**	**(Atul Sobti)**
Company Secretary	Director (Finance)	Chairman and Managing Director

As per our report of even date attached

For Wahi & Gupta	**For DSP & Associates**	**For S B A & Company**
Chartered Accountants	Chartered Accountants	Chartered Accountants
FRN-002263N	**FRN-006791N**	**FRN-004651C**
(CA Y.K. Gupta)	**(CA Sanjay Jain)**	**(CA. Sita Ram Soni)**
Partner	Partner	Partner
M.No. 016020	**M.No. 084906**	**M.No. 072381**

Place: New Delhi
Date: May 29, 2017

Note no. 1

Significant Accounting Policies (Consolidated Financial Statement)

1. Basis of preparation of Financial Statements

a) Statement of Compliance

The financial statements have been prepared in accordance with Indian Accounting Standards (Ind-AS) as notified by Ministry of Corporate Affairs under the Companies (Indian Accounting Standards) Rules, 2015 and subsequent amendments thereof as well as with the additional requirements applicable to financial statements as set forth in Companies Act, 2013.

b) Basis of measurement

The financial statements have been prepared on a going concern basis and on an accrual method of accounting. Historical cost is used in preparation of the financial statements except as otherwise mentioned in the policy.

c) Functional and presentation currency

The financial statements are prepared in INR, which is the Company's functional currency.

d) Use of Estimates and Judgments

The preparation of the financial statements in conformity with Ind AS requires management to make judgements, estimates and assumptions that affect the application of accounting policies and the reported amounts of assets, liabilities, income and expenses. Actual results may differ from these estimates. Estimates and underlying assumptions are reviewed on an ongoing basis. Revisions to accounting estimates are recognised prospectively.

Critical estimates and judgements in applying accounting policies

Estimates and judgements made in applying accounting policies that have significant effect on the amounts recognized in the financial statements are as follows:

i) Revenue

The Company uses the percentage-of-completion method in accounting the revenue in respect of construction contracts. Use of the percentage-of-completion method requires the Company to estimate total contract revenue, and remaining cost to complete the contract at the end of each reporting date. The financial reporting of these contracts depends on estimates that are assessed continually during the term of these contracts, therefore recognized revenue and profit are subject to change as the contract progresses to completion.

ii) Property, plant and equipment

The charge in respect of periodic depreciation is derived after estimating the asset's expected useful life and the expected residual value at the end of its life. The depreciation method, useful lives and residual values of Company's assets are estimated by management at the time the asset is acquired and reviewed during each financial year.

iii) Employee Benefit Plans

Employee defined benefit plans and long term benefit plans are measured on the basis of actuarial assumptions. However, any changes in these assumptions may have impact on the reported amount of obligation and expenses.

iv) Provisions and contingencies

Assessments undertaken in recognising provisions and contingencies have been made as per the best judgement of the management based on the current available information.

2. Property Plant & Equipment (PPE)

Property, plant and equipment are carried at cost less accumulated depreciation and accumulated impairment losses, if any.

Depreciation on property, plant and equipment (other than those used abroad under contract) is charged on straight-line method as per the useful life prescribed in Schedule II of the Companies Act, 2013, except where estimated useful life is shorter based on technically assessed estimated useful life as shown hereunder:-

	(Years)		
	Single shift	Double Shift	Triple shift
General plant & machinery	12.5	8.33	6.25
Automatic/semi-automatic machines	10	6.67	5
Erection equipment, Capital tools & tackles	5		
Railway sidings, Locomotives & wagons	12.5		
Drainage, sewerage & water supply	30		
Servers and networks	5		
Solar Power Generation Plant	25		

Depreciation methods, useful lives and residual values are reviewed in each financial year and changes, if any, are accounted for prospectively. Leased assets are depreciated over the shorter of the lease term and their useful lives unless it is reasonably certain that the Company will obtain ownership by the end of the lease term. Freehold land is not depreciated.

Property Plant & Equipment costing ₹ 10,000/- or less and those whose written down value as at the beginning of the year is ₹ 10,000/- or less, are depreciated fully.

At erection/project sites: The cost of roads, bridges and culverts is fully amortized over the tenure of the contract, while sheds, railway sidings, electrical installations and other similar enabling works (other than temporary structures) are depreciated over the tenure of the contract after retaining residual value, if any.

Assets used outside India pursuant to long term contracts are depreciated over the duration of the initial contract.

Temporary structures are fully depreciated in the year of construction.

Significant components with different useful lives are accounted for and depreciated separately.

In the case of BHEL-GE Gas Turbine Services Pvt. Ltd.

Depreciation is provided on the straight line method over the estimated useful life of the assets, which are equal/lower than the rates prescribed under Schedule II of the Companies Act, 2013. In order to reflect the actual usage of assets, the estimated useful lives of the assets is based on a technical evaluation.

Asset category	Estimated useful life (Years)
Plant and machinery	2-15
Electrical installations	3-10
Furniture and fixtures	1-8
Computers	3
Office equipment	3-5

Assets under finance lease are amortised over the lease term or the useful life, whichever is shorter. Assets individually costing ₹ 5000 or less, are depreciated fully in the year of purchase.

In the case of Dada Dhuniwale Khandwa Power Ltd.

Depreciation on Property, Plant and Equipment is charged on straight-line method as per the useful life prescribed in Schedule II of the Companies Act, 2013.

In the case of Raichur Power Corporation Ltd.

Depreciation is provided on straight line method at the rates specified in the CERC Regulation 2009. In respect of assets for which rates are not specified in the CERC regulations, at the rates specified under Schedule II of the Companies Act, 2013.

Assets are depreciated to the extent of 90% of the cost and 10% is retained as residual value.

Depreciation on additions to assets is provided for the full year irrespective of the date of addition. Depreciation is not charged on assets sold/dismantled in the year of sale/discard/dismantling. Individual assets costing up to ₹ 5000 are fully depreciated in the year in which they are put to use.

In the case of NTPC-BHEL Power Projects Pvt. Ltd.

Depreciation on Property, Plant and Equipment is charged on straight line method as per the useful life prescribed in Schedule-II of the Companies Act, 2013.

3. Leases

At the inception of an arrangement, the Company determines whether such an arrangement is or contains a lease.

Upon initial recognition, assets taken on finance lease are capitalized at an amount equal to the lower of their fair value and the present value of the minimum lease payments. Minimum lease payments made under finance leases are apportioned between the finance expense and the reduction of the outstanding liability. The finance expense is allocated to each period during the lease term so as to produce a constant periodic rate of interest on the remaining balance of the liability.

Lease rentals arising under operating leases are recognized in the statement of profit or loss on a straight-line basis over the lease term except where the increment in lease rentals is in line with general rate of inflation.

For assets given on finance lease, the Company recognizes finance income over the lease term using effective interest rate method. Initial direct costs incurred are included in the initial measurement of the finance lease receivable and reduce the amount of income recognized over the lease term.

Lease income arising from operating lease is recognized as income over the lease period on a straight line basis except where the periodic increase in lease rentals is in line with expected general inflation.

4. Intangible assets

Intangible items costing more than ₹ 10000/- are evaluated for capitalization and are carried at cost less accumulated amortization and accumulated impairment, if any.

Intangible assets are amortised in Statement of Profit or Loss on a straight-line method over the estimated useful lives from the date that they are available for use. The estimated useful lives for the intangible assets are as follows:

Software	3 years
Others	10 years.

Intangible assets having WDV ₹ 10000/- or less at the beginning of the year are amortized fully.

Amortization period and amortization methods are reviewed in each financial year and changes, if any, are accounted for prospectively.

Expenditure on research activities is recognized in profit or loss as incurred. Expenditure on development activities is capitalized only if the expenditure can be measured reliably, the product or process is technically and commercially feasible, future economic benefits are probable and the company intends to and has sufficient resources to complete development and to use or sell the asset. The expenditure capitalized includes the cost of materials, direct labour, overhead costs that are directly attributable to preparing the asset for its intended use, and borrowing costs, if any.

Assets acquired for purposes of research and development are capitalized.

5. Borrowing costs

Borrowing costs directly attributable to the acquisition, construction or production of qualifying assets, are added to the cost of such assets.

An asset that necessarily takes a substantial period of time , considered as more than twelve months, to get ready for its intended use or sale is a qualifying asset for the purpose.

All other borrowing costs are recognized in the statement of profit or loss in the period in which they are incurred.

6. Inventories

Inventory is valued at cost or net realizable value, whichever is lower. In respect of valuation of finished goods and work-in-progress, cost means factory cost. In respect of raw material, components, loose tools, stores and spares cost means weighted average cost.

7. Revenue Recognition

Revenue is recognized when it is probable that the economic benefits associated with the transaction will flow to the entity and the amount of revenue can be measured reliably.

A. Construction Contracts

Revenue from construction contracts including long term service contracts are recognized using the "percentage of completion" method. Percentage of completion is determined based on contract costs incurred to date as a percentage of total estimated contract costs required to complete the contract.

B. Other than Construction Contracts

Revenue is recognised when the significant risks and rewards of ownership have been transferred to the customer in accordance with the contract. Revenue from services other than long term service contracts are recognised when services are performed as per contract.

Other Income

- Dividend income is recognized in profit or loss on the date on which the Company's right to receive payment is established.
- Interest Income is recognized using effective interest rate method.
- Claims for export incentives/ duty drawbacks, duty refunds and insurance are accounted for on accrual basis.

In the case of BHEL-GE Gas Turbine Services Pvt. Ltd.

Multiple deliverable arrangements:

When two or more revenue generating activities or deliverables are provided under a single arrangement each deliverable is considered to be a separate

unit of account and is accounted for separately. The allocation of consideration from a revenue arrangement to its separate units of account is based on the relative fair value of each unit.

8. Foreign currency Translation/Transaction

Transaction in foreign currencies are recorded at the exchange rate prevailing on the date of the transaction.

Foreign currency denominated monetary assets and liabilities are translated into the functional currency at exchange rates in effect at the end of each reporting period. Foreign exchange gains or losses arising from settlement and translations are recognized in the statement of profit or loss.

Non-monetary assets and non-monetary liabilities denominated in a foreign currency and measured at historical cost are translated at the exchange rate prevailing at the date of transaction.

9. Employee Benefits

Defined contribution plans

The Company's contribution to Pension fund including Family Pension Fund for the employees is covered under defined contribution plan and is recognized as employee benefit expense in statement of profit or loss in the periods during which services are rendered by employees.

Defined benefit plans

The Company's gratuity scheme, provident fund scheme, travel claims on retirement and post-retirement medical facility scheme are in the nature of defined benefit plans.

The liability recognized in the balance sheet in respect of these defined benefit plan is the present value of the defined benefit obligation at the end of the reporting period less the fair value of plan assets, if any. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using an appropriate government bond rate that have terms to maturity approximating to the terms of the related liability.

Remeasurements comprising actuarial gains and losses as well as the difference between the return on plan assets and the amounts included in net interest on the net defined benefits liability (asset) are recognized in other comprehensive income, net of income tax.

Other expenses related to defined benefit plans are recognized in statement of profit or loss.

Long term Leave Liability

The Company measures the expected cost of accumulating compensated absences as the additional amount expected to be paid as a result of the unused entitlement that has accumulated at the end of the reporting period. Expense on non-accumulating compensated absences is recognized in the period in which the absences occur. The Company records a liability for accumulated balance based on actuarial valuation determined using projected unit credit method. Remeasurements and other expenses related to long term benefit plans are recognized in statement of profit or loss.

10. Provisions

(i) Claims for liquidated damages against the Company are recognized in the financial statements based on the management's assessment of the probable outcome with reference to the available information supplemented by experience of similar transactions.

(ii) For construction contracts the company provides warranty cost at 2.5% of the revenue progressively as and when it recognises the revenue and maintain the same throughout the warranty period. For other contracts, provision for contractual obligations in respect of contracts under warranty at the year end is maintained at 2.5% of the value of contract. In the case of contracts for supply of more than a single product 2.5% of the value of each completed product is provided.

(iii) When it is probable that total contract costs will exceed total contract revenue, the expected loss is recognised immediately.

(iv) Other provisions are recognized if, as a result of a past event, the Company has a present legal or constructive obligation that can be estimated reliably, and it is probable that an outflow of economic benefits will be required to settle the obligation.

However, where the effect of time value of money is material, provisions are determined and maintained by discounting the expected future cash flows, wherever applicable.

11. Government Grants

Government grants are recognized only when there is reasonable assurance that the conditions attached to them shall be complied with, and the grants will be received. Non monetary grants are accounted at Fair Value of assets and are treated as deferred income. Deferred income is recognized in the statement

of profit or loss on a systematic and rational basis over the useful life of the asset. Government grants related to revenue are recognized on a systematic basis in the statement of profit or loss over the periods necessary to match them with the related costs which they are intended to compensate.

12. Income Taxes

Income tax expense comprises current tax and deferred tax. Income tax expense is recognized in statement of profit or loss except to the extent that it relates to items recognized in other comprehensive income or directly in equity.

Current tax is the expected tax payable on the taxable income for the year, using tax rates (tax laws) enacted or substantively enacted by the end of the reporting period and includes adjustment on account of tax in respect of previous years.

Deferred tax is recognized using the balance sheet method, providing for temporary difference between the carrying amount of an asset or liability in the balance sheet and its tax base.

Deferred tax is measured at the tax rates that are expected to apply when the temporary differences are either realised or settled, based on the laws that have been enacted or substantively enacted by the end of reporting period.

A deferred tax asset is recognized to the extent that it is probable that future taxable profit will be available against which the temporary difference can be utilized.

The carrying amount of Deferred tax assets are reviewed at each reporting period and are reduced to the extent that it is no longer probable that the related tax benefit will be realized.

Additional Income tax that arise from the distribution of dividends are recognized at the same time when the liability to pay the related dividend is recognized.

13. Impairment of Assets

Impairment of financial assets

The loss allowance in respect of trade receivables and lease receivables are measured at an amount equal to lifetime expected credit losses.

The loss allowance in respect of all other financial assets, which are required to be impaired, are measured at an amount equal to lifetime expected credit losses if the credit risk on that financial instrument has increased significantly since initial recognition. However, if, at the reporting date, the credit risk on a financial instrument has not increased significantly since initial recognition, the loss allowance is measured at an amount equal to 12-month expected credit losses.

Impairment of Non- Financial Assets

The carrying amount of cash generating units is reviewed at each reporting date where there is any indication of impairment. An impairment loss is recognized in the statement of profit and loss where the carrying amount exceeds the recoverable amount of the cash generating units. Impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists.

An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

14. Segment Reporting

Revenue and expenses are identified to segments on the basis of their relationship to the operating activities of the segment. Revenue, expenses, assets and liabilities which are not allocable to segments on a reasonable basis, are included under "Unallocated revenue/ expenses/ assets/ liabilities".

15. Financial Instruments

i) Non-derivative financial instruments

Non derivative financial instruments are classified as

- Financial assets, measured at (a) amortized cost and (b) fair value through Profit and Loss ("FVTPL").
- Financial liabilities carried at amortized cost.

Initially, all financial instruments are recognized at their fair value. Transaction costs are included in determining the carrying amount, if the financial instruments are not measured at FVTPL. Financial assets are derecognized when substantial risks and rewards of ownership of the financial asset have been transferred. In cases where substantial risks and rewards of ownership of the financial assets are neither transferred nor retained, financial assets are derecognized only when the Company has not retained control over the financial asset. Financial liabilities are derecognized when contractual obligations are discharged or cancelled or expired.

Non-derivative financial assets are subsequently measured as below:

A. Amortized cost –

"Financial Instruments at amortized cost" are subsequently measured at amortized cost using the effective interest rate (EIR) method. Amortized cost is calculated by taking into account any discount or premium on acquisition and fees or costs that are an integral part of the EIR. The EIR amortization is recognized in the profit or loss. The losses arising from impairment are recognized in the profit or loss.

B. FVTPL Category –

Financial instruments classified in this category are subsequently carried at fair value with changes recorded in the statement of profit or loss. Directly attributable transaction costs are recognised in P&L as incurred.

Non-derivative financial liabilities are subsequently measured as below:

Subsequent to initial recognition, non–derivative financial liabilities are measured at amortised cost using the effective interest method.

ii) Derivative financial instruments

Embedded derivatives, if any, having material impact, are separated from the host contract and accounted for separately if the economic characteristics and risks of the host contract and the embedded derivative are not closely related, a separate instrument with the same terms as the embedded derivative would meet the definition of a derivative, and the combined instrument is not measured at fair value through profit or loss.

Derivatives are recognized and measured initially at fair value. Attributable transaction cost are recognized in statement of profit or loss as cost. Subsequent to initial recognition, derivatives are measured at fair value through profit or loss.

16. Cash and Cash Equivalent

Cash and cash equivalents comprise cash at bank and on hand. It includes term deposits and other short-term money market deposits with original maturities of three months or less that are readily convertible to known amounts of cash and which are subject to an insignificant risk of changes in value.

Note no. 2

Property, Plant and Equipment (PPE)

(₹ in Crore)

Particulars				Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
(a)	**Tangible assets**					
	Gross block			**5181.51**	4717.94	3987.02
	Less: Accumulated depreciation			**1685.08**	886.59	
	Net Block			**3496.43**	3831.35	3987.02
	Company has opted exemption under Ind AS 101, and accordingly carrying value as on 31.03.2015 has been considered as deemed cost.					
	Land and buildings includes					
a	i)	Acres of land for which formal transfer/lease deed have not been executed	Acres	**8198.00**	8933.27	8939.61
		Net Block of above	₹ Crore	**73.62**	72.62	74.20
	ii)	Number of flats for which formal transfer/lease deed have not been executed	Nos.	**12**	12	12
		Net Block of above	₹ Crore	**1.28**	1.33	1.37
	iii)	Including acres of land for which the cost paid is provisional; registration charges and stamp duty, net of provision already made would be accounted for on payment.	Acres	**528.18**	528.18	528.18
		Net Block of above	₹ Crore	**66.37**	67.09	67.81
b.		acres of land leased to Ministry of Defence, Govt. of India Departments & others	Acres	**30.37**	30.60	30.60
c.		acres of land being used by Ministry of Defence (BEG) for which licencing agreement is valid upto 30.11.2018	Acres	**180.00**	180.00	180.00
d.		acres of land is under adverse possession/ encroachment.	Acres	**759.89**	811.72	586.05
e.		1242.71 acres (P.Y. 1242.71 acres) of land pending mutation at Haridwar for which legal action is in process. It includes land measuring 878.85 acres which is in BHEL's possession but has been wrongly got mutated in the name of SIDCUL Govt of Uttarakhand in the year 2004 & 2007				

Particulars			Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
	f.	Possession of Land admeasuring extant Ac 1-02 Guntas was taken in favour of Railways Vikas Nigam Ltd, a Govt Enterprise by district administration during 2016-17. pending appeal for enhanced compensation the transfer deed of the subject land is not executed. (Cost of land of (b), (c), (d), (e) & (f) above mentioned is not material)			
		The impact of providing 100% depreciation on PPE upto ₹ 10,000/- each on profit, without considering the impact of earlier years is as under:			
		100% depreciation on PPE upto ₹ 10,000/- charged off in the accounting year.	₹ Crore	**6.88**	8.50	8.26
		Normal depreciation on above.	₹ Crore	**1.93**	2.47	1.42
		Excess amount charged.	₹ Crore	**4.95**	6.03	6.84
(b)	**Capital work in progress**					
	Construction work-in-progress -Civil			**40.47**	83.03	72.78
	Construction stores (including in transit)			**2.33**	3.93	2.88
	Plant & machinery and other equipments					
		-Under Erection/ Fabrication/awaiting erection		**84.25**	152.55	353.41
		-In transit		**32.46**	69.95	72.92
				159.51	309.46	501.99

Note no. 3

Intangible assets

(₹ in Crore)

Particulars		Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
(a)	**Intangible assets**			
	Gross block	**198.04**	185.10	158.30
	Less: Accumulated amortisation	**93.28**	47.74	
	Net block	**104.76**	137.36	158.30
(b)	**Intangible assets under development**	**8.83**	8.38	17.30
		8.83	8.38	17.30

Company has opted exemption under Ind AS 101, and accordingly carrying value as on 31.03.2015 has been considered as deemed cost.

NOTE 2.1

Property Plant and Equipment

(₹ in Crore)

	Gross Block					Depreciation				Net Block	
	Deemed Cost as on Transition date 01.04.2015 $	Cost as at 01.04.2016	Additions/ Adjustments	Deductions/ Adjustments	Total Cost as at 31.03.2017	Accumulated Depreciation as at 01.04.2016	Depreciation / Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2017	Net Block as at 31.03.2017	Net Block as at 31.03.2016
Factory/ Office Complex											
OWNED											
Freehold land(including development expenses)	25.45	25.45			25.45					25.45	25.45
Roads, bridges & culverts	10.62	10.65	0.05		10.70	4.54	3.02		7.56	3.14	6.11
Buildings	1101.17	1223.71	59.06	1.00	1281.77	82.96	98.10	-0.03	181.03	1100.75	1140.75
Drainage, Sewerage & water supply	15.75	15.75	0.03		15.78	0.74	0.69		1.43	14.35	15.01
Railway Siding	8.73	8.74			8.74	0.93	0.93		1.86	6.88	7.81
Locomotives & Wagons	28.08	28.09	0.25		28.34	3.13	3.14		6.27	22.07	24.96
Plant & Machinery	2179.80	2506.02	309.96	1.56	2814.42	623.96	539.86	-1.58	1162.24	1652.18	1882.06
Electronic Data Processing Equipment	4.30	35.16	18.36		53.52	19.54	6.64	15.66	41.84	11.68	15.62
Electrical Installations	175.16	186.63	18.51		205.14	29.75	30.58	-0.10	60.23	144.91	156.88
Construction Equipment	48.45	61.40	3.28		64.68	23.03	18.76	0.14	41.93	22.75	38.37
Vehicles	6.21	9.22	1.08	0.24	10.06	1.47	1.46	-0.22	2.71	7.35	7.75
Furniture & fixtures	33.54	41.29	10.70	0.37	51.62	7.75	8.13	-0.13	15.75	35.87	33.54
Office and Other equipments	60.29	74.80	11.98	0.86	85.92	29.64	21.33	-0.76	50.21	35.71	45.16
Fixed Assets costing upto ₹ 10,000/-		3.94	3.24	0.41	6.77	3.94	3.31	-0.48	6.77	0.00	0.00
LEASED											
Leasehold land (including development expenses)	58.60	58.60			58.60	0.64	0.64		1.28	57.32	57.96
Leasehold buildings	1.63	1.63			1.63	0.05	0.06		0.11	1.52	1.58
EDP Equipment	50.66	171.05	9.91	18.51	162.45	36.84	51.32	-18.18	69.98	92.47	134.21
Office & other equipment	1.62	13.04	0.79		13.83	1.87	2.82		4.69	9.14	11.17
Others	0.14	0.10			0.10	0.10			0.10		
Township/ Residential											
OWNED											
Freehold land(including development expenses)	2.54	2.54			2.54					2.54	2.54
Roads, bridges & culverts	1.86	1.92			1.92	0.70	0.49		1.19	0.73	1.22
Buildings	132.64	147.22	11.11		158.33	7.81	5.96		13.77	144.56	139.41
Drainage, Sewerage & water supply	6.86	11.08			11.08	0.55	0.59		1.14	9.94	10.53
Plant & Machinery	10.09	11.26	25.21		36.47	2.24	2.57		4.81	31.66	9.02
Electronic Data Processing Equipment	0.03	0.03			0.03	0.02	0.01		0.03		0.01
Electrical Installations	4.70	5.95	2.02		7.97	1.21	0.80	-0.08	1.93	6.04	4.74
Vehicles	0.02	0.01			0.01					0.01	0.01
Furniture & fixtures	0.64	1.53	0.26		1.79	0.26	0.34		0.60	1.19	1.27
Office & other equipemnts	6.54	8.15	0.88	0.18	8.85	2.46	1.96	-0.14	4.28	4.57	5.69

(₹ in Crore)

	Gross Block					Depreciation				Net Block	
	Deemed Cost as on Transition date 01.04.2015 $	Cost as at 01.04.2016	Additions/ Adjustments	Deductions/ Adjustments	Total Cost as at 31.03.2017	Accumulated Depreciation as at 01.04.2016	Depreciation / Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2017	Net Block as at 31.03.2017	Net Block as at 31.03.2016
Fixed Assets costing upto ₹ 10000/-		0.20	0.02		0.22	0.20	0.02		0.22		
Assets taken on lease											
Leasehold land (including development expenses)	10.89	52.25			52.25	0.18	0.76		0.94	51.31	52.07
Office & other equipment		0.52			0.52	0.08	0.10		0.18	0.34	0.44
TOTAL	**3987.02**	**4717.94**	**486.70**	**23.13**	**5181.51**	**886.59**	**804.38**	**-5.90**	**1685.08**	**3496.43**	**3831.35**
Previous year		**3987.02**	**750.82**	**19.90**	**4717.94**		**888.04**	**-1.45**	**886.59**	**3831.35**	**3987.02**
The details of R&D capital items included in Property plant and Equipment & Intangible											
Plant & Machinery & other Equipments	179.96	208.60	22.28	-0.14	231.02	45.96	43.45	-0.94	88.47	142.55	162.64
Building	22.68	22.76			21.27	1.23	1.07		2.30	18.97	21.53

Gross Block as at 31.03.2017 includes assets condemned and retired from active use **₹ 0.12 Crore** (Previous year ₹ 0.37 Crore)

Net Block as at 31.03.2017 includes assets condemned and retired from active use **₹ 0.12 Crore** (Previous year ₹ 0.37 Crore)

Gross Block excludes cost of assets purchased out of grant received from Govt of India for research as executing agency since the property does not vest with the Company.	**31.03.2017**	**31.03.2016**
	49.31	49.31

There is no impairment loss in Property plant and Equipment & Intangible asset during the year.

$ Gross block as on 31.03.2015 was at ₹ 12254.52 Crore as per previous Indian GAAP.

NOTE 3.1

Intangible Assets

(₹ in Crore)

	Gross Block					Depreciation				Net Block	
	Deemed Cost as on Transition date 01.04.2015 $	Cost as at 01.04.2016	Additions/ Adjustments	Deductions/ Adjustments	Total Cost as at 31.03.2017	Accumulated Depreciation as at 01.04.2016	Depreciation / Amortisation for the year	Depreciation Adjustments	Accumulated Depreciation as at 31.03.2017	Net Block as at 31.03.2017	Net Block as at 31.03.2016
Internally Developed											
-Others	19.97	34.84	7.75		42.59	11.87	12.53		24.40	18.19	23.29
Others											
-Software	18.94	22.03	4.23		26.26	11.63	8.51		20.14	6.12	10.08
-Technical Know-how	109.12	117.96	0.96		118.92	20.39	20.52		40.91	78.01	97.57
-Others	10.27	10.27			10.27	3.85	3.85	0.13	7.83	2.44	6.42
TOTAL	**158.30**	**185.10**	**12.94**		**198.04**	**47.74**	**45.41**	**0.13**	**93.28**	**104.76**	**137.36**
Previous year		**158.30**	**35.91**	**9.11**	**185.10**		**48.66**	**-0.92**	**47.74**	**137.36**	**158.30**

$ Gross block as at 31.03.2015 was at ₹ 444.43 Crore as per previous Indian GAAP.

Note no. 4

Investment accounted for using equity method

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
BHEL-GE Gas Turbine Services Private Limited						
Opening Net asset		**120.92**		116.56		
Profit for the year		**21.38**		25.52		
Other Comprehensive Income		**(0.14)**		0.02		
Dividends Paid		**12.85**		21.18		
Closing Net assets		**129.31**		120.92		116.56
NTPC-BHEL Power Projects Private Limited						
Opening Net asset		**59.77**		66.32		
Profit for the year		**(38.46)**		(6.55)		
Other Comprehensive Income		**0.00**		0.00		
Dividends Paid		**0.00**		0.00		
Closing Net assets		**21.31**		59.77		66.32
Dada Dhuniwale Khandwa Power Limited						
Opening Net asset		**19.74**		22.88		
Profit for the year		**(1.55)**		(3.14)		
Other Comprehensive Income		**0.00**		0.00		
Dividends Paid		**0.00**		0.00		
Closing Net assets		**18.19**		19.74		22.88
Raichur Power Corporation limited						
Opening Net asset		**589.32**		331.52		
Equity investment		**0.00**		257.80		
Profit for the year		**-4.93**		0.00		
Other Comprehensive Income		**0.00**		0.00		
Dividends Paid		**0.00**		0.00		
Closing Net assets		**584.39**		589.32		331.52
Total of Investment accounted for using Equity Method						
Opening Net asset		**789.75**		537.27		
Equity investment		**0.00**		257.80		
Profit for the year		**(23.56)**		15.84		
Other Comprehensive Income		**(0.14)**		0.02		
Dividends Paid		**12.85**		21.18		
Closing Net assets		**753.20**		789.75		537.27
1999999 (previous year 1999999) Equity Shares of ₹10/- each of Power Plant Performance Improvement Ltd.	**2.00**		2.00		2.00	
Less: Provision for impairment	**2.00**	**0.00**	2.00	0.00	2.00	0.00

Note no. 4 (a)

Financial Assets - Investments (Non- Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
UNQUOTED (Fully Paid up)						
Investment in Equity Instruments (at fair value through FVTPL):						
1892 (previous year 1892) Equity shares of ₹ 10/- each of Engineering Projects (India) Ltd.	*		*		*	
728960 (previous year 728960) Equity shares of ₹ 10/- each of AP Gas Power Corporation Ltd.	**0.91**		0.91		0.91	
5000000 (Previous year 5000000) Equity shares of ₹ 10/- each of Neelachal Ispat Nigam Ltd	**5.00**		5.00		5.00	
	5.91		5.91		5.91	
Add/(less): Fair value adjustment	**(1.98)**	**3.93**	0.76	6.67	2.80	8.71
Cooperative Societies #						
		3.93		6.67		8.71
* Value of less than ₹ 1 lakh						
Aggregate amount of Unquoted Investment		**3.93**		6.67		8.71
Aggregate amount of impairment in value of investments						

Equity Share held in various employees cooperatives societies values is less than ₹ 1 lakh/-

Note no. 5

Financial Assets -Trade Receivables (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Trade Receivables	**15074.54**		15506.31		14725.18	
Less: Allowances for bad & doubtful debts	**4893.94**		3948.89		3123.91	
Less :Automatic price reduction adjustment	**391.46**	**9789.14**	429.20	11128.22	361.25	11240.02
		9789.14		11128.22		11240.02

Sub classification:

Unsecured, considered good

-(**₹ 9789.14 Crore** (previous year ₹ 11128.22 Crore))

Doubtful

-(**₹ 5285.40 Crore** (previous year ₹ 4378.09 Crore))

Non Current Trade receivables include deferred debts (net of provisions)-

-(**₹ 7989.26 Crore** (previous year ₹ 10041.99 Crore))

Non Current trade receivables include valuation adjustment-

-(**₹ 124.63 Crore** (previous year ₹ 187.69 Crore))

Includes:

Due from Directors

-(**₹ Nil** (previous year ₹ Nil))

Due from Officers

-(**₹ Nil** (previous year ₹ Nil))

Note no. 6

Financial Assets -Loans (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Loans to employees	**0.00**		0.01		0.01	
Loans to PSUs	**0.00**		0.00		4.00	
Interest accrued and due on loans	**0.04**		0.11		0.17	
Less: Allowances for bad & doubtful loans	**0.01**	**0.03**	0.01	0.11	0.00	4.18
Sub classification:-						
Unsecured, considered good						
-(**₹ 0.03 Crore** (previous year ₹ 0.11 Crore))						
Doubtful						
-(**₹ 0.01 Crore** (previous year ₹ Nil Crore))						
Security Deposits						
Balance with port trust & others	**0.68**		0.25		0.27	
Deposits others	**77.64**		65.37		100.34	
Less: Allowances for bad & doubtful deposits	**0.31**	**78.01**	0.11	65.51	0.53	100.08
Sub classification:-						
Unsecured, considered good						
-(**₹ 78.01 Crore** (previous year ₹ 65.51 Crore))						
Doubtful						
-(**₹ 0.31 Crore** (previous year ₹ 0.11 Crore))						
		78.04		**65.62**		**104.26**
Includes:						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ Nil** (previous year ₹ Nil))						

Note no. 7

Financial Assets- Others (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Fixed Deposits more than 12 months maturity period	**0.00**	0.00	0.83
Rent Receivables on leased Assets	**0.16**	0.62	1.32
	0.16	0.62	2.15

Note no. 8

Deferred tax assets (Net)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Provisions	**2987.47**	2880.25	2090.02
Statutary dues	**725.88**	680.55	639.32
Depreciations	**132.18**	104.81	57.48
Others	**56.31**	57.50	78.92
	3901.84	3723.11	2865.74
Deferred Tax Liabilities	**55.65**	60.39	49.66
Net deferred tax assets	**3846.19**	**3662.72**	**2816.08**

Note no. 9

Other non-current assets

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Capital advance	**40.36**		34.83		35.12	
Advances for purchases	**58.29**		79.63		366.05	
Others	**58.17**		58.53		58.59	
Less: Allowances for bad & doubtful advances	**23.63**	**133.19**	10.02	162.97	10.03	449.73
Security Deposits						
Balance with customs and other Govt Authorities	**59.99**		62.31		53.46	
Deposits Others	**26.80**		22.95		32.84	
Less: Allowances for bad & doubtful deposits	**16.68**	**70.11**	7.83	77.43	7.54	78.76
		203.30		240.40		528.49
Includes:						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ Nil** (previous year ₹ Nil))						

Note no. 10

Inventories

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Stores & spare parts						
Production	**204.11**		213.44		222.98	
Fuel stores	**8.10**		6.19		5.50	
Miscellaneous	**51.03**	**263.24**	50.80	270.43	46.55	275.03
Raw material & components	**3061.71**		3892.55		4091.32	
Material-in-transit	**257.19**	**3318.90**	552.24	4444.79	467.45	4558.77
Materials with fabricators/contractors		**71.32**		93.85		145.16
Loose tools		**36.37**		33.71		35.29
Scrap (at estimated realisable value)		**73.31**		62.16		71.54
Finished goods	**1297.76**		1571.43		1746.24	
Inter division transfers in transit	**133.44**	**1431.20**	134.32	1705.75	201.99	1948.23
Work-in-progress (including items with sub-contractors)		**2535.60**		3254.32		3212.00
Less: Provision for non-moving inventroy		**350.27**		256.57		137.25
		7379.67		9608.44		10108.77

Note:

Write down of Inventories **₹ 136.97 Crore** (previous year ₹ 142.32 Crore)

Less: reversal theroff **₹ 43.27 Crore** (Previous year ₹ 23.00 Crore)

Net: **₹ 93.70 Crore** (Previous year ₹ 119.32 Crore)

Note no. 11

Financial Assets -Trade receivables (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Trade Receivables	**27441.76**	27247.49	27795.53
Less : Allowances for bad & doubtful debts	**5148.40**	4617.66	3574.72
Less : Automatic price reduction adjustment	**215.78**	190.94	250.62
	22077.58	22438.89	23970.19
Sub-classification			
Unsecured, considered good			
-(**₹ 22077.58 Crore** (previous year ₹ 22438.89 Crore))			
Doubtful			
-(**₹ 5364.18** Crore (previous year ₹ 4808.60 Crore))			
Current trade receivables include deferred debts (net of provisions)-			
-(**₹ 8748.5 Crore** (previous year ₹ 7916.57 Crore))			
Current trade receivables include goods despatched pending billing-			
-(**₹ 1038.57 Crore** (previous year ₹ 682.93 Crore))			
Current trade receivables include valuation adjustment-			
-(**₹ 1035.29 Crore** (previous year ₹ 1114.65 Crore))			
Current trade receivables include debts outstanding for a period exceeding six months-			
-(**₹ 17252.79 Crore** (previous year ₹ 17723.02 Crore))			
Includes:			
Due from Directors			
-(**₹ Nil** (previous year ₹ Nil))			
Due from Officers			
-(**₹ Nil** (previous year ₹ Nil))			

Note no. 12

Financial Assets -Cash & Cash Equivalents (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Cash & cash equivalents			
Balances with Banks			
Corporate liquid term deposits	**599.78**	764.23	720.87
Others*	**733.01**	788.65	437.83
Cash & Stamps in on hand	**0.25**	0.49	0.58
Cheques, Demand Drafts on hand	**122.85**	412.73	290.74
Remittances in transit	**34.90**	0.00	0.00
Deposits having maturity 3 month or less	**0.00**	0.00	1350.00
	1490.79	1966.10	2800.02
* Includes			
Earmarked against unclaimed dividend	**3.10**	3.27	3.72
Non-repatriable account	**1.77**	4.28	4.11

Note no. 13

Financial Assets - Bank Balances other than above (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Deposits having maturity more than 3 months but not more than 12 months	**9002.76**	8121.10	7012.14
	9002.76	8121.10	7012.14

Note no. 14

Financial Assets - Loans (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Loans						
Loans to Employees	**0.00**		0.01		0.01	
Loans to Public Sector Undertakings	**12.00**		12.00		8.00	
Interest accrued and or due on loans	**2.29**		2.63		1.93	
Less: Allowances for bad & doubtful loans	**13.83**	**0.46**	2.62	12.02	0.03	9.91
Sub classification:-						
Secured, considered good						
-(**₹ 0.01 Crore** (previous year ₹ 0.01 Crore))						
Unsecured, considered good						
-(**₹ 0.45 Crore** (previous year ₹ 12.01 Crore))						
Doubtful						
-(**₹ 13.83 Crore** (previous year ₹ 2.62 Crore))						
Security Deposits						
Balance with port trust & others	**1.47**		1.78		1.95	
Others	**137.74**		164.03		85.37	
Less: Allowances for bad & doubtful deposits	**3.89**	**135.32**	4.02	161.79	6.01	81.31
		135.78		173.81		91.22
Sub classification:-						
Secured, considered good						
-(**₹ 50.88 Crore** (previous year ₹ 37.11 Crore))						
Unsecured, considered good						
-(**₹ 84.24 Crore** (previous year ₹ 124.68 Crore))						
Doubtful						
-(**₹ 3.89 Crore** (previous year ₹ 4.02 Crore))						
Includes:						
Due from Directors						
-(**₹ Nil** (previous year ₹ Nil))						
Due from Officers						
-(**₹ 0.01 Crore** (previous year ₹ 0.04 Crore))						

Note no. 15

Financial Assets -Others (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Interest Accrued on Banks Deposits and investments	**183.83**		122.08		175.03	
Rent Receivable on leased Assets	**0.56**		0.91		0.93	
Advance to employees	**34.66**	**219.05**	36.11	159.10	39.83	215.79
Less Allowances for bad & doubtful advances		**0.03**		0.08		0.13
		219.02		159.02		215.66
Includes:						
Due from Directors						
-(**₹ 0.01 Crore** (previous year ₹ Nil))						
Due from Officers						
-(**₹ 0.11 Crore** (previous year ₹ 0.12 Crore))						

Note no. 16

Current Tax Assets (Net)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Advance Tax / TDS	**4365.15**	6835.27	6537.94
Provision for Taxation	**-3492.06**	-6252.31	-5909.46
	873.09	582.96	628.48

Note no. 17

Other current assets

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
Advances						
For purchases	**352.54**		495.48		507.58	
To Others	**1009.93**		1127.51		1180.99	
Less Allowances for bad & doubtful advances	**202.75**	**1159.72**	78.65	1544.34	79.87	1608.70
Security Deposits						
Deposit: Balance With customs and other govt authorities	**582.26**		537.29		525.56	
Others	**21.38**		25.23		27.06	
Less Allowances for bad & doubtful depsoit	**38.09**	**565.55**	17.27	545.25	17.59	535.03
		1725.27		2089.59		2143.73
Includes:						
Due from Directors						
-(**₹ 0.01 Crore** (previous year ₹ Nil))						
Due from Officers						
-(**₹ 0.04 Crore** (previous year ₹ 0.01 Crore))						

Note no. 18

Share Capital

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017		Figures as at the end of previous reporting period 31.03.2016		Opening Figures as on Ind AS Transition date 01.04.2015	
A. Equity Share capital						
Authorised						
		2000.00		2000.00		2000.00
1000,00,00,000 equity shares of ₹ 2 each (prev year 1000,00,00,000 equity shares of ₹ 2 each)						
Issued, Subscribed & Paid up Capital		**489.52**		489.52		489.52
244,76,00,000 fully paid Equity Shares of ₹ 2 each (prev year 244,76,00,000 equity shares of ₹ 2 each)						
a) The reconciliation of the number of equity shares outstanding is set out below:						
	Number	**Amount**	**Number**	Amount	Number	Amount
Shares outstanding at the beginning of the year	**2447600000**	**489.52**	2447600,000	489.52	2,447,600,000	489.52
Shares bought back during the year		**-**		-		-
Shares outstanding at the end of the year	2447600000	489.52	2447600000	489.52	2447600000	489.52
b) Details of shares held by shareholders holding more than 5% shares at the year end	No. of shares	%	No. of shares	%	No. of shares	%
President of India (POI)	1543452000	63.06%	1543452000	63.06%	1543452000	63.06%
Life Insurance Corporation of India	230453920	9.42%	230459320	9.42%	230516784	9.42%
Face Value per share (₹)		2.00		2.00		2.00
c) Terms / rights attached to the equity shares:						
The company has only one class of equity shares having a par value of ₹ 2 per share (previous year ₹ 2 per share). Each holder of the equity shares is entitled to one vote per share.						

Note no. 19

Financial Liabilities - Borrowings (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Unsecured			
Long term maturities of finance lease obligations (Refer para 10 of Note no. 40 on leases)	**89.55**	126.29	61.00
	89.55	126.29	61.00

Note no. 20

Financial Liabilities -Trade payables (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Trade payables	**633.10**	747.69	645.03
	633.10	747.69	645.03

Note no. 21

Other financial liabilities (Non-Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Deposits from contractors & others	**104.71**	123.51	90.16
	104.71	123.51	90.16

Note no. 22

Provisions (Non- Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Contractual Obligation - Long term	**3244.33**	4177.43	3067.59
Provision for employee benefits	**1524.40**	2994.39	2710.93
Other long-term provisions	**218.48**	424.52	511.41
Corporate Social Responsibility*	**18.98**	33.27	45.09
	5006.19	7629.61	6335.02

*(Refer para 17 of Note no. 40 on CSR expenses)

Note no. 23

Other non-current liabilities

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Advances received from customers & others	**2978.80**	3637.78	4559.44
Deferred income- Govt grant **	**4.56**	0.00	0.00
	2983.36	3637.78	4559.44

**Received from Ministry of MNRE for setting up of Solar PV Plant

Note no. 24

Financial Liabitilities -Borrowings (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Secured			
Cash credit (Cr. balance)	**6.03**	3.53	2.14
	6.03	3.53	2.14

Note no. 25

Financial Liabilities - Trade Payables (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Trade Payables	**8697.72**	8672.27	8759.06
Acceptances	**18.16**	36.17	44.11
	8715.88	8708.44	8803.17

(Trade payables includes for Micro & small Enterprises **₹ 234.57 Crore** (Previous year ₹ 193.51 Crore)

Refer Para 9 of note no 40 for micro and small entereprises disclosure

Note no. 26

Other financial liabilities (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Current maturities of finance lease obligation #	**60.31**	76.15	56.83
Deposits from Contractors & others	**511.07**	529.42	517.36
Unpaid dividend*	**3.10**	3.27	3.72
Other payables/ liabilities			
- Capex	**116.61**	134.31	193.49
- Employees dues	**187.57**	208.71	322.17
- Other dues	**647.16**	684.45	599.13
Interest accrued but not due	**0.59**	0.57	0.40
Interest accrued & due on loans from			
- State Government Loans	**2.33**	2.33	2.33
- Current maturities of finance lease obligations	**3.65**	5.43	4.16
	1532.39	1644.64	1699.59

* There is no amount due & outstanding as at balance sheet date to be transferred to Investor Education & Protection Fund.
# (Refer para 10 of Note no. 40 on leases)

Note no. 27

Other current liabilities

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Advances received from customers & others	**5267.20**	6623.40	6959.08
Deferred income- Govt grant **	**0.26**	0.00	0.00
Other payables /liabilities- Statutory dues	**427.09**	423.03	455.12
	5694.55	7046.43	7414.20

Advances received from customers & others include valuation adjustment-

- (**₹ 2333.52 Crore** (previous year ₹ 2861.41 Crore)

* * Received from Ministry of MNRE for setting up of Solar PV Plant

Note no. 28

Provisions (Current)

(₹ in Crore)

Particulars	Figures as at the end of current reporting period 31.03.2017	Figures as at the end of previous reporting period 31.03.2016	Opening Figures as on Ind AS Transition date 01.04.2015
Contractual obligation	**1983.63**	1629.67	2511.19
Provision for employee benefits	**1492.41**	588.83	479.87
Corporate social responsibility##	**34.92**	56.41	18.51
Other short-term provisions	**682.82**	1062.70	972.97
##(Refer para 17 of Note no. 40 on CSR expenses)			
	4193.78	3337.61	3982.54

Note no. 29

Revenue from operations

(₹ in Crore)

Particulars			Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
(a)	**Sales less returns**		**23956.39**	21816.13
	(includes excise duty of **₹ 1102.06 Crore** Prev year ₹ 960.92 Crore)			
	Income from external erection & other services (Net of service tax of **₹ 534.98 Crore** Prev year ₹ 490.10 Crore)		**5010.72**	4323.57
	Less: Fair value adjustment A/c		**95.22**	49.53
	Net Sales	**(a)**	**28871.89**	26090.17
(b)	**Other Operational Income**			
	Export Incentives		**37.96**	34.24
	Finance income on assets given on finance lease		**0.10**	0.21
	Scrap income		**168.61**	158.61
	Freight & Insurance Income		**298.92**	268.87
	Fair value adjustment (Unwinding) A/c		**98.88**	96.20
	Others		**30.21**	30.22
		(b)	**634.68**	588.35
	TOTAL	**(a) + (b)**	**29506.57**	26678.52

Revenue from operations

a.	Includes based on provisional prices	₹ Crore	**74.09**	47.20
b.	Includes additional claim for despatches made in earlier year in accordance with price settlement with railways during the year.	₹ Crore	**214.65**	204.05
c.	includes for escalation claims raised in accordance with sales contracts, inclusive of escalation claims on accrual basis, to the extent latest indices were available;	₹ Crore	**899.51**	1051.47
d.	includes despatches of equipment valued at held on behalf of customers at their request for which payment has been received by Company; and	₹ Crore	**3.42**	0.00
e.	excludes for price reduction (net of refund) due to delay in delivery as per the terms of the contract .	₹ Crore	**12.50**	32.20

Note no. 30

Other Income

(₹ in Crore)

Particulars			Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
A.	**Other income**			
	Government Grant		**0.17**	0.00
	Profit from sale of item of PPE		**2.36**	5.75
	Exchange variation (Cr. Balance)		**0.00**	402.70
	Dividend on Investment (Long term-Trade)		**21.02**	12.97
	Others		**282.47**	292.14
		Total (A)	**306.02**	713.56
B.	**Interest Income ***			
	From banks		**671.46**	685.80
	Others		**5.88**	77.07
		Total (B)	**677.34**	762.87
	Total Other Income	**Total (A+B)**	**983.36**	1476.43

*'including TDS **₹ 69.16 Crore** (prev year ₹ 70.53 Crore)

Note no. 31

Cost of material consumption, erection and engineering expenses

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Consumption of raw material & components	**13125.88**	13028.88
Consumption of stores & spares	**425.65**	422.36
Erection and Engineering exp. - payment to subcontractors	**3055.51**	2978.08
Less: PV Adjustment Material/Subcontracting Cost	**16.36**	22.60
	16590.68	16406.72

Note no. 32

Changes in inventories of finished goods and work in progress

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
Work -in -progress				
Closing Balance	**2535.60**		3254.32	
Opening Balance	**3254.32**	**-718.72**	3212.00	42.32
Finished Goods $				
Closing Balance	**1297.76**		1571.43	
Opening Balance	**1571.43**	**-273.67**	1746.24	-174.81
Inter-division transfer in transit		**-0.55**		-77.56
		-992.94		-210.05
NOTE:				
$ Element of Excise duty in Finished Goods				
Closing Balance		**134.25**		154.59
Opening Balance		**154.59**		128.31

Note no. 33

Employee benefits expenses

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Salaries, wages, bonus, allowances & other benefits	**4489.95**	4530.59
Contribution to gratuity fund	**117.85**	110.89
Contribution to provident and other funds	**350.37**	320.65
Group insurance	**11.25**	11.52
Staff welfare expenses	**438.58**	413.68
	5408.00	5387.33

Note no. 34

Other expenses of manufacture, administration, selling & distribution

(₹ in Crore)

Particulars		Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
Royalty, technical, Resident consultant's charges & other consultancy charges			**118.70**		102.15
Rent: Residential		**49.09**		54.79	
Non residential		**25.41**	**74.50**	26.63	81.42
Excise duty			**1254.39**		1158.08
Power & Fuel			**451.55**		499.47
Rates & taxes			**51.46**		68.05
Service tax, Swachh Bharat Cess & other cess			**12.26**		15.25
Exchange variation			**269.71**		0.00
Insurance			**123.87**		135.86
Repairs:					
Buildings			**66.65**		90.64
Plant & machinery			**39.59**		42.83
Others			**114.05**		131.60
Other expenses in connection with exports			**15.72**		21.18
Losses written off			**13.60**		0.01
Bad debts written off during the year			**72.86**		17.00
Carriage outward			**425.73**		371.67
Travelling & conveyance			**124.68**		146.58
Expenditure on Other Sub Contracts			**322.18**		345.37
Miscellaneous expenses			**762.48**		692.09
Liquidated damages charged off			**84.69**		6.58
Corporate social responsibility			**37.50**		110.10
Fair value loss in investment of Equity Share			**2.74**		2.04
			4438.91		4037.97
Payment to the Auditors ('Net of Service Tax & Other Cess)					
Payment to Auditors - as Auditors (Audit Fees)- for the year	₹ Crore		**0.78**		0.66
Audit fees include ....to Auditors abroad	₹ Crore		**0.01**		0.03
Payment to Auditors - Reimbursement of expenses	₹ Crore		**0.12**		0.12
Payment to Auditors - Taxation Matters - for the year	₹ Crore		**0.14**		0.14
Payment to Auditors - Other Services	₹ Crore		**0.39**		0.35
Payment to Cost Auditors (Audit fees) - for the year ('Net of Service Tax, Swachh Bharat Cess & Other Cess)	₹ Crore		**0.13**		0.12

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016
Expenditure on departmental Repair & maintenance which are as under:			
Plant & Machinery	₹ Crore	**206.65**	218.58
Buildings	₹ Crore	**48.32**	56.40
Others	₹ Crore	**35.63**	37.64
Agency Commission on exports included in expenses in connection with exports	₹ Crore	**12.34**	8.21
Expenditure on research & development	₹ Crore	**240.74**	270.63
Rent Residential	₹ Crore	**49.09**	54.79
Expenditure on entertainment	₹ Crore	**5.47**	5.67
Expenditure on foreign travel			
No. of tours		**294**	390
Expenditure in Rupees	₹ Crore	**5.09**	8.75
Expenditure on Publicity and Public relations			
Salaries allowances & other benefits	₹ Crore	**16.20**	11.83
Other expenses	₹ Crore	**8.95**	9.67
Directors' Fees	₹ Crore	**0.13**	0.18

Note no. 35

Provisions (net)

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
Doubtful debts ,Liquidated Damages and Loans, advances & deposits				
Created during the year	**2964.19**		2833.01	
Less: written back during the year	**1491.65**	**1472.54**	941.74	1891.27
Contracutal Obligations				
Created during the year	**619.99**		638.99	
Less: written back during the year	**1446.68**	**-826.69**	692.33	-53.34
Others				
Created during the year	**1565.40**		454.24	
Less: written back during the year	**937.03**	**628.37**	252.26	201.98
		1274.22		2039.91

Note no. 36
Finance costs

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Interest Expense	**61.84**	26.82
Borrowing Cost (on accretion to deferred liabilities)	**30.06**	38.32
Borrowing Costs (Unwinding of Provisions)	**259.40**	294.67
	351.30	359.81
Less: Borrowing Cost capitalised	**0.00**	0.00
	351.30	359.81

Note no. 37
Tax expense

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017		Figures for the previous reporting period 31.03.2016	
a) Current Tax				
For Current Years	**610.11**		396.32	
For earlier years	**-311.76**	**298.35**	-5.24	391.08
b) Deferred Tax				
For Current Years	**-463.11**		-834.37	
For earlier years	**295.15**	**-167.96**	-12.26	-846.63
		130.39		-455.55

Note no. 38

Other Comprehensive Income

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Re measurement of defined employee benefits	**-43.67**	-116.65
Income tax related to above items*	**-15.11**	-40.27
	-28.56	-76.38

* It includes Current Tax **₹ 0.42 Crore** and deferred tax **₹ -15.53 Crore** (previous year Current Tax ₹ -40.27 Crore and deferred tax ₹ Nil)

Note no. 39

Earning Per Share

(₹ in Crore)

Particulars	Figures for the current reporting period 31.03.2017	Figures for the previous reporting period 31.03.2016
Profit attributable to equity shareholders	**455.18**	-705.58
Weighted average number of equity shares	**244.76**	244.76
Basic and diluted earnings per share (in INR)	**1.86**	-2.88

Note no. 40

Notes to Accounts

Bharat Heavy Electricals Limited ("BHEL" or "the Company") is a public limited company domiciled in India and has its registered office at BHEL House, Siri fort, New Delhi- 110049.

The Company is an integrated power plant equipment manufacturer engaged in the design, engineering, manufacture, erection, testing, commissioning and servicing of a wide range of products and services for the core sectors of the economy, viz. Power, Transmission, Industry, Transportation, Renewable Energy, Oil & Gas and Defence.

The Company has one subsidiary in the name of BHEL-Electrical Machines Ltd. and Joint Venture Companies namely, BHEL-GE Gas Turbine Services Ltd., NTPC - BHEL Power Projects Pvt. Ltd., Raichur Power Corporation Ltd, Power Plant Performance Improvement Ltd. and Dada Dhuniwale Khandwa Power Ltd.

The Consolidated financial statements relates to Bharat Heavy Electricals Limited (the Company), its subsidiary and its interest in Joint venture entities. The Consolidated financial statements have been prepared on the following basis-

Basis of Accounting

i) The financial Statements of the subsidiary company and interest in joint ventures in the consolidation are drawn upto the same reporting date as of the parent company.

ii) The consolidated financial statements have been prepared in accordance with Ind AS 110 on "Consolidated Financial Statements" and Ind AS-28 "Investment in Associates and Joint Ventures".

Basis of Consolidation

1. Subsidiary is entity controlled by the Company. The financial statements of subsidiaries are combined on a line-by-line basis by adding together the book value of like items of assets, liabilities, income and expenses after fully eliminating the intra group balances and intra-group transactions and unrealized profits or losses in accordance with Ind AS 110 on "Consolidated Financial Statements".

2. The Company's interest in equity-accounted investees comprise interests in joint venture. A joint venture is an arrangement in which the Company has joint control, whereby the Company has rights to the net assets of the arrangement, rather than rights to its assets and obligations for its liabilities. Interests in the joint venture are accounted for using the equity method. They are initially recognized at cost, which includes transaction costs. Subsequent to initial recognitions, the consolidated financials include the Company's share of profit or loss and OCI of equity-accounted investees, until the date on which significant influence or joint control ceases.

3. The consolidated financial statements have been prepared using uniform accounting policies for like transactions and other events in similar circumstances and are presented to the extent possible.

4. Minority interest' share of net loss of consolidated subsidiary for the year is adjusted against the income of the group in order to arrive at the net income attributable to shareholder of the company.

5. Minority interest share of net liabilities of consolidated subsidiary is identified and presented in consolidated financial statement separate from assets/ liabilities & equities of the company shareholder.

The Consolidated Financial Statements include the results of the following entities-

Particulars	Principal place of business	Proportion of ownership	
		2016-17	2015-16
Subsidiary Company			
BHEL Electrical Machines Limited (BHEL EML)	India	**51**	51
Joint Venture Companies (accounted for using equity method)			
BHEL-GE Gas Turbine Services Private Limited	India	**One share less than 50%**	One share less than 50%
NTPC-BHEL Power Projects Private Limited	India	**50**	50
Raichur Power Corporation Limited	India	**27.34**	27.34
Dada Dhuniwale Khandwa Power Limited	India	**50**	50

a) The financial statements of BHEL-EML are consolidated based on the audited financial statement for the year ended on 31.03.2017.

b) Interest in joint Ventures in respect of Power Plant Performance Improvement Ltd. (PPIL) have not been considered in preparation of Consolidated Financial Statements as the company is under liquidation. Full amount of equity investment has been provided for as impairment.

c) Interest in Joint Ventures in respect of NTPC-BHEL Power Projects Pvt. Ltd, Dada Dhuniwale Khandwa Power Ltd. and Raichur Power Corporation Ltd. is considered based on unaudited financial statements for the year ended on 31.03.2017.

d) Interest in Joint Ventures in respect of BHEL-GE Gas Turbine Services Ltd. is considered based on audited financial statements for the year ended on 31.03.2017.

1) First-time Adoption of Ind AS -101

The company has prepared its first Consolidated Financial Statements in accordance with Ind AS for the year ended 31st March 2017. For periods up to and including the year ended 31st March 2016, the Company prepared its consolidated financial statements in accordance with Indian GAAP, including accounting standards notified under the Companies (Accounting Standards) Rules, 2006 (as amended). The effective date for Company's Ind AS Opening Balance Sheet is 1st April 2015 (the date of transition to Ind AS).

The accounting policies set out in Note 1 have been applied in preparing the consolidated financial statements for the year ended 31st March 2017, the comparative information presented in these financial statements for the year ended 31st March 2016 and in the preparation of an opening Ind AS Balance Sheet as at 1st April 2015 (the Company's date of transition). According to Ind AS 101, the first Ind AS Consolidated Financial Statements must use recognition and measurement principles that are based on standards and interpretations that are effective as at 31st March 2017, the date of first-time preparation of Consolidated Financial Statements according to Ind AS. These accounting principles and measurement principles must be applied retrospectively to the date of transition to Ind AS and for all periods presented within the first Ind AS Consolidated Financial Statements.

Any resulting differences between carrying amounts of assets and liabilities according to Ind AS 101 as on 1st April 2015 compared with those presented in the Indian GAAP Balance Sheet as on 31st March 2015, were recognized in equity under retained earnings within the Ind AS Balance Sheet, wherever applicable.

An explanation of how the transition from previous GAAP to Ind AS has affected the Group's consolidated financial position and financial performance is set out in the following tables and notes .

Exemptions and Exceptions availed

In the Ind AS Opening Balance Sheet as on 1st April 2015, the carrying amounts of assets and liabilities from the Indian GAAP as at 31st March 2015 are generally recognized and measured according to Ind AS in effect as on 31st March 2017. For certain individual cases, however, Ind AS 101 provides for optional exemptions and mandatory exceptions to the general principles of retrospective application of Ind AS. The Group has applied the following exemptions and exceptions in preparing its Ind AS consolidated Opening Balance Sheet:

Optional Exemptions Availed:

i) Property, plant and equipment & Intangible assets

Ind AS 101 permits a first-time adopter to elect to continue with the carrying value for all of its property, plant and equipment as recognised in the financial statements as at the date of transition to Ind AS, measured as per the previous Indian GAAP (IGAAP) and use that as its deemed cost as at the date of transition after making necessary adjustments for de-commissioning liabilities. This exemption can also be used for intangible assets covered by Ind AS 38, Intangible Assets. Accordingly, the Group has elected to measure all of its property, plant and equipment and intangible assets at their erstwhile Indian GAAP carrying value.

ii) Business Combination

Ind AS 101 provides the option to apply Ind AS 103 prospectively from the transition date or from a specific date prior to the transition date. The Company has elected to apply Ind AS 103 'Business Combinations' prospectively from the date of transition. Accordingly, business combinations occurred prior to 1 April 2015 have not been restated.

Ind AS Mandatory Exceptions:

i) Classification and measurement of financial assets

Ind AS 101 requires an entity to assess classification and measurement of financial assets on the basis of the facts and circumstances that exist as on the date of transition to Ind AS. Accordingly Company has classified and measured all its financial assets on the basis of the facts and circumstances that exist as on the date of transition to Ind AS.

ii) Estimates

An entity's estimates in accordance with Ind AS as on the date of transition to Ind AS shall be consistent with estimates made for the same date in accordance with previous IGAAP (after adjustments to reflect any difference in accounting policies), unless there is objective evidence that those estimates were in error.

Ind AS estimates as at 1st April 2015 are consistent with the estimates as on the same date made in conformity with previous GAAP.

Notes to first-time adoption:

i) Classification of Locomotives as finance lease:

Locomotives given on lease prior to 1 April 2001 were accounted for in accordance with the guidance contained for manufacturer dealer lessor and recognised as fixed assets under previous IGAAP. Under Ind AS, locomotives given on finance lease has been derecognised by the previous IGAAP net carrying value of ₹ 2.25 Crore and corresponding finance lease receivable has been recognised on transition date.

ii) Stores and Spares and retrofitting expenses classified as CWIP:

Stores and spares classified as inventory has been capitalized and depreciated over their useful life amounting to ₹ 1.53 Crore as at April 01, 2015. Further, expenditure on retrofitting works has been capitalised as an item of PPE in FY 2015-16 in line with Ind AS. The net impact is increase in retained earning by ₹ 0.40 Crore as on 01.04.2015 and increase in profit by ₹ 1.83 Crore for 2015-16.

iii) Proposed dividend:

Under Indian GAAP, the Company had accounted for proposed dividends relating to year ended 31st March 2015 in that year, though the approval of that dividend took place after the reporting date. Under Ind AS, proposed dividends do not meet the definition of liability until they have been approved by shareholders at the Annual General Meeting.

Company has declared dividend of ₹ 151.75 Crore (₹ 182.64 Crore inclusive of CDT) for the year 2014-15 which is reversed as per Ind AS on transition date, with corresponding effect of increase in retained earnings by ₹ 182.64 Crore. Dividend of ₹ 97.90 Crore (₹ 117.83 Crore inclusive of CDT) for the year 2015-16 declared in 2016-17 is reversed and dividend of ₹ 151.75 Crore (₹ 182.64 Crore including CDT) of 2014-15 declared in 2015-16 is adjusted. The impact is decrease in retained earnings by ₹ 64.81 Crore for 2015-16.

iv) Government grants to be shown as deferred income:

Under Indian GAAP, the Company had recognised government grant received amounting to ₹ 1.38 Crore as capital reserve. Under Ind AS, government grants received for capital assets are to be recognised as deferred income and to be amortized on a systematic basis in line with Ind AS. The amount of ₹ 1.38 Crore has been reclassified from capital reserve to retained earnings on transition date accordingly.

v) Investments in equity securities classified as at Fair value through P&L (FVTPL):

As per Ind AS, the Company has classified certain investments amounting to ₹ 5.91 Crore as at FVTPL. The fair value of these investments have been calculated at ₹ 8.71 Crore. The gain of ₹ 2.80 Crore is adjusted to retained earnings as on 1st April, 2015. In FY 2015-16, the fair value of these investment has been calculated as ₹ 6.67 Crore and the resultant impact of ₹ 2.04 Crore is accounted through P&L.

vi) Revenue Contracts accounted at percentage of completion method (POCM):

The company has accounted for revenue arising from contracts entered into before 1.4.2003 at POCM as per Ind AS 11. The effect of adjustment is decrease in retained earnings by ₹ 9.60 Crore with consequential impact on trade receivables and provision for warranty obligation as on April 01st, 2015. The effect of adjustment is increase in profit by ₹ 8.03 Crore with consequent impact on turnover and warranty obligation for 2015-16.

vii) Recognition of other Long-term Provisions at present value:

As per Ind AS long term provisions are to be accounted at present value where obligation are likely to be settled at a later date. Accordingly, other long term provisions, wherever applicable, have been measured at present value.and the effect of the adjustment is increase in retained earnings by ₹ 37.22 Crore and decrease in provisions by same amount as on April 01st, 2015. The unwinding of interest on these provisions and discounting of provisions with respect to additions made during the year has net impact of decrease in profit by ₹ 20.57 Crore for 2015-16.

viii) Recognition of Long-term Contractual Obligation at present value:

In line with Ind AS where the obligation are likely to settled at later date and the effect of time value is material the provision are to be accounted at present value. Accordingly, Long term Contractual obligation have been measured at present value and the effect of the adjustment is increase in retained earnings by ₹ 538.93 Crore and decrease in provisions by same amount as on April 01st, 2015. The effect of unwinding of interest on these provisions and discounting of provision with respect to additions made during the year is decrease in profit by ₹ 184.06 Crore for 2015-16.

ix) Fair value of consideration:

Ind AS prescribes the revenue recognition in respect of construction contracts at fair value. Generally the transaction value is the fair value of consideration in respect of construction contracts except in certain contracts, where as per contractual payment terms, percentage of advance are lower than deferred debts. The resulted impact has decreased retained earnings by ₹ 193.49 Crore with corresponding reduction in deferred debtors as at April 01st, 2015. The net impact resulted in decrease in turnover by ₹ 49.53 Crore and increase in other operating income by ₹ 96.20 Crore, increase in profit by ₹ 46.66 Crore for 2015-16.

x) Discounting of Deferred Liability:

As per Ind AS where a contractual payment terms contain deferred payments and constitutes a time value of money considering advance percentage, such deferred liability are to be recognised at discounted value and subsequently unwinded as a borrowing cost. The effect of the adjustments increase in retained earnings by ₹ 60.80 Crore and decrease in deferred liability by same amount as on April 01st, 2015. The effect for 2015-16 is decrease in consumption of material cost / sub-contracting cost by ₹ 22.60 Crore and increase in finance cost by ₹ 37.99 Crore for unwinding of interest on these liabilities, resulted impact in decrease of profit by ₹ 15.39 Crore for 2015-16.

xi) Provisions for expected credit loss:

In respect of trade receivable the impairment loss has been computed using expected credit loss considering regression effect for time value. The effect of the adjustment is decrease in retained earnings by ₹ 2230 Crore as on April 01st, 2015. Impact of the adjustment is reversal of provision by ₹ 328 Crore for 2015-16.

xii) Classification adjustment of Advances restatement:

Re-classification of advances adjustment has been carried out from transition date in line with Ind AS 21, the impact on retained earning is increase by ₹ 82.54 Crore as on 01.04.2015 and increase in profit by ₹ 33.43 Crore for 2015-16.

xiii) Deferred Tax:

The impact of transition adjustments together with Ind AS mandate of using balance sheet approach for computation of deferred taxes has resulted in charge to the Reserves, on the date of transition, with consequential impact to the Profit and Loss account for the subsequent periods.

xiv) Other comprehensive income:

Under Indian GAAP, the Company has not presented other comprehensive income (OCI) separately. Items that have been reclassified from statement of profit and loss to other comprehensive income includes remeasurement of defined benefit plans of ₹ 76.38 Crore (net of tax) in 2015-16. Indian GAAP profit or loss is reconciled to total comprehensive income as per Ind AS.

xv) Joint Venture and Statement of cash flows:

Under the previous GAAP, Joint ventures were accounted for using proportionate consolidation method. On transition to Ind AS, Joint ventures have been consolidated using equity method as per Ind AS 28. The transition from Indian GAAP to Ind AS has an impact on the statement of cash flows only to the extent of proportionately consolidated cash flows of Joint Ventures.

I. Reconciliation of Equity as per erstwhile Indian GAAP as previously reported and as per Ind AS

(₹ in Crore)

	Opening Transition date 01.04.2015	As on 31.03.2016	Refer to paras given in Notes to First time adoption
Retained Earning as per erstwhile Indian GAAP 31.03.2015	**33717.08**	**32682.98**	
Adjustments due to audited results of JVs considered now as against unaudited results consolidated earlier		13.46	
Adjustments for the year:			
Capitalisation of stores & spares etc.	0.40	1.83	refer (ii)
Proposed Dividend adjustment	182.64	-64.81	refer (iii)
Effect of measuring equity investment at fair value	2.80	-2.04	refer (v)
Effect of Revenue Recognition (POCM)	-9.60	8.03	refer (vi)
Recognition of other long term provisions at present value	37.22	-20.57	refer (vii)
Recognition of long term contractual obligation at present value	538.93	-184.06	refer (viii)
Fair value of consideration on construction contracts	-193.49	46.66	refer (ix)
Discounting effect on deferred liabilities	60.80	-15.39	refer (x)
Provision for expected credit loss	-2230.00	328.00	refer (xi)
Classification adjustment of Advances restatement	82.54	33.43	refer (xii)
Deferred tax impact on above adjustments	592.86	-68.45	refer (xiii)
JVs Ind AS adjustment	5.58	0.03	refer (xiv)
JVs Dividend Adjustment		-5.15	
Opening Ind AS Transition Impact		**-929.32**	
Retained Earning as per Ind AS (opening as on 01.04.2015)	**32787.76**	**31824.63**	

II. Reconciliation of Total Comprehensive Income as per erstwhile Indian GAAP as previously reported and as per Ind AS 2015-16

	₹ in Crore	Refer to paras given in Notes to First time adoption
Net Profit as per erstwhile Indian GAAP 2015-16	**-897.39**	
Adjustments due to audited results of JVs considered now as against unaudited results consolidated earlier	13.46	
Dividend adjusted earlier has accounted under Equity Method	-21.18	
Adjustments for the year, increase/ (-) decrease:		
Capitalisation of stores & spares, retrofitting etc.	1.83	refer (ii)
Effect of measuring equity investment at fair value	-2.04	refer (v)
Effect of Revenue Recognition (POCM)	8.03	refer (vi)
Recognition of other long term provisions at present value	-20.57	refer (vii)
Recognition of long term contractual obligation at present value	-184.06	refer (viii)
Fair value of consideration on construction contracts	46.66	refer (ix)
Discounting effect on deferred liabilities	-15.39	refer (x)
Provision for expected credit loss	328.00	refer (xi)
Classification adjustment of Advances restatement	33.43	refer (xii)
Deferred tax impact on above adjustments	-68.45	refer (xiii)
Dividend Tax Adjustment	-4.30	
JVs Ind AS adjustment	0.03	refer (xiv)
Total Comprehensive Income as per Ind AS 2015-16	**-781.94**	

2. I. Contingent liabilities & Commitments to the extent not provided for:

(₹ in Crore)

Particulars		Figures for the current year ended 31.03.2017	Figures for the Previous year ended 31.03.2016
(i)	**Contingent liabilities:**		
1)	Claims against the company not acknowledged as debt :		
a	Income Tax Demands	**12.73**	0.96
	Against which paid under protest.		
b	Sales Tax Demands	**1846.50**	1229.45
	Against which paid under protest/ court orders.	**298.34**	269.29
c	Excise Duty demands	**482.92**	467.96
	Against which paid under protest/ court orders.	**24.17**	23.59
d	Custom Duty demands		0.10
	Against which paid under protest/ court orders.		
e	Court & Arbitration cases	**884.19**	1029.32
f	Liquidated Damages	**6214.54**	7836.37
	Amount deducted by customers towards LD included in above (1) (f)	**2730.50**	3161.77
g	Counter Claim by contractors	**0.61**	0.61
h	Service Tax Demand	**507.67**	485.94

	Against which paid under protest/ court orders.	**7.39**	7.34
i	Others (incl. disputed staff cases)	**34.74**	45.85

(In view of the various court cases, litigations and claims disputed by the company, the outflow of resources is not ascertainable at this stage).

(ii) Commitments

a	Estimated amount of contracts, net of advances, remaining to be executed on capital account and not provided for.	**193.93**	251.08
	The above includes for acquisition of intangible assets	**3.96**	0.82
b	Investment in the Joint Venture entities for which the company has restrictions for their disposal for five years from the date of incorporation /commercial operation of the project/first unit of the project/completion of first EPC contract , as the case may be.	**639.32**	639.32
c	Commitments towards additional investment in the JV in case of inability of other JV partner to take up additional equity stake	**111.26**	111.26
d	In view of the nature of business, being long term construction contracts there may be other commitments for purchase of material etc., which has been considered as normal business process, hence not been disclosed.		

3. (i) Cash credit limit from banks aggregating to **₹ 5000 Crore** (previous year ₹ 5000 Crore) and Company's counter guarantee / indemnity obligations in regard to bank guarantee / letters of credit limit aggregating to **₹ 55000 Crore** (previous year ₹ 55000 Crore) sanctioned by the consortium banks are secured by first charge by way of hypothecation of raw materials, components, work in progress, finished goods, stores, trade receivables and other current assets both present and future. The outstanding bank guarantees as at 31.03.2017 is **₹ 40667 Crore** (previous year ₹ 45835 Crore).

(ii) Corporate Guarantees given for own obligations outstanding as on 31.03.2017 is **₹ 1733.80 Crore** (Previous year ₹ 3028.33 Crore).

4. Balance shown under Trade Receivables, Long-term Trade Receivables, Trade Payable, contractors' advances, deposits and stock / materials lying with sub-contractors/ fabricators are subject to confirmation, reconciliation & consequential adjustment, if any. As the Company is in the business of long term construction contracts, bills are raised on the customers as per contract by the units located at various places as per approved billing schedule by the customer and the reconciliation is carried out ongoing basis & provisions made, wherever considered necessary. Final reconciliation with customer is done on completion of project (Trial Operation and PG Test completed). The total receivables (including long term) are ₹ 42510 Crore, (including deferred debts and other debts of ₹ 20195 Crore presently not due for payment and ₹ 6287 Crore outstanding in respect of completed projects), out of which, the projects reconciled with customers have outstanding debts of ₹ 5497 Crore in respect of completed projects.

5. In line with the EAC/ICAI opinion on "Fair value of consideration for Construction Contracts" under Ind AS 11, retention money , relating to the projects where advance %age is less than retention %age as per the terms of contract, is discounted at the time of recognition of turnover.

Out of total deferred debtors (net) of **₹ 16736.95 Crore** (previous year ₹ 17957.67 Crore), deferred debtors at amortised value representing such retention money as stated above as on 31.03.2017 is **₹ 1797.27 Crore** (previous year ₹ 1256.57 Crore).

6. Amorphous Silicon Solar Cell Plant (ASSCP), Gurgaon was taken on April 1st, 1999 from Ministry of New and Renewable Energy (MNRE) on lease for a period of 30 years. The formal lease agreement with the Ministry of New and Renewable Energy (MNRE) is yet to be finalised.

7. Current Financial liabilities includes a sum of **₹ 100.51 Crore** (previous year ₹ 100.51 Crore) towards guarantee fee demanded by the Government of India in respect of foreign currency loans taken by the Company at the instance of the Government upto 1990-91. The matter for its waiver has been taken up with the Government since there was no stipulation for payment of such guarantee fee at the time the loans (guaranteed by Government) were taken by the company. The Company vide letter dated 09.02.2015 has again requested Department of Heavy Industries (DHI) for waiver of the guarantee fee.

8. Disclosure as per Ind AS 19 on 'Employee benefits'

A. Gratuity

The Company has a defined benefit gratuity plan. Every employee who has rendered continuous service of five years or more is entitled to gratuity at 15 days salary (15/26 X last drawn basic salary plus dearness allowance) for each completed year of service subject to a maximum of ₹ 10 Lakhs. The gratuity liability arises on account of future payments, which are required to be made in the event of retirement, death in service or withdrawal. The liability has been assessed using projected unit credit actuarial method.

I. Movement in net defined benefit (asset)/liability on Gratuity plan

(₹ in Crore)

	Defined benefit obligation		Fair value of plan assets		"Net defined benefit (asset) liability"	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	**1944.44**	1913.41	**1939.47**	1909.03	**4.97**	4.38
Included in profit or loss:						
Current service cost	**117.46**	111.68			**117.46**	111.68
Interest cost / income	**155.56**	153.07	**155.16**	152.72	**0.40**	0.35
Total amount recognised in profit or loss	**273.02**	264.75	**155.16**	152.72	**117.86**	112.03
Included in OCI:						
Remeasurement loss (gain):					**(57.53)**	16.76
Actuarial loss (gain) arising from:	**(56.45)**	15.65				
Return on plan assets excluding interest income			**1.08**	(1.12)		
Total amount recognised in other comprehensive income	**(56.45)**	15.65	**1.08**	(1.12)	**(57.53)**	16.76
Others						
Contributions paid by the employer			**60.39**	128.21	**(60.39)**	(128.21)
Benefits paid	**(224.85)**	(249.37)	**(224.68)**	(249.37)	**(0.17)**	-
Closing balance	**1936.16**	1944.44	**1,931.42**	1939.47	**4.74**	4.97

II. Details of Plan assets (BHEL)

	31 March 2017	31 March 2016
Govt. of India securities (quoted)	**15.94%**	16.27%
State Government securities (quoted)	**31.83%**	30.46%
High quality Corporate bonds (quoted)	**43.41%**	44.02%
Equity shares of listed Companies (quoted)	**0.68%**	0.42%
Funds managed by Insurer	**4.86%**	4.07%
Bank Balance	**3.28%**	4.76%
Total	**100.00%**	**100.00%**

III. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Salary escalation rate	**7.65% P.A. for 1st 4 yrs. & then 6% P.A. thereafter**	8.25% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	**100% of IALM (2006-08)**	
Withdrawal rate % (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

IV. Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

	Gratuity (Funded)			
	31 March 2017		31 March 2016	
	Increase	Decrease	Increase	Decrease
Discount rate (0.50% movement)	**(58.44)**	**64.16**	(58.70)	64.46
Salary escalation rate (0.50% movement)	**63.49**	**(58.39)**	63.78	(58.66)

Sensitivities due to mortality and withdrawls are not material and hence impact of change not calculated.

Sensitivities as to rate of inflation, rate of increase of pensions in payment, rate of increase of pensions before retirement & life expectancy are not applicable being a lump sum benefit on retirement.

The sensitivity analysis above has been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

V. Expected maturity analysis of the gratuity plan in future years

(₹ in Crore)

	Gratuity (Funded)		
	31 March 2017	31 March 2016	1 April 2015
Less than 1 year	**236.27**	246.54	292.93
Between 1-2 years	**200.44**	222.39	210.98
Between 2-3 years	**145.80**	199.92	210.71
Between 3-4 years	**140.71**	173.92	190.80
Between 4-5 years	**111.69**	137.05	163.86
Between 5-6 years	**101.58**	110.45	127.16
Over 6 years	**999.67**	854.17	716.97
Total	**1936.16**	**1944.44**	**1913.41**

Expected contributions to gratuity plans for the year ending 31st March 2018 are ₹ 119.45 Crore.

The weighted average duration of the gratuity defined benefit plan obligation at the end of the reporting period is 14.66 years (31st March 2016: 14.37 years).

VI. Risk Exposures

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in salary, investment risk, discount rate, mortality, disability and withdrawals.

B. Post Retirement Medical Benefits

The Company has Post-Retirement Medical benefit (PRMB), under which the retired employees and their spouses are provided medical facilities in the Company hospitals/empanelled hospitals. They can also avail treatment as out-patient subject to a ceiling fixed by the Company. The liability for the same is recognised annually on the basis of actuarial valuation.

I. Movement in net defined benefit (asset)/liability on Post Retirement Medical Benefit Plan

(₹ in Crore)

	Defined benefit obligation		Fair value of plan assets		"Net defined benefit (asset) liability"	
	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
Opening balance	**1679.37**	1530.44	-	-	**1679.37**	1,530.44
Included in profit or loss:						
Current service cost	**30.29**	27.47	-	-	**30.29**	27.47
Interest cost / income	**134.35**	122.44	-	-	**134.35**	122.44
Total amount recognised in profit or loss	**164.64**	149.91	**-**	**-**	**164.64**	149.91
Included in OCI:						
Remeasurement loss (gain):					**67.82**	82.94
Actuarial loss (gain) arising from:						
Demographic assumptions			-	-	**-**	-
Financial assumptions	**74.43**	18.95	-	-		
Experience adjustment	**(6.61)**	63.99	-	-		
Total amount recognised in other comprehensive income	**67.82**	82.94	**-**	**-**	**67.82**	82.94
Others						
Contributions paid by the employer			1,820.70		**(1820.70)**	-
Benefits paid	**(91.13)**	(83.92)	-	-	**(91.13)**	(83.92)
Closing balance	**1820.70**	1679.37	**1820.70**	**-**	**0.00**	1679.37

The plan assets of the Company are managed by Life Insurance Corporation of India through a trust managed by the Company in terms of an insurance policy taken to fund obligations of the Company.

II. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Salary escalation rate	**7.65% P.A. for 1st 4 yrs. & then 6% P.A. thereafter**	8.25% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	**100% of IALM (2006-08)**	
Withdrawal rates (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

III. Sensitivity analysis

The sensitivity of the defined benefit obligation to changes in the significant principal assumptions is:

(₹ in Crore)

	Post Retirement Medical Benefit			
	31 March 2017		31 March 2016	
	Increase	Decrease	Increase	Decrease
Discount rate (0.50% movement)	**(89.34)**	**90.14**	(82.47)	83.55
Change in cost (0.50% movement)	**90.94**	**(90.02)**	84.11	(82.99)

Sensitivity due to mortality and withdrawls are not material and hence impact of change not calculated.

The sensitivity analysis above has been determined based on a method that extrapolates the impact on defined benefit obligation as a result of reasonable changes in key assumptions occurring at the end of the reporting period. This analysis may not be representative of the actual change in the defined benefit obligations as it is unlikely that the change in assumptions would occur in isolation of one another as some of the assumptions may be correlated.

IV. Expected maturity analysis of the Post Retirement Medical Benefit Plan in future years

(₹ in Crore)

	Post Retirement Medical Benefit		
	31 March 2017	31 March 2016	1 April 2015
Less than 1 year	**103.44**	101.05	87.59
Between 1-2 years	**105.61**	103.18	89.95
Between 2-3 years	**108.14**	105.65	92.56
Between 3-4 years	**111.28**	108.72	95.52
Between 4-5 years	**115.17**	112.52	99.15
Between 5-6 years	**119.78**	117.02	103.32
Over 6 years	**1,157.28**	1,031.23	962.35
Total	**1820.70**	**1679.37**	**1,530.44**

Expected contributions to Post retirement medical benefit plan for the year ending 31st March 2018 are ₹ 32.30 Crore.

The weighted average duration of the post retirement medical benefit plan obligation at the end of the reporting period is 12.57 years (31st March 2016: 13.26 years).

V. Risk Exposure

Valuations are based on certain assumptions, which are dynamic in nature and vary over time. As such company is exposed to various risks such as increase in salary, investment risk, discount rate, mortality, disability and withdrawals.

C. Long term Leave Liability (EL/HPL) - Unfunded

The company provides for earned leave benefit and half pay leave to the employees of the company which accrue half yearly at 15 days (maximum) and 10 days respectively. The earned leave is encashable while in service and up to a maximum of 300 days on retirement. Half Pay leave is encashable on superannuation or on separation beyond the age of fifty years subject to the overall ceiling of 480 days. The leave liability has been treated as other long term benefits and has been assessed using projected unit credit actuarial method.

I. Movement in net defined benefit (asset)/liability

(₹ in Crore)

	Long term Leave Liability	
	31 March 2017	**31 March 2016**
Opening balance	**1628.73**	1479.87
Included in profit or loss:		
Current service cost	**107.77**	60.35
Interest cost (income)	**130.30**	118.39
Actuarial loss (gain)	**226.30**	263.06
Total amount recognised in profit or loss	**464.37**	441.80
Others		
Contributions paid by the employer		
Benefits paid	**323.61**	292.94
Closing balance	**1769.49**	1628.73

II. Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	Long-term Leave Liability	
	31 March 2017	**31 March 2016**
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Salary escalation rate	**7.65% P.A. for 1st 4 yrs. & then 6% P.A. thereafter**	8.25% P.A. for 1st 4 yrs. & then 6% P.A. thereafter
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	**100% of IALM (2006-08)**	
Withdrawal rates (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	**1%**	1%

D. Provident Fund Liability

The Company pays fixed contribution to provident fund at predetermined rates to a separate trust, which invests the funds in permitted securities. An amount of ₹ 282.46 Crore (31st March 2016: ₹ 278.88 Crore) for the year is recognised as expense on this account and charged to the Statement of Profit and Loss. The Company has an obligation to ensure minimum rate of return to the members as specified by GOI. Accordingly, the Company has obtained report of the actuary, based on which overall interest earnings and cumulative surplus is more than the statutory interest payment requirement for all the periods presented and wherever as per the actuarial valuation certificate liability for likely interest shortfall arises, the same has been provided in the accounts.

(₹ in Crore)

	2016-17	2015-16
Excess / (Shortfall) in PF interest liability based on actuarial valuation for the year	**7.73**	3.69
Accumulated provision for shortfall in PF interest liability based on actuarial valuation	**3.53**	11.26
Remeasurement gain/(loss) recognised through other comprehensive income statement	**12.00**	(17.13)
Interest shortfall / (excess) accounted through Statement of Profit & Loss	**4.27**	(20.82)

The company has PF trusts located at various places covering the employees of the company and managed separately, the details of plan assets and obligations are as follows

(₹ in Crore)

	Defined benefit obligation		Fair value of plan assets		Surplus / (Shortfall)	
Location	31 March 2017	31 March 2016	31 March 2017	31 March 2016	31 March 2017	31 March 2016
New Delhi	**830.17**	754.18	**838.08**	762.42	**7.91**	8.24
Haridwar	**1263.70**	1186.87	**1262.35**	1181.28	**(1.35)**	(5.59)
Ranipet	**324.38**	326.07	**325.95**	328.36	**1.57**	2.29
Chennai	**502.23**	458.98	**500.67**	455.71	**(1.56)**	(3.27)
Hyderabad	**873.85**	841.86	**911.51**	879.90	**37.66**	38.04
Vizag	**108.00**	88.35	**135.82**	116.25	**27.82**	27.90
Bengaluru	**507.04**	454.15	**510.41**	453.87	**3.37**	(0.28)
Trichy	**1088.93**	1037.84	**1088.31**	1035.71	**(0.62)**	(2.13)
Jhansi	**344.46**	343.35	**352.49**	349.27	**8.03**	5.92
Bhopal	**1033.79**	955.05	**1041.21**	962.75	**7.42**	7.70

Actuarial assumptions

The following were the principal actuarial assumptions at the reporting date.

	31 March 2017	31 March 2016
Economic assumptions:		
Discount rate	**7.50%**	8.00%
Expected Statutory interest rate	**8.65%**	8.80%
Demographic assumptions:		
Retirement age	**60.00**	60.00
Mortality table	**100% of IALM (2006-08)**	
Withdrawal rates (All ages)		
Upto 30 Years	**3%**	3%
From 31 to 44 years	**2%**	2%
Above 44 years	1%	1%

9 Micro and Small Enterprises disclosure

(₹ in Crore)

Particulars		2016-17	2015-16
i)	The principal amount remaining unpaid to supplier as at the end of the accounting year	**234.57**	193.51
ii)	The interest due thereon remaining unpaid, to supplier as at the end of accounting year.	**0.00**	0.25
iii)	The amount of interest paid in terms of section 16, along with the amounts of the payment made to the supplier beyond appointed day during the year.	**0.07**	0.00
iv)	The amount of interest due and payable for the period of delay in making payment (which have been paid but beyond the appointed day during the year) but without adding interest specified under this Act.	**-**	1.52
v)	The amount of interest accrued during the year and remaining unpaid at the end of year.	**0.00**	0.14
vi)	The amount of further interest remaining due and payable even in the succeeding years, until such date when the interest dues as above are actually paid to the small enterprises, for the purpose of disallowance as a deductible expenditure.	**1.73**	2.29

10 Leases

Operating lease commitments – Company as lessee

The company is in the practice of taking houses for employees, office buildings and EDP equipment etc. on operating lease both as cancellable and non- cancellable. The total of future minimum lease payments under non-cancellable operating leases for each of the following periods was:

(₹ in Crore)

	2016-17	2015-16
Less than one year	**2.74**	1.02
Between one and five years	**3.12**	1.48
More than five years	**1.03**	1.11
	6.89	3.61

Finance lease commitments - Company as Lessee

The Company has taken Land, building, EDP equipment on finance lease. The future minimum lease payments under non-cancellable leases are as follows:

(₹ in Crore)

	2016-17	2015-16
Less than one year	**73.88**	95.91
Between one and five years	**104.60**	164.47
More than five years	**0.00**	0.00
	178.48	260.38

Finance lease liabilities are payable as follows:

(₹ in Crore)

	Future minimum lease payments		Interest		Present value of minimum lease payments	
	2016-17	2015-16	2016-17	2015-16	2016-17	2015-16
Less than one year	**73.88**	95.91	**13.57**	19.76	**60.31**	76.15
Between one and five years	**104.60**	164.47	**15.05**	38.18	**89.55**	126.29
More than five years	**0.00**	0.00	**0.00**	0.00	**0.00**	0.00

Finance lease commitments - Company as Lessor

The Company has given locomotives under finance lease. The components of finance lease receivables are as follows:

(₹ in Crore)

	2016-17	2015-16
Gross investment in lease:		
Less than one year	**0.56**	0.91
Between one and five years	**0.19**	0.75
More than five years	**-**	-

Net investment in finance receivables

(₹ in Crore)

	2016-17	2015-16
Unearned finance income	**0.03**	0.13
Net investment in finance receivables	**0.72**	1.53

Present value of minimum lease receivables are as follows:

(₹ in Crore)

	2016-17	2015-16
Present value of minimum lease		
Less than one year	**0.56**	0.91
Between one and five years	**0.16**	0.62
	0.72	1.53

11 The reconciliation between the provision of Income Tax (Net of Deferred Tax) and amounts computed by applying the Income Tax Rate

(₹ in Crore)

Particulars	31-Mar-17	31-Mar-16
Total Comprehensive Income / (Loss) before tax (A)	**541.76**	(1,277.78)
Income Tax Rate (B)	**34.608%**	34.608%
Tax Expense (C) = (A) X (B)	**187.49**	(442.21)
Add Tax effect of the amounts as under:		
a) Expenses - Not Deducted	**13.96**	40.71
b) Tax Exempt Income	**(7.27)**	(4.49)
c) Tax Incentive	**(70.49)**	(66.84)
d) Changes in tax expense - Earlier years	**(16.61)**	(17.50)
e) Tax effect on Profit/ (Loss) on Share of JVs	**8.20**	(5.49)
Total (D)	**(72.21)**	(53.61)
Net Tax Expense (E) = (C)+(D)	**115.28**	(495.82)
Net Tax Expense (Refer Note 37 & 38) (F)	**115.28**	(495.82)

12. Research and Development Expenditure

The details of Research & Development Expenditure incurred during the year, which is eligible (other than land or building) of deduction under section 35 (2AB) of the Income Tax Act, 1961.

(₹ in Crore)

		2016-17	2015-16
A.	(i) Land	**0**	0
	(ii) Building	**0**	0.08
B.	Plant & Machinery & Other Equipments	**16.12**	13.56
C.	Revenue Expenditure:		
	Salaries/ Wages	**141.81**	133.34
	Material/ Consumables/spares	**18.10**	16.40
	Utilities	**0.55**	0.75
	Other R&D related expenses	**31.82**	33.01
	Total Revenue Expenditure	**192.28**	183.50
D.	Any Receipt/ Income by the R&D Centre	**-4.73**	-3.92
E.	Net amount eligible for deduction (B+C-D)	**203.67**	193.14

13. Subsidiary

(a) Name of subsidiary	Principal place of business	Proportion of ownership interest held by the Company		Proportion of ownership interest held by the Non Controlling Interest	
		2016-17	2015-16	2016-17	2015-16
BHEL Electrical Machines Limited	India	**51%**	51%	**49%**	49%

BHEL EML (subsidiary company) is engaged in manufacturing of rotating electrical machines located at Kasargod, Kerala.

(b) Summarized financial information of Subsidiary Company is as follows. The amounts disclosed for subsidiary are before inter- company eliminations:-

(₹ in Crore)

Summarized Balance Sheet	2016-17	2015-16
Current assets	**15.02**	19.26
Non-current assets	**11.55**	10.69
Total Assets	**26.57**	29.95
Current liabilities	**21.98**	21.79
Non-current liabilities	**6.82**	6.60
Total Liabilities	**28.8**	28.39
Net Assets	**-2.23**	1.56
Accumulated NCI	**-1.08**	0.78

(₹ in Crore)

Summarized statement of profit or loss	2016-17	2015-16
Revenue	**32.13**	41.73
Profit/ (loss) for the year	**-4.24**	-2.98
Other Comprehensive Income	**0.44**	-0.01
Total Comprehensive Income	**-3.80**	-2.99
Profit/ (loss) attributable to NCI	**-1.86**	-1.45

(₹ in Crore)

Summarized Cash flows	2016-17	2015-16
Cash flows from operating activities	**-2.17**	-3.53
Cash flows from investing activities	**-0.04**	-0.08
Cash flows from financing activities	**2.77**	4.54
Net increase/ (decrease) in cash and cash equivalents	**0.56**	0.93

14. Jointly Controlled Entities

Summarized financial information of the joint venture, based on its Ind-AS financial statements, and reconciliation with the carrying amount of the investment in financial statements are set out below:

(₹ in Crore)

Particulars	Principal place of business	Proportion of ownership		Carrying Amount	
		2016-17	2015-16	2016-17	2015-16
a) Name of the joint ventures (accounted for at equity method)					
BHEL-GE Gas Turbine Services Private Limited (BGGTS)	India	**50% minus 1 share**	50% minus 1 share	**2.38**	2.38
NTPC-BHEL Power Projects Private Limited (NBPPL)	India	**50%**	50%	**50**	50
Raichur Power Corporation Limited (RPCL)	India	**27.34%**	27.34%	**589.32**	589.32
Dada Dhuniwale Khandwa Power Limited	India	**50.00%**	50.00%	**15.79**	15.79

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

BHEL along with NTPC Limited 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.

Raichur Power Corporation Limited has been promoted 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. COD of Unit I and Unit II of Yeramarus TPP achieved in March 2017 and April 2017 respectively.

Dada Dhuniwale Khandwa Power Limited has been promoted for setting up of a 2x800 MW supercritical thermal power plant at Khandwa, Madhya Pradesh on build, own and operate basis considering that coal linkage was not available and land acquisition problem, the promoter had decided to wind up.

(i) The provision for impairment in value of investment in Powerplant Performance Improvement Limited has been made since the Company is under liquidation and the amount paid as equity is not recoverable.

(ii) The provision for impairment in value of investment in Dada Dhuniwale Khandwa Power Limited has been made to the extent of ₹ 6.71 Crore based on the net financial position since the winding of the company is in process.

(b) Summarized financial information of Joint Ventures (proportionate interest) is as follows:-

(₹ in Crore)

BHEL-GE Gas Turbine Services Pvt. Ltd	2016-17	2015-16
Current assets	**188.65**	200.24
Cash and Cash Equivalent (including bank balances) included in Current assets	**8.30**	2.40
Non-current assets	**18.87**	21.11
Current liabilities	**74.81**	93.75
Current financial liabilities (excluding Trade Payables)	**4.05**	3.64
Non-current liabilities	**3.41**	6.69
Non-Current financial liabilities (excluding Trade Payables)	**0.40**	0.44

	2016-17	2015-16
Revenue	**269.38**	290.00
Depreciation and Amortization	**1.68**	1.49
Interest Income	**6.40**	7.52
Interest Expense	**0.53**	0.12
Income tax Expense	**13.38**	15.97
Profit or loss from Continuing operations	**24.00**	29.82
Other Comprehensive Income	**-0.14**	0.02
Total Comprehensive Income	**23.86**	29.83

(₹ in Crore)

NTPC-BHEL Power Projects Pvt. Ltd.	2016-17	2015-16
Current assets	**254.30**	299.42
Cash and Cash Equivalent included in Current assets	**8.96**	19.20
Non-current assets	**93.39**	129.35
Current liabilities	**309.97**	356.87
Current financial liabilities (excluding Trade Payables)	**60.53**	53.79
Non-current liabilities	**16.41**	12.12
	2016-17	**2015-16**
Revenue	**321.58**	410.93
Depreciation and Amortization	**4.04**	4.46
Interest Income	**3.88**	1.38
Interest Expense	**0.34**	0.11
Income tax Expense	**0.00**	-4.32
Profit or loss from Continuing operations	**-38.46**	-6.55
Total Comprehensive Income	**-38.46**	-6.55

(₹ in Crore)

Raichur Power Corporation Ltd.	2016-17	2015-16
Current assets	**21.27**	5.70
Cash and Cash Equivalent included in Current assets	**0.14**	0.06
Non-current assets	**3400.01**	2934.31
Current liabilities	**117.27**	47.95
Current financial liabilities (excluding Trade Payables)	**45.84**	11.02
Non-current liabilities	**2719.70**	2302.68
Non-Current financial liabilities (excluding Trade Payables)	**2719.70**	2302.68
	2016-17	**2015-16**
Revenue	**0.00**	0.00
Depreciation and Amortization	**3.54**	0.00
Interest Expense	**1.12**	0.00
Profit or loss from Continuing operations	**-4.93**	0.00
Total Comprehensive Income	**-4.93**	0.00

(₹ in Crore)

Dada Dhuniwale Khandwa Power Ltd.	2016-17	2015-16
Current assets	**18.62**	18.11
Cash and Cash Equivalent included in Current assets	**15.47**	15.68
Non-current assets	**0.01**	1.77
Current liabilities	**0.44**	0.02
Non-current liabilities	**0.00**	0.12
	2016-17	**2015-16**
Revenue	**0.87**	0.00
Interest Income	**0.87**	0.00
Income tax Expense	**0.42**	0.00
Profit or loss from Continuing operations	**-1.53**	-3.14
Total Comprehensive Income	**-1.53**	-3.14

15. Related Parties Transactions

i) Joint Ventures:

Powerplant Performance Improvement Ltd.

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

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

Latur Power Company Ltd.

Raichur Power Corporation Ltd. (RPCL)

Dada Dhuniwale Khandwa Power Ltd.

Central Government controlled entities

Provident fund trusts

Gratuity trusts,PRMB Trust, Pension Trust

ii) Other related parties (Key Management Personnel- Functional Directors: existing & retired and Company Secretary):

CMD/ BHEL : Shri Atul Sobti
Functional Directors : S/Shri D. Bandyopadhyay, Amitabh Mathur, S. Biswas, T. Chockalingam, Akhil Joshi (w.e.f. 10.08.2016) & Company Secretary : Shri IP Singh
CMD/ BEML : Shri S. Basu

(₹ in Crore)

Key Management Personnel (KMP)	2016-17	2015-16
Payment of Salaries	**2.34**	4.20
Sale of Fixed Assets		0.01
Relatives of KMP		
Amounts due to BHEL at the end of the year	**0.00**	0.01
Payment of Salaries	**0.00**	0.2
Details of transactions		
Short-term employee benefits	**1.92**	3.53
Post-employment benefits	**0.42**	0.67
Total remuneration paid	**2.34**	4.20

iii) The CMD and functional directors have been allowed the use of staff car for both duty and non-duty journeys.The ceiling of non duty journey is 1000 kms p.m against recovery of prescribed amount in accordance with terms and condition of appointment. The monetary value of the perquisite for the use of car, if calculated in accordance with the provisions of I.T. Rules 1962 would amount to **₹ 0.02 Crore** (Previous Year ₹ 0.02 Crore).

iv) The company is a central Public Sector undertaking under the administrative control of Ministry of Heavy Industries and majority of its stake is held by Government of India. The significant transactions are with other PSUs, State owned utilities, Railways etc. which are also controlled by Govt. of India directly or indirectly. The transactions with such company are based on market driven rates at arms length price.

BHEL transactions with Joint Ventures are as under:

(₹ in Crore)

Details of Transactions and Balances as on 31.03.2017	BGGTS	RPCL	NBPPL	TOTAL (including Others)
Purchase of Goods and Services	0.56	-	1.43	1.99
Sales of Goods and services	187.76	129.91	359.14	676.81
Receiving of Services	-	-	8.06	8.06
Rendering of Services	-	105.55	2.43	107.98
Dividend income	12.85	-	-	12.85
Royalty income	1.47	-	-	1.47
Amounts due to BHEL at the end of the year	42.61	472.18	309.34	824.15
Amounts due from BHEL (incl. advances) at the end of the year	0.16	27.55	91.66	119.37
Provision for Doubtful debts	-	-	0.70	0.72
Provision for Doubtful advances	-	-	11.50	11.50

(₹ in Crore)

Details of Transactions and Balances as on 31.03.2016	BGGTS	RPCL	NBPPL	TOTAL (including Others)
Purchase of Goods and Services	0.85	-	4.47	5.32
Sales of Goods and services	146.42	157.88	709.13	1,013.43
Receiving of Services	-	-	19.00	19.00
Rendering of Services	0.06	241.97	53.15	295.18
Dividend income	21.18	-	-	21.18
Royalty income	1.03	-	-	1.03
Purchase of shares	-	257.79	-	257.79
Amounts due to BHEL at the end of the year	41.55	595.99	346.25	983.81
Amounts due from BHEL (incl. advances) at the end of the year	0.29	38.02	125.90	164.41
Provision for Doubtful debts	-	0.05	-	0.07

16 a) Movement in Provisions

(₹ in Crore)

Liquidated Damages	2016-17	2015-16
Opening	**2986.92**	2188.32
Additions	**1506.83**	1041.41
Usage/ Write off/payment	**-84.69**	-6.58
Withdrawal/adjustments	**-525.22**	-236.23
Closing Balance	**3883.84**	2986.92

(₹ in Crore)

Contractual Obligation	2016-17	2015-16
Opening	**5807.13**	5578.78
Borrowing Cost	**250.70**	278.91
Additions	**759.15**	733.87
PV Adjustment	**-133.63**	-115.62
Usage/ Write off/payment	**-161.45**	-176.80
Withdrawal/adjustments	**-1288.40**	-513.89
Change in estimate and rates	**-5.53**	21.88
Closing Balance	**5227.97**	5807.13

b) Liquidated damages are provided in line with the Accounting Policy of the Company and the same is dealt suitably in the accounts on settlement or otherwise. Contingent liability relating to liquidated damages is shown in Para 2 of Note 40.

c) The provision for contractual obligation is made at the rate of 2.5% of the contract revenue considering the effect of time value of money in line with significant Accounting Policy No. 11 to meet the warranty obligations as per the terms and conditions of the contract. The same is retained till the completion of the warranty obligations of the contract. The actual expenses on warranty obligation may vary from contract to contract and on year to year depending upon the terms and conditions of the respective contract.

17. As per Section 135 of the Companies Act, 2013 read with guidelines issued by DPE, the Company is required to spend, in every financial year, at least two per cent of the average net profits of the Company made during the three immediately preceding financial years in accordance with its CSR Policy. The details of CSR expenses for the year are as under:

(₹ in Crore)

Particulars	31 March 2017	31 March 2016
A. Amount required to be spent during the year	**37.50**	110.10
B. Amount available from previous year	**88.98**	62.94
C. Total (A+B)	**126.48**	173.04
D. Amount spent during the year on-		
- Construction/ acquisition of any asset		
- On purposes other than (i) above	**72.58**	84.06
Total	**72.58**	84.06
Amount carried forward (C-D)	**53.90**	88.98

a) Amount spent during the year ended 31 March 2017:

(₹ in Crore)

Particulars	In cash	Yet to be paid in cash	Total
Construction/acquisition of any asset	-	-	-
On purposes other than (i) above	26.78	10.72	37.50

b) Amount spent during the year ended 31 March 2016:

(₹ in Crore)

Particulars	In cash	Yet to be paid in cash	Total
Construction/acquisition of any asset	-	-	-
On purposes other than (i) above	56.47	53.63	110.10

18. Disclosure as per Ind AS 11 Construction Contracts

a) The disclosures relating to Construction Contracts as per the requirement of Indian Accounting Standard -11 (IndAS-11) Construction Contracts are as follows:

(₹ in Crore)

	2016-17	2015-16
Contract revenue recognised for the year	**21757.36**	20020.94
In respect of Contract in progress at the end of year :		
The aggregate amount of Cost incurred and recognised profits (less recognised losses) to date	**280975.13**	278528.82
Amount of advance received	**4447.76**	5883.04
Amount of retentions (deferred debts)	**19099.24**	20185.00
In respect of dues from customers after appropriate netting off		
Gross amount due from customer for the contract work as an asset	**2939.99**	3705.90
Gross amount due to customer for the contract work as a liability	**1169.85**	1569.61

b) The estimates of total costs and total revenue in respect of construction contracts in accordance with Ind AS 11 Construction Contracts are reviewed and up dated periodically to ascertain the percentage completion for revenue recognition. However, it is impracticable to quantify the impact of change in estimates.

19 Financial Instruments - Accounting Classifications and Fair value measurements

a The Fair value of cash and cash equivalents, bank balances, loans, trade receivables, trade payables and others approximates their carrying amount. Trade receivables are evaluated after taking into consideration for Expected Credit Losses. Company uses the following hierarchy for determining and disclosing the fair value of financial instruments by valuation technique.

Level 1: quoted prices (unadjusted) in active markets for identical assets or liabilities.

Level 2: inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly (i.e., as prices) or indirectly (i.e., derived from prices)

Level 3: inputs for the asset or liability that are not based on observable market data (unobservable inputs)

b Financial Assets / Liabilities Classification

(₹ in Crore)

	Carrying Amount		
	As on 31.03.17	As on 31.03.16	As on 01.04.15
Financial Assets at amortised cost			
Trade Receivables	**31866.72**	33567.11	35210.21
Cash & Cash equivalent	**1490.79**	1966.10	2800.02
Other Bank Balances	**9002.76**	8121.10	7012.14
Loans	**213.82**	239.43	195.48
Other Financial Assets	**219.18**	159.64	217.81
Financial Assets at Fair value through Profit & Loss			
Investments (Equity Instruments)	**3.93**	6.67	8.71
Financial Liabilities at amortised cost			
Finance Lease Obligation	**153.51**	207.87	121.99
Trade Payables	**9348.98**	9456.13	9448.20
Borrowings (Current)	**6.03**	3.53	2.14
Other Financial Liabilities	**1573.14**	1686.57	1728.76

(₹ in Crore)

	Level 3 Heirarchy		
Financial assets and liabilities measured at fair value- recurring fair value measurements	**As on 31.03.17**	**As on 31.03.16**	**As on 01.04.15**
Financial assets:			
Investment in Unquoted Equity Instruments	**3.93**	6.67	8.71

c Valuation Techniques used to determine fair value

Fair value of unquoted equity instruments is determined using Level 3 inputs which include inputs from the financial statements of the investee Company based on Net asset value per share.

Reconciliation of fair value measurement of unquoted equity shares classified as FVTPL assets

(₹ in Crore)

As at 1st April 2015	8.71
Changes in fair value	-2.04
As at 31st March 2016	6.67
Changes in fair value	-2.74
As at 31st March 2017	3.93

d Financial Risk Management

Objectives and Policies

The company's Financial risk management is an integral part of business strategies. The Company is exposed to the following risks from its use of financial instruments:

- Credit risk
- Liquidity risk
- Market risk

This note presents information about the Company's exposure to each of the above risks, the Company's objectives, policies and processes for measuring and managing risk, and the Company's management of capital. Further quantitative disclosures are included throughout these financial statements.

e Risk management framework

BHEL has in place a Board approved Risk Management Charter laying down procedures to inform Board members about the risk assessment & minimization. An important purpose of the Charter is to implement a structured and comprehensive risk management system across the company which ensures that the risks are being properly identified and effectively managed. The risk management process includes risk identification, risk assessment, risk evaluation, risk mitigation and regular review & monitoring of risks.

BHEL has in place a Board level risk management committee (BLRMC) with assigned responsibility of reviewing the company's risk governance structure, risk assessment & risk management framework, guidelines, policies and processes. Besides this, Risk Management Steering Committee (RMSC) leads the risk management initiative across the company. RMSC members comprising of Executive Directors/ Functional Heads from Corporate Functions and Business sectors are responsible for adopting & implementing the risk management framework. At the divisional level, Risk Management Committees at the Business Sectors/Regions/Units/functions are responsible for review of risk profiles & risk mitigation plans and their implementation at the respective Units/Regions. Order book reduction due to increase in competition, excess domestic manufacturing capacities and low businesses sentiments are the key risk which is being mitigated through expanding the offerings, diversified product profile and focus on EPC business.

f Financial Risk management

Credit Risk

Credit risk refers to the risk of default on its obligation by the counterparty resulting in a financial loss. The maximum exposure to the credit risk at the reporting date is primarily from trade receivables. BHEL is a project oriented organisation with significant operations from power projects. The customer profile consists of around 75% from Govt. Sectors (SEB's, PSU's, Railways and other govt. departments). The projects are generally funded by Financial Institutions/ banks or payments are covered by Letter of Credit (LC). In respect of private sectors, the payment terms are mainly through LC. On account of adoption of Ind AS 109, the Company uses expected credit loss model to assess the impairment loss or gain. The disclosure of expected credit losses is made elsewhere.

(i) Exposure to credit risk

The carrying amount of financial assets represents the maximum credit exposure. The maximum exposure to credit risk at the reporting date was:

(₹ in Crore)

Particulars	31-Mar-17	31-Mar-16	1-Apr-15
Financial assets for which loss allowance is measured using 12 months Expected Credit Losses (ECL)			
Loans	**213.82**	239.43	195.48
Cash and Cash Equivalents	**1490.79**	1966.10	2800.02
Other Bank Balances	**9002.76**	8121.10	7012.14
Others	**219.18**	159.64	217.81
Financial assets for which loss allowance is measured using Life time Expected Credit Losses (ECL)			
Trade Receivables	**31866.72**	33567.11	35210.21

Concentration of credit risk- Geographical **Percentage of total revenue**

Note	2017	2016
Within India	**97.00%**	95.34%
Outside India	**3.00%**	4.66%

The company's exposure to credit risk for trade and other receivables by type of counterparty are as follows –

Percentage of total trade receivables	2017	2016
State Electricity Boards	**28.11%**	25.85%
Central Public Sector Undertakings	**45.23%**	46.75%
Railways	**1.09%**	1.29%
Govt. Deptt.	**0.49%**	0.28%
Private Parties	**20.47%**	20.41%
Others	**4.61%**	5.42%
	100%	100%

g Impairment losses

(a) Financial assets for which loss allowance is measured using 12 month expected credit losses

The company has assets where the counter- parties have sufficient capacity to meet the obligations and where the risk of default is very low.

The movement in the allowance for impairment in respect of loans during the year was as follows:

(₹ in Crore)

Balance as at 1st April 2015	6.57
Impairment loss recognised / write off/ withdrawl	0.19
Balance as at 31st March 2016	6.76
Impairment loss recognised / write off/ withdrawl	11.28
Balance as at 31st March, 2017	18.04

(b) Reconciliation of impairment loss provisions

The movement in the allowance for impairment in respect of trade receivables during the year was as follows:

(₹ in Crore)

Balance as at 1st April 2015	4667.95
Impairment loss recognised	1785.47
Amounts written off/ withdrawl	669.12
Balance as at 31st March 2016	5784.30
Impairment loss recognised	1262.33
Amounts written off/ withdrawl	866.37
Balance as at 31st March, 2017	6180.26

The Company believes that, apart from the above, no impairment allowance is necessary in respect of any other assets. Credit risk on cash and cash equivalents is limited as we generally invest in deposits with banks and financial institutions with high credit ratings assigned by credit rating agencies.

h Liquidity risk

Liquidity risk is the risk that the Company will encounter difficulty in meeting the obligations associated with its financial liabilities that are settled by delivering cash. The Company's approach in managing the same is to ensure, as far as possible, sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions.

The company's principal sources of liquidity are cash and cash equivalents, balances with banks and the cash flow that is generated from operations. The company has no outstanding bank borrowings. The company believes that the working capital is sufficient to meet its current requirements. Accordingly, no liquidity risk is perceived.

The following are the contractual maturities of non-derivative financial liabilities, based on contractual cash flows:

(₹ in Crore)

Financial Liabilities	As at 31.03.17		As at 31.03.16		As at 01.04.15	
Non-derivative financial liabilities	**Within 1 year**	**exceeding 1 year**	**Within 1 year**	**exceeding 1 year**	**Within 1 year**	**exceeding 1 year**
Trade payables	**8715.88**	**633.10**	8708.44	747.69	8803.17	645.03
Finance lease obligations	**63.96**	**89.55**	81.58	126.29	60.99	61.00
Borrowings	**6.03**		3.53		2.14	
Deposits from contractors and others	**511.07**	**104.71**	529.42	123.51	517.36	90.16
Other Payables/liabilities						
Capex dues	**116.61**		134.31		193.49	
Employee dues	**187.57**		208.71		322.17	
Other dues	**653.18**		690.62		605.58	
TOTAL	**10254.30**	**827.36**	**10356.61**	**997.49**	**10504.90**	**796.19**

i Market risk

Market risk is the risk that changes in market prices, such as foreign exchange rates and interest rates will affect the Company's income or the value of its holdings of financial instruments. The objective of market risk management is to manage and control market risk exposures within acceptable parameters, while optimizing the return. The Company is exposed to foreign currency risk on certain transactions that are denominated in a currency other than the entity's functional currency; hence exposures to exchange rate fluctuations arise. The risk is that the functional currency value of cash flows will vary as a result of movements in exchange rates.

j Foreign currency risk exposure :- The company's exposure to foreign currency risk at the end of reporting period, are as follows

(i) The derivative instruments that are hedged and outstanding as on 31.03.2017 is Nil (previous year Nil).

(ii) The foreign currency exposures that are not hedged by a derivative instrument or otherwise are as under:

31-Mar-17

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	In	**47.70**	**50.48**	**0.81**	**0.03**	**-**
Liabilities	Crore	**17.55**	**10.38**	**1.39**		**-**
		30.15	**40.10**	**(0.58)**	**0.03**	**-**

31-Mar-16

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	In	49.60	58.22	0.81	0.03	-
Liabilities	Crore	25.81	18.22	1.36		-
		23.79	40.00	(0.55)	0.03	-

(iii) The currency profile as at March 31, 2017 & March 31, 2016 expressed in ₹ are as below:

31-Mar-17

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	₹ In Crore	**3058.67**	**3462.46**	**36.03**	**4.87**	**149.02**
Liabilities		**1065.92**	**716.62**	**63.62**		**148.12**
		1,992.75	**2,745.84**	**(27.59)**	**4.87**	**0.90**

31-Mar-16

		USD	Euro	Libyan Dinar	Oman Riyal	Others
Assets/ Receivables	₹ In Crore	3272.10	4336.11	38.74	5.25	179.83
Liabilities		1696.06	1362.25	65.74		121.97
		1,576.04	2,973.86	(27.00)	5.25	57.86

Sensitivity analysis

A strengthening of the Indian Rupee, as indicated below, against the USD, Euro, LYD, Oman Riyal and others at 31 March would have increased (decreased) profit or loss by the amounts shown below. This analysis is based on foreign currency exchange rate variances that the Company considered to be reasonably possible at the end of the reporting period. The analysis is performed on the same basis for previous year, albeit that the reasonably possible foreign exchange rate variances were different, as indicated below.

	Impact on Profit or loss (before tax)	
Effect	**Strengthening**	**Weakening**
March 31, 2017	**₹ in Crore**	
1% movement		
USD	19.93	(19.93)
Euro	27.46	(27.46)
Libyan Dinar	(0.28)	0.28
Oman Riyal	0.05	(0.05)
Others	0.01	(0.01)

	Impact on Profit or loss (before tax)	
Effect	**Strengthening**	**Weakening**
March 31, 2016	**₹ in Crore**	
1% movement		
USD	15.76	(15.76)
Euro	29.74	(29.74)
Libyan Dinar	(0.27)	0.27
Oman Riyal	0.05	(0.05)
Others	0.58	(0.58)

k Capital Management

While managing capital, the Company's objective is to safeguard its ability to continue as a going concern, so that it can continue to provide returns for shareholders and benefits for other stakeholders.

The Board of Directors monitors the return on capital, which the Company defines as result from operating activities divided by total shareholders' equity. The Board of Directors also monitors the level of dividends to equity shareholders.

The Group's return on capital during 2016-17 is 1.41% in comparison to -2.18% in 2015-16.

The Company monitors capital, using a medium term view and long term view, on the basis of a number of financial ratios generally used by industry and by the rating agencies. The Company is not subject to externally imposed capital requirements. The Company's capital structure is managed against the various financial ratios as required to maintain strong credit ratings.

20. The Group held and transacted in cash during the period 08.11.2016 to 30.12.2016 as provided in the Table below:

(₹ in Crore)

Particulars	SBN	Other Denomination Notes	Total
Closing Cash in hand as on 08.11.2016	0.31	0.11	0.42
(+) Permitted Receipts	-	21.63	21.63
(-) Permitted Payments	-	18.02	18.02
(-) Amount Deposited in Banks	0.31	3.41	3.72
Closing Cash in hand as on 30.12.2016	-	0.31	0.31

21. Dividends

a) The following dividends were declared and paid during the year:

(₹ in Crore)

	2016-17	2015-16
Final dividend of ₹ 0.40 (previous year ₹ 0.62) per qualifying equity share	**97.90**	151.75
Interim dividend of ₹ 0.80 (previous year NIL) per qualifying equity share	**195.81**	0

The above final dividend figures exclude tax on dividend of **₹ 19.93 Crore** (previous year ₹ 30.89 Crore)

The above interim dividend figures exclude tax on dividend of **₹ 39.86 Crore** (previous year ₹ NIL Crore)

b) The company has proposed final dividend @ 39 % (₹ 0.78 Per share, amounting to ₹ 190.91 Crore) on paid up share capital of ₹ 489.52 Crore out of profit for the year 2016-17. The total payout on account of dividend (₹ 190.91 Crore) alongwith corporate dividend tax (₹ 38.87 Crore) will be ₹ 229.78 Crore.

c) The Board of Directors has authorised to issue the Financial Statements 2016-17 in its meeting held on 29.05.2017.

22. Assets and Liabilities are classified between Current and Non-current considering 12 months period as operating Cycle.

23. Pending finalisation of agreement for wage/ salary structure due from 1st January, 2017, a provision of ₹ 961 Crore (including one time cumulative impact on a/c of gratuity and leave liability of ₹ 674 Crore) has been made in financial year 2016-17 based on estimates as per third pay revision committee (PRC) recommendation.

24. Marginal Cost of lending rate (MCLR) as applicable to BHEL as at the year end has been considered for working out fair value of consideration and present value of long term provisions.

25. There are net outstanding debts of ₹ 2119 Crore (after adjustment of advances) pertaining to 27 projects on hold due to various reasons like environment clearance, fuel linkage, land acquisition, fund constraints, force majeure, hold imposed by BHEL due to strategic reasons etc. FG/ WIP of ₹ 777 Crore is also lying in these projects. Provision of ₹ 1618 Crore for outstanding debts and ₹ 180 Crore for inventory has been provided till 31.03.2017 against these projects in line with the guidelines in this regard.

26. Previous year's figures have been regrouped/ rearranged wherever considered necessary.

27. Additional Information

(₹ in Crore)

Name of the entity in the Group	Net Assets, i.e., total assets minus total Liabilities		Share in profit or loss		Share in other Comprehensive Income		Share in total Comprehensive Income	
	As % of Consolidated Net results	Amount	As % of Consolidated Profit or loss	Amount	As % of Total Other Comprehensive Income	Amount	As % of Total Comprehensive Income	Amount
BHEL	97.68 (97.55)	31636.93 (31523.61)	106.11 (101.82)	482.98 (-718.43)	101.05 (100.03)	-29.00 (-76.38)	106.45 (101.65)	453.98 (-794.81)
Subsidiary-								
BHEL Electrical Machines Limited (BHEL EML)	0.00	-1.15 (0.79)	-0.47 (0.22)	-2.16 (-1.53)	-0.77 (0.00)	0.22 (0.00)	-0.45 (0.20)	-1.94 (-1.53)
Non-controlling Interests in BHEL EML	0.00	-1.08 (0.78)	-0.46 (0.21)	-2.08 (-1.45)	-0.77 (0.00)	0.22 (0.00)	-0.44 (0.19)	-1.86 (-1.45)
Joint Ventures (investment as per the equity method)-								
BHEL-GE Gas Turbine Services Private Limited	0.40 (0.37)	129.31 (120.91)	4.70 (3.62)	21.38 (25.52)	0.49 (-0.03)	-0.14 (0.02)	4.98 (-3.27)	21.24 (25.54)
NTPC-BHEL Power Projects Private Limited	0.07 (0.18)	21.32 (59.78)	-8.45 (0.93)	-38.46 (-6.55)	0.00	0.00	-9.02 (0.84)	-38.46 (-6.55)
Raichur Power Corporation	1.80 (1.82)	584.39 (589.32)	-1.08 (0.00)	-4.93 (0.00)	0.00	0.00	-1.16 (0.00)	-4.93 (0.00)
Dada Dhuniwale Khandwa Power Limited	0.06 (0.06)	18.19 (19.74)	-0.34 (0.45)	-1.55 (-3.14)	0.00	0.00	-0.36 (0.40)	-1.55 (-3.14)
Total	**100.00**	**32387.91 (32314.93)**	**100.00**	**455.18 (-705.58)**	**100.00**	**-28.70 (-76.36)**	**100.00**	**426.48 (-781.94)**

28. Consolidated Operating Segment

The Segments have been identified as 'Power' and 'Industry' based on the orders booked by the respective business sectors. The order booked by International operation group is taken to Power or Industry as the case may be.

The Company's Committee of functional Directors has been identified as Chief Operating Decision maker (CODM).

(₹ in Crore)

		For the year ended 31.3.2017			For the year ended 31.3.2016		
		Power	Industry	Total	Power	Industry	Total
I.	**SEGMENT REVENUE**						
a.	Segment Revenue	**22794.78**	**6077.11**	**28871.89**	20222.74	5867.43	26090.17
b.	Operating Revenue-External	**22794.78**	**6077.11**	**28871.89**	20222.74	5867.43	26090.17
II.	**SEGMENT RESULTS**						
a.	Segment Results	**2534.58**	**239.02**	**2773.60**	129.74	-198.40	-68.66
b.	Unallocated expenses (Net of income)			**1836.73**			732.66
c.	Profit before finance cost & Incometax (a) - (b)			**936.87**			-801.32
d.	Finance cost (Includes unwinding of Interest)			**351.30**			359.81
e.	Net Profit before Income Tax (c) - (d)			**585.57**			-1161.13
f.	Income Tax			**130.39**			-455.55
g.	Net Profit after Income Tax			**455.18**			-705.58
III	**ASSETS & LIABILITIES**						
a.	Segment Assets	**37601.20**	**9210.89**	**46812.09**	42020.25	9508.03	51528.28
b.	Common Assets			**14535.36**			13792.18
c.	Total Assets			**61347.45**			65320.46
d.	Segment Liabilities	**23250.32**	**5504.69**	**28755.01**	25973.19	5830.10	31803.29
e.	Common Liabilities			**204.53**			1202.24
f.	Total Liabilities			**28959.54**			33005.53
IV	**OTHER INFORMATION**						
a.	Capital Expenditure	**76.70**	**201.31**		347.33	117.45	
b.	Depreciation & Amortization	**657.83**	**143.10**		697.25	178.00	
c.	Non Cash Expenses (other than depreciation & amortization)	**455.17**	**205.61**		1781.49	510.50	
	GEOGRAPHICAL SEGMENTS						
		Within India	**Outside India**	**Total**	**Within India**	**Outside India**	**Total**
1	Net Sales / Revenue from Operations	**28005.90**	**865.99**	**28871.89**	24874.16	1216.01	26090.17
2	Non- Current Assets (PPE & Intangible Assets)	**3763.68**	**5.85**	**3769.53**	4280.31	6.24	4286.55
3	Capital Expenditure	**329.52**	**2.98**	**332.50**	555.63	0.35	555.98
	Major Customer- Details of Revenue from Single Customer exceeding 10% of total revenue of the BHEL						
		Power	**Industry**	**Total**	**Power**	**Industry**	**Total**
	PSUs	**7050.71**	**1916.08**	**8966.79**	6715.22	988.37	7703.59
	Railways	**0.00**	**987.29**	**987.29**	0.00	793.11	793.11



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Ten Years' Financials

₹ in Crore

		IND AS		IGAAP								
		2016-17	2015-16*	2015-16	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	2007-08
I	**EARNINGS/ OUTGOINGS**											
	Earnings											
	Turnover	28840	26050	26587	30947	40338	50156	49510	43337	34154	28033	21401
	Revenue from Operations (Net)	29475	26638	25630	30242	39109	48425	47979	42246	33354	26726	19727
	Other Income	996	1498	1450	1220	1616	1121	1266	1021	1155	983	1023
	Total Earnings	30471	28136	27080	31462	40725	49546	49245	43267	34509	27709	20750
	Outgoings											
	Cost of material consumption, Erection & Engineering Expenses	16566	16377	16398	17758	22103	27899	28908	23209	20672	17620	11821
	Changes in inventories of finished goods and work in progress	994	210	210	(338)	1054	116	(823)	(127)	(787)	(1152)	(827)
	Employee benefit expenses	5400	5380	5541	5450	5933	5753	5466	5397	6540	2984	2608
	Other expenses of manufacture, administration, selling and distribution	4435	4034	3036	3707	3315	3777	3242	2537	2057	1823	1644
	Provisions (Net)	1273	2051	2455	1604	2259	1566	1403	2715	-934	1281	778
	Less : Cost of job done for internal use	25	47	47	28	68	76	104	69	121	61	38
	Outgoings before finance cost & depreciation	28643	28005	27594	28153	34596	39035	38092	33662	27427	22495	15986
	Profit before depreciation, finance cost & tax	1828	131	(514)	3309	6129	10511	11153	9605	7082	5214	4763
	Depreciation & amortisation expense	849	936	936	1077	983	953	800	544	458	334	297
	Gross Profit	979	(805)	(1450)	2232	5146	9558	10353	9061	6624	4880	4466
	Finance Costs	351	359	27	92	133	125	51	55	33	31	36
	Profit before tax	628	(1164)	(1477)	2140	5014	9432	10302	9006	6591	4849	4430
	Tax Expense (Net)	132	(454)	(564)	721	1553	2817	3262	2995	2280	1711	1571
	Profit after tax	496	(710)	(913)	1419	3461	6615	7040	6011	4311	3138	2859
	Total Comprehensive income	467	(786)									
	Dividend ^	294	152	98	284	693	1323	1567	1525	1141	832	746
	Corporate Dividend Tax on the above	60	31	20	57	118	221	254	249	191	141	127

₹ in Crore

		IND AS		IGAAP								
		2016-17	2015-16*	2015-16	2014-15	2013-14	2012-13	2011-12	2010-11	2009-10	2008-09	2007-08
II	**WHAT THE COMPANY OWNED**											
	Property, Plant & Equipment and Intangible Assets :											
	Gross Block	5372	4896	13298	12588	12050	10783	9707	8050	6580	5225	4443
	Less: Accumulated Depreciation	1776	934	9335	8448	7357	6325	5410	4649	4165	3754	3462
	Net Block	3596	3962	3963	4140	4693	4458	4297	3401	2415	1471	981
	Capital WIP incl. Intangible Assets under development	169	318	315	518	642	1172	1348	1733	1530	1157	658
	Non-Current Investments	661	664	663	418	420	429	462	439	80	52	8
	Deferred Tax Assets(Net)	3841	3659	3135	2221	1969	1551	1546	2164	1527	1840	1338
	Current Assets & other non current assets	52963	56560	58614	61170	65067	62518	59123	51523	42915	36901	27906
	Total assets	61230	65163	66690	68467	72791	70128	66776	59260	48467	41421	30892
III	**WHAT THE COMPANY OWED**											
	Borrowings	90	126	126	61	105	129	123	102	81	105	61
	Liabilities & Provisions	28846	32856	33510	34321	39639	39555	41280	39004	32489	28377	20056
	Total liabilities	28936	32982	33636	34382	39744	39684	41403	39106	32570	28482	20117
IV	**NET WORTH OF THE COMPANY**											
	Equity Share Capital	490	490	490	490	490	490	490	490	490	490	490
	Other Equity	31804	31691	32564	33595	32557	29954	24883	19664	15427	12449	10285
	Net Worth	32294	32181	33054	34085	33047	30444	25373	20154	15917	12939	10775
V	**CAPITAL EMPLOYED**	28374	28330	29778	31435	33139	29161	22651	16391	12968	10091	8873
VI	**VALUE ADDED**	10111	8356	8382	11983	15046	19460	19098	18476	13171	9894	8323
VII	**RATIOS**											
	PBDIT to total assets (%) #	2.9%	0.2%	(0.8%)	4.7%	8.6%	15.4%	17.7%	17.8%	15.8%	14.4%	17.6%
	Gross profit to capital employed (%)#	3.4%	(2.8%)	(4.7%)	6.9%	16.5%	36.9%	53.0%	61.7%	57.5%	51.5%	54.1%
	Turnover/ gross block	5.4	5.3	2.0	2.5	3.3	4.7	5.1	5.4	5.2	5.4	4.8
	Earnings per share (₹) +	2.03	(2.90)	(3.73)	5.80	14.14	27.03	28.76	24.56	17.61	12.82	11.68
	Net worth per share (₹) +	131.94	131.48	135.04	139.26	135.02	124.38	103.67	82.34	65.03	52.86	44.02
	Total Debt / Equity	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01	0.01	0.01	0.01
	Return on Net Worth	1.5%	(2.2%)	(2.8%)	4.2%	10.5%	21.7%	27.7%	29.8%	27.1%	24.3%	26.5%
	Gross profit margin	3.4%	(3.1%)	(5.5%)	7.2%	12.8%	19.1%	20.9%	20.9%	19.4%	17.4%	20.9%
	Net profit margin	1.7%	(2.7%)	(3.4%)	4.6%	8.6%	13.2%	14.2%	13.9%	12.6%	11.2%	13.4%

* Figures are restated as per Ind AS

^ Dividend for 2015-16* and 2016-17 includes Interim Dividend for the Current Year and Final Dividend for the Previous Year as per Ind AS

\# On the basis of average assets and capital employed

+ Figures are restated on post-split made in 2011-12 and bonus issue of 1:1 in 2007-08

Value Addition Statement

₹ in Crore

Description	IND AS		IGAAP			
	2016-17	2015-16*	2015-16	2014-15	2013-14	2012-13
A. Generation of Value Addition						
Value of Production (Net of Excise Duty)	26631	24718	24765	29755	37077	47219
Less- Direct Material,Power & Fuel and payment to sub-contractors	16520	16362	16383	17772	22031	27759
Value Added	10111	8356	8382	11983	15046	19460
Less - Other Operating Expenses	2913	2922	3355	3224	2982	3196
Net Value Addition	7198	5434	5027	8759	12064	16264
% to value of production	27.03%	21.99%	20.30%	29.44%	32.54%	34.44%
B. Application of Value Addition						
Employees payments	5400	5380	5541	5450	5934	5753
% to net value addition	75.02%	98.99%	110.23%	62.22%	49.19%	35.37%
Depreciation	849	936	936	1077	983	953
% to net value addition	11.79%	17.22%	18.61%	12.30%	8.15%	5.86%
Finance Cost :	351	359	27	92	133	125
% to net value addition	4.87%	6.61%	0.53%	1.05%	1.10%	0.77%
Tax Provision (Income Tax including Deferred tax)	132	(455)	(563)	721	1554	2818
% to net value addition	1.83%	(8.36%)	(11.21%)	8.23%	12.88%	17.32%
Dividend (incl. dividend tax)^	354	183	118	341	810	1544
% to net value addition	4.92%	3.37%	2.34%	3.90%	6.71%	9.49%
Retained Profit	113	(969)	(1031)	1078	2651	5071
% to net value addition	1.57%	(17.83%)	(20.51%)	12.31%	21.97%	31.18%

* Figures are restated as per Ind AS

^ As per Ind AS for 2015-16 and 2016-17, Dividend includes Interim Dividend for the Current Year and Final Dividend for the Previous Year

Performance Annual Plan

₹ in Crore

Category of Investment	2016-17	2015-16
Schemes	**210**	80
Modernisation and Rationalisation, others	**51**	141
Customer Project Related Capital Investment	**33**	90
Total	**294**	311

Contribution to Exchequer

₹ in Crore

2016-17	2015-16	2014-15	2013-14	2012-13
2062	1857	2449	4729	6561

Dividend Distribution Policy

1. SCOPE & OBJECTIVE

1.1 This policy has been formulated in line with Regulation 43A notified vide SEBI (Listing Obligations and Disclosure Requirements) (Second Amendment) Regulations, 2016 on July 8, 2016. The said notification requires top five hundred listed companies (based on market capitalization of every financial year) to formulate a Dividend Distribution Policy, which shall be disclosed in its Annual Report and on its website.

1.2 Accordingly, the Company has approved and adopted this Dividend Distribution Policy (the "Policy") at its meeting held on 6th April 2017, being the effective date of the Policy.

1.3 The intent of the Policy is to broadly specify the parameters (external and internal factors) that shall be considered while declaring dividend and the circumstances under which shareholders of the Company may / may not expect dividend and how the retained earnings shall be utilized, etc.

The Company strives for maximisation of shareholders' value and believes that this can be attained by driving growth. The policy endeavours to strike an optimum balance between rewarding shareholders through dividend and ensuring that sufficient profits are retained for growth of the Company and other needs.

The Policy is not an alternative to the decision of the Board for recommending dividend, which is made every year after taking into consideration the interest of the Company and all the relevant circumstances enumerated in the policy or other factors as may be decided as relevant by the Board.

2. DEFINITIONS

2.1 "Board" shall mean Board of Directors of the Company.

2.2 "Companies Act" shall mean the Companies Act, 2013 and Rules thereunder, notified by the Ministry of Corporate Affairs, Government of India, as amended from time to time.

2.3 "Dividend" includes interim dividend.

2.4 "Company" shall mean Bharat Heavy Electricals Limited.

2.5 "Policy" means Dividend Distribution Policy.

2.6 "Regulations" shall mean the Securities and Exchange Board of India (Listing Obligations and Disclosure Requirements) Regulations, 2015 as notified by The Securities and Exchange Board of India, as amended, from time to time.

2.7 "Stock Exchange" shall mean a recognised Stock Exchange as defined under clause (f) of Section 2 of the Securities Contracts (regulation) Act, 1956, where shares of the company are listed.

3. Factors including financial parameters that shall be considered while declaring and pay-out decision on dividend of the Company:

3.1 External Factors

3.1.1 Economic and Business Environment: Macro Economic conditions including present and likely business scenario will be considered while declaration of dividend in any year.

3.1.2 Status of Industry: Prevailing conditions in the Industry in which the Company operates will also be considered while taking decisions regarding declaration of dividend.

3.1.3 Statutory Provisions and Guidelines: The Company shall ensure compliance to the provisions of Companies Act & regulations of SEBI and other Statutory Authorities with regard to declaration of dividend. Further, being a Government Company, the Company shall also consider applicable guidelines in force in respect of dividend declaration, as issued from time to time by the Govt. of India.

3.1.4 Applicable taxes including tax on dividend: The taxes applicable on the company including taxes on dividends that effect overall cash outflow.

3.2 Internal Factors

The Board while considering declaration of dividend for a financial year may, inter-alia, consider the following factors taking into account the nature and

scale of company's operations: -

3.2.1 Profits upto the Quarter/for the financial year

3.2.2 Available balance in Free Reserves of the Company

3.2.3 Dividend payout trend of the Company and the industry

3.2.4 Future business projections and operational requirements

3.2.5 Stability of earnings and projections of future profits

3.2.6 Operating cash flows, treasury positions and cash flow projections for near future

3.2.7 Borrowing levels and the capacity to borrow

3.2.8 Present and future capital expenditure plans of the Company including organic/ inorganic growth avenues

3.2.9 Additional investment requirements in subsidiaries / JVs and associates of the company

3.2.10 Providing for unforeseen events and contingencies which has financial implications

3.2.11 Any other factor as may be deemed fit by the Board

3.2 The profits for a year may be adjusted at the discretion of the Board, for the purpose, to exclude exceptional or one-off items or non-cash items resulting from change in law, accounting policies, accounting standards or otherwise.

3.3 The Board may consider payment of interim dividend as and when it feels appropriate. Final dividend shall be recommended by the Board for approval of shareholders of the Company as per prevalent applicable rules and regulations.

4. Circumstances under which the shareholders may or may not expect dividend

Distribution of profits in the form of dividends and retaining some proportion of it for use in business for other objectives is a fundamental decision for every company. This decision requires adequate balancing between suitably rewarding shareholders through dividends and retaining profits to fund the operational requirements and growth plans of business. Although the Company has been consistently paying out dividends to its shareholders and they can reasonably expect it in future also unless the Company is constrained not to declare dividends under following circumstances:

(a) Absence or Inadequacy of profits – If during any financial year, there are no profits or it is determined that the profits of the Company are not sufficient, the Board may decide not to declare dividends for that financial year.

(b) Other constraints – Crucial factors like limited / non availability of cash resources, limitations due to future cash flow projections, emergent needs requiring significant resources, unstable business and profit projections etc and any other statutory factors as considered by the Board while arriving at the decision not to declare dividends for that financial year.

5. Utilization of Retained Earnings

The retained earnings of the company, after distribution of dividend, shall primarily be utilized towards requirements for growth plans and for meeting operational requirements of the company as the company is committed towards continuous growth and safeguarding of stake holders interest.

6. Parameters to be adopted with regard to various classes of shares

Company has presently only one class of shares i.e. equity shares. As and when it proposes to issue any other class of shares, the policy shall be modified accordingly.

7. Modifications to the policy

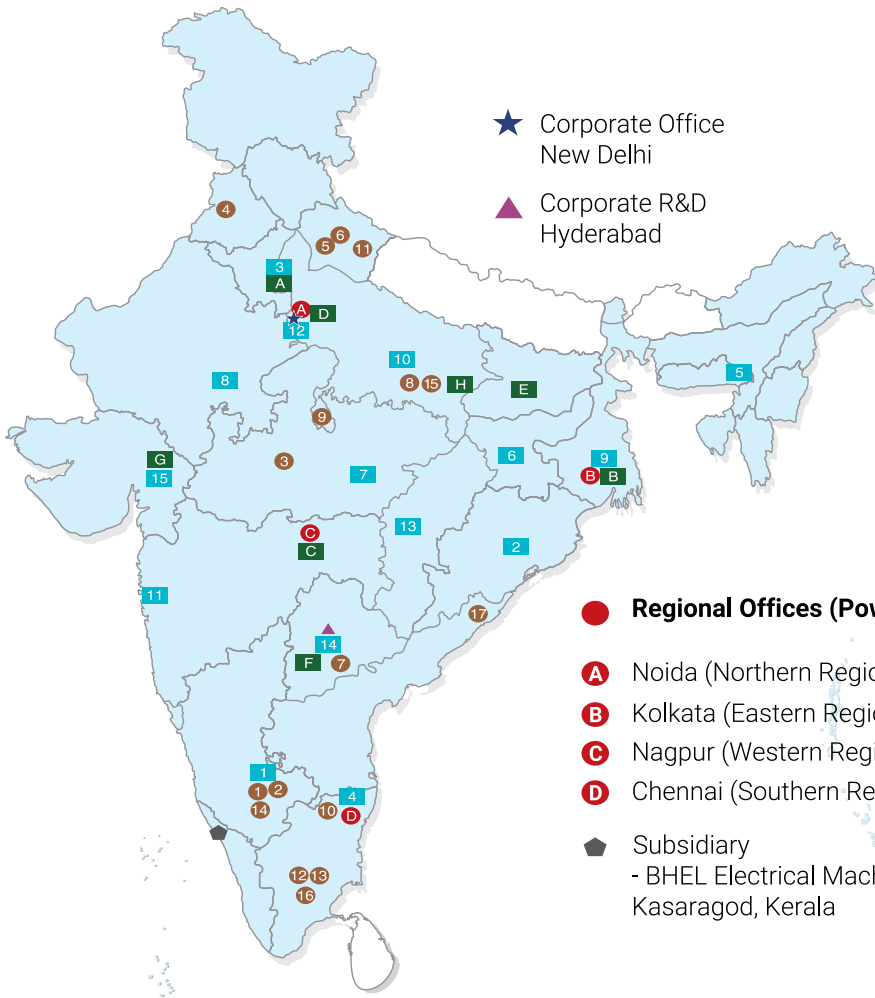
The Company reserves its right to amend any or all of the provisions of the policy as it may deem fit or in accordance with the guidelines as may be issued by SEBI, Government of India or any other regulatory authority. The change in the policy shall, however, be disclosed along with the justification thereof on the Company's Website and in the ensuing Annual Report in accordance with the extant regulatory provisions.

8. GENERAL:

8.1 Declaration of dividend on the basis of parameters in addition to the elements of this Policy or resulting in amendment of any element of the Policy, will be disclosed in the Annual Report as well as on the website of the Company.

8.2 In the event of the policy being inconsistent with any regulatory provision, such regulatory provision shall prevail upon the corresponding provision of this policy and the policy shall be construed to be amended accordingly from the effective date of such provision.

BHEL in India



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

Business Offices

1 Bengaluru
2 Bhubaneswar
3 Chandigarh
4 Chennai
5 Guwahati
6 Ranchi
7 Jabalpur
8 Jaipur
9 Kolkata
10 Lucknow
11 Mumbai
12 New Delhi
13 Raipur
14 Secunderabad
15 Vadodara

Manufacturing Units

14 1 2 Bengaluru
3 Bhopal
4 Goindwal
5 6 Haridwar
7 Hyderabad
15 8 Jagdishpur
9 Jhansi
10 Ranipet
11 Rudrapur
12 13 Tiruchirappalli
16 Thirumayam
17 Visakhapatnam

Service Centres

A Chandigarh
B Kolkata
C Nagpur
D Noida
E Patna
F Secunderabad
G Vadodara
H Varanasi

BHEL's Product Profile

THERMAL POWER PLANTS

- Steam Generators, Steam Turbines, Turbo Generators along with regenerative feed cycle up to 1000 MW capacities for fossil-fuel and combined-cycle applications. Capability to design and manufacture Steam Generators, Steam Turbines with supercritical steam cycle parameters and matching Turbo Generators up to 1000 MW unit size.
- Air and water cooled Condensers, Condensate Extraction Pumps, Boiler Feed Pumps, Duplex Heaters, Valves and Heat Exchangers meeting above requirement of TG Sets up to 1000 MW.
- Energy Efficient Renovation and Modernisation (EE R&M) and Life Extension (LE) of old thermal power plants and RLA studies.

NUCLEAR POWER PLANTS

- Engineering, Manufacturing and supply Reactor side components like Steam generator, Reactor header, End Shield, special purpose Heat Exchangers, Pressure Vessels, Motors etc. For PHWR based Nuclear Power plants upto 700 MWe capacity. BHEL also provides complete solution to Secondary Side of Nuclear Power Projects and has capability to supply Turbines, Turbo Generators and Condensers, etc. for Nuclear Power plants upto 700 MWe capacity.
- BHEL has the capability to design, manufacture and supply various components of both Reactor side and Secondary side for Nuclear Power Plant Projects upto 500 MWe rating based Fast Breeder Reactors (FBR)

GAS-BASED POWER PLANTS

- Gas turbines and matching generators ranging upto 299 MW (ISO) rating tailored to meet specific needs with regard to plant layout, type of fuels, emission and noise requirements. The features of these machines include
  - Capability to burn a variety of fuels, both gaseous and liquids.
  - Mixed firing of many of these combinations of gases and liquids.
  - Low exhaust emission levels upto 15ppm of NOx with DLN combustors.
- Gas turbine-based co-generation and combined-cycle systems for industry and utility applications.

HYDRO POWER PLANTS

- Custom-built conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators, pump turbines with matching motor-generators upto 300 MW, Bulb turbine with matching generators up to 10 MW
- High capacity pumps along with matching motors for Lift Irrigation Schemes (up to 150 MW)
- Small hydro power plants 10- 25 MW unit rating capacity
- Electro Hydraulic Microprocessor based Digital Governor for conventional turbines
- Microprocessor based Digital Controller for lift irrigation schemes
- Static excitation systems for Hydro generators & motors
- Brushless exciter for Hydro generators & motors
- Special purpose Motor Generator sets
- Spherical (rotary) valves, butterfly valves and auxiliaries for hydro stations

SOLAR POWER PLANTS

- EPC solutions from Concept to Commissioning of Solar PV Power Plants:
  - Grid Interactive systems with & without BESS (Battery Energy Storage System)
  - Standalone systems
  - Roof Top systems
  - Hybrid systems
  - Canal Top Systems
  - Floating Solar power plants
  - Solar based Irrigation Pumps

DG POWER PLANTS

- HSD, LDO, FO, LSHS, natural gas based diesel generator power plants, unit rating of up to 20 MW and voltage up to 11 kV, for emergency, peaking as well as base load operations on turnkey basis.

DESALINATION AND WATER TREATMENT PLANTS

Complete Water Management Solutions for Power Plants, Industrial applications and Municipal Applications with different treatment technologies include: -

- Pre Treatment Plants (PT)
- Sea Water Reverse Osmosis (SWRO) Plants
- Demineralization (DM) Plants
- Membrane Based treatment for industrial applications
- Effluent Treatment Plants (ETP)
- Sewage Treatment Plants (STP) for Municipal applications
- Zero Liquid Discharge (ZLD) System

DEFENCE

- Super Rapid Gun Mount (SRGM) 76/62 gun for naval ships
- Integrated Platform Management system (IPMS) for naval ships
- Integrated Bridge System (IBS)
- Training Simulator for Vehicles, platforms, radars, weapons, missiles and CBT for all defence and para-military forces
- Turret Casting for T 72 Tanks
- Casting for ships
- Castings and Forgings for Defence application
- Compact Heat Exchangers for military aircrafts
- Strategic equipment, etc.

SYSTEMS AND SERVICES

- **Power Generation Systems**
  - Turnkey power stations/ EPC contracts.
  - Combined-cycle power plants.
  - Cogeneration systems.
  - Captive power plants.
  - Concept to Commissioning solutions for Solar Photovoltaic systems
  - Modernization and renovation of power stations and RLA studies.
  - Software packages including simulators for utilities.
  - Erection, commissioning, support services, spares management and consultancy services for all the above systems.
- Transmission Systems
  - EHV & UHV Sub-stations/switchyards both AIS & GIS type ranging from 33 kV to 765 kV.
  - HVDC transmission systems.
  - Flexible AC Transmission system (FACTS) solutions
    - Fixed Series Compensation(FSC)
    - Static VAR Compensation (SVC)
    - STATCOM
    - Controlled Shunt Reactor (CSR)
    - Phase Shifting Transformer (PST)
- Power system studies, Feasibility studies & Insulation Coordination

BOILERS

- Steam generators for utilities, ranging from 30 to 800 MW capacity, using coal, lignite, oil, natural gas or a combination of these fuels; capability to manufacture boilers with supercritical parameters up to 1000 MW unit size.
- Fuel Flexible boilers capable of all combination of blending / co-firing diverse qualities of imported/ indigenised coals, blending of lignite, petcoke, etc.
- Steam generators for industrial applications of the following types ranging from 40 to 450 T/Hour capacity, using coal, natural gas, industrial gases, biomass, lignite, oil, Bagasse or a combination thereof.
  - Pulverized coal / lignite fired boilers
  - Stoker fired boilers
  - Bubbling fluidized bed combustion (BFBC) boilers.
  - Circulating fluidized bed combustion (CFBC) boilers up to 250 MW.
  - Heat-recovery steam generators (HRSG).
  - Chemical recovery boilers for paper industry, ranging from capacity of 100 to 1000 T/Day of dry solids.

BOILER AUXILIARIES

Fans

- Axial reaction fans of single stage and double stage for clean air application and dust laden hot gases applications up to 200°C, with capacity ranging from 40 to 1300 m^3/s and pressure ranging from 400 to 1,500 mmwc.
- Axial impulse fans for both clean air and flue gas applications up to 200°C, with capacity ranging from 25 to 600 m^3/s and pressure up 300 to 700 mmwc

- Single and double-suction radial fans (plate aerofoil bladed) for clean air and dust-laden hot gases applications up to 400°C, with capacity ranging from 4 to 660 m^3/s and pressure ranging from 200 to 3000 mmwc

Air-Preheaters

- Tubular Air Preheaters for industrial, utility boilers and CFBC boilers
- Rotary regenerative Air-Preheaters for boilers of different types like Bisector, TriSector and QuadSector.
- Large rotary regenerative Air-Preheaters for utilities of capacity up to 800 MW.
- Air PreHeater for boilers with Selective Catalytic Reduction (SCR) for DeNox.

Pulverizers

- Bowl mills of slow and medium speed for coal fired thermal stations with capacity from 10 T /Hour to 120 T/ Hour catering to 60 MW to 1000 MW thermal power stations
- Ball Tube mills for pulverizing low-grade coal with high ash content from 30 T/ Hour to 110 T/ Hour catering to 110 MW to 500 MW thermal power stations
- Apart from strong presence in the Indian market for utility thermal power stations, BHEL also caters to the requirement of:
  - Steel Plants for Pulverised Coal Injection to Blast furnace
  - Cement Plants for coal pulverising
  - Fertilizers Plants for their captive power generation

Electrostatic Precipitators (ESP)

- Electrostatic precipitators of any capacity with outlet emission as low as 17 mg/Nm^3 (efficiency up to 99.97%) for coal fired utility and industrial applications including Bio mass fired boilers, cement plants, steel plants, soda recovery boilers etc.
- Bag Filters for Utility and Industrial applications.
- Mechanical Dust Collector for SCR application

Guillotine Gates & Dampers

- Guillotine gates with electric / pneumatic actuator. 100% leak proof with seal air.
- Bi-plane dampers with electric / pneumatic actuator. 100% leak proof with seal air.
- Louver dampers (Open close / Regulating) with electric / pneumatic actuator.
- Control dampers (Regulating) with electric / pneumatic actuator

Flue gas desulphurization (FGD) systems

- Flue gas desulphurization (FGD) systems with sea water/ limestone slurry scrubber.
- Steel Chimneys for Heat Recovery Steam Generators (HRSG), Industrial Boilers, auxiliary boilers and other flue gas exhaust applications.

SOOT BLOWERS

- Long retractable soot blowers (LRSB) for travel upto 12.2m
- Furnace temperature probe (FTP) for travel length 6.9m and 8.3m
- Long Retractable Non-rotating (LRNR) soot blowers with forward blowing for Air heaters
- Ash discharge valve for CFBC boiler application
- Soot blowers with integral starters
- Soot blower Sequential PLC control panel
- Rack type Long Retractable Soot blowers
- Wall blowers
- Rotary Soot blowers

VALVES

- High and Low-pressure Turbines Bypass Valves & hydraulic system for utilities and industrial application
- High and medium-pressure Valves, Cast and Forged Steel Valves of Gate, Globe, Non-Return (Swing-Check and Piston Lift-Check) types for steam, oil and gas duties up to 950 mm diameter, maximum pressure class 4500 (791 kg/cm^2) and 650 °C temperature.
- Hot reheat and cold reheat Isolating Devices up to 900 mm pipe size class 1500 and steam of 650°C temperature.
- High capacity Spring Loaded Safety Valves for set pressure up to 372 kg/cm^2 and temperature up to 630°C, and automatic electrically operated pressure relief valves for set pressure up to 210 kg/cm^2 and temperature up to 593°C
- Safety relief valves for applications in power, process and other industries for set pressure up to 421 kg/cm^2 and temperature up to 537° C.
- Reactive cum absorptive type vent Silencers maximum diameter of 2700 mm.
- Direct Water Level Gauges
- Angle Drain Valves - Single & Multi Stage for Turbine Drain Application
- Severe Service Control Valves for RH & SH Spray Lines

- Quick Closing Non return Valves for Extraction lines and Cold Reheat Non Return valves, up to 800 mm diameter, 158 kg/cm^2 pressure and 540°C temperature.
- Butterfly Valves (Fabricated/ cast body & door)

PIPING SYSTEMS

- Power cycle piping, Constant load Hangers, Variable spring Hangers, Hanger components, Low Pressure piping including Circulating Water Piping for power stations up to 1000 MW capacity including Super Critical sets
- Piping systems for Nuclear Power Stations, Combined Cycle Power Plants & Industrial boilers and for power plants in Process Industries

SEAMLESS STEEL TUBES

- Hot-finished and cold-drawn seamless steel tubes with a range varying from outer diameter of 19 to 133 mm and wall thickness of 2 to 14 mm, in carbon steel and low-alloy steels to suit ASTM/API and other international specifications including Rifled tubes andSpiral finned tubes.

STEAM TURBINES

- Steam Turbines of higher ratings upto 1000 MW for thermal Sets conforming to international Specifications.
- Steam turbines for 500 MW Nuclear Power Plants.

TURBOGENERATORS

- Turbogenerators of higher rating upto 1000 MW supercritical parameters.
- Turbogenerators for 270 MW, 540 MW and 700 MW Nuclear Power Plants.

INDUSTRIAL SETS

- Steam Turbine based Captive Power Plants
  - STG/Boilers/BTG/EPC: Unit rating upto 200 MW
  - Non Reheat upto 120 MW unit rating
  - Reheat upto 200 MW unit rating
- Gas Turbine based Captive Power Plants
  - GTG/HRSG/EPC: Fr-5 (26 MW) to Fr-9E (126 MW)
  - Open, Cogen & Combined Cycle

CASTINGS AND FORGINGS

- Sophisticated heavy castings and forgings of creep resistant alloy steels, stainless steel and other grades of alloy steels meeting stringent international specifications for components of sub critical, supercritical and Ultra-super critical technology.

CONDENSER AND HEAT EXCHANGERS

- Surface Condenser:
  - 236 MW, 500 MW & 700 MW for Nuclear power plants
  - 12.5 MW Marine applications
  - Industrial Condensers
- Feed Water Heaters (HP Heaters, LP Heaters, Drain Coolers, Duplex Heater, De-Super Heaters, etc.)
  - Thermal : 7 to 500 MW (sub-critical) & 300-800 MW (super critical with single stream)
  - Nuclear 236 MW, 500 MW and 700 MW rating
- Moisture Separator & Reheater (MSR):
  - 236 MW, 500 MW & 700 MW Nuclear sets
- Live Steam Reheater (LSR):
  - 500 MW FBR Nuclear sets
- Auxiliary Heat Exchangers for Turbo and Hydro Generators :
  - Air Coolers (Frame & Tube Type)
  - Oil Coolers (Shell & Tube Type and Plug In Type)
  - Hydrogen Coolers (Frame & Tube Type)
- Auxiliary Heat Exchangers for Transformers :
  - Oil Coolers (Shell & Tube Type Single Tube or Concentric Double Tube Type) (Frame & Tube Type)
- Auxiliary Heat Exchangers for General Application
  - Water - Water Coolers (Shell & Tube Type)
- Industrial Heat Exchangers for Refineries, Petro-Chemicals & Fertilizers industries.
- Flash Tanks for thermal & nuclear sets
- Service Tanks, Storage Tanks & Pressure vessels for Thermal, Nuclear sets of all ratings & industrial applications
- CS/SS/Non-ferrous shell and tube heat exchangers and pressure vessels (For all applications irrespective of rating)
- Air-cooled heat exchangers for GTG uptoFr-9E, and Compressor applications of all ratings
- Steam jet air ejectors for all condensers upto 150 MW
- Deaerators from 7 MW to 800 MW
- Gland steam condensers 7 MW to 150 MW
- Gas coolers for all possible compressor applications
- Oil coolers- STG upto 150 MW, GTG upto Fr-9E,
- Generator Air coolers upto 150 MW STG and GTG up to 9 FA

PUMPS

- Pumps for various utility power plant applications up to a capacity of 1000 MW:
  - Boiler feed pumps (motor or steam turbine driven) and Boiler feed booster pumps.
  - Condensate extraction pumps.
  - Circulating water pumps (also known as Cooling water Pumps)

COMPRESSORS

- Multi stage Centrifugal compressors along with auxiliary system for various applications are manufactured and supplied with following configuration & parameters
  - **Model –**
    - Horizontally split type up to 40 bar design pressure
    - Vertically split type up to 350 bar design pressure
  - Capacity – 300000 m^3/hr
  - Gas – Air, CO_2, N_2, H_2, NH_3, Natural Gas, Wet Gas, Propylene etc.,
  - Sealing system – Dry Gas Seal
  - Industry – Refineries, Fertilizers, Oil & Gas, Steel, Power and Natural Gas Transportation.
  - International standard – API 617
  - Testing capability – MRT, Performance test, Full load, full pressure full speed test, Complete Unit Test
  - Driver – Steam Turbine, Gas Turbine, Motor

SOLAR PHOTOVOLTAICS

- Mono/ Multi Crystalline Solar Cells (156 mm)
- Mono/ Multi Crystalline PV Modules (40 to 320 Wp)
- Power Conditioning Unit (upto 1.25 MW)
- SCADA System
- HT Switchgear
- Space grade solar panels
- Space grade Batteries

AUTOMATION AND CONTROL SYSTEMS

- Steam Generator/ Boiler Controls including Boiler Protection
- Steam Turbine Controls
- Boiler Feed Pump (BFP) Drive Turbine Control
- Station Control and Instrumentation/ DCS
- Offsite/Off base controls/ Balance of Plant Controls
  - Ash Handling Plant (AHP)
  - Coal Handling Plant (CHP)
  - Water System for power plant
  - Mill Reject System (MRS)
  - Condensate On-Load Tube Cleaning system (COLTCS)
  - Gas Booster Compressor (GBC)
  - Condensate Polishing Unit (CPU)
  - Heating, Ventilation & Air conditioning (HVAC)
  - Fuel Oil Unloading System (FOUS)
- Hydro Power Plant Control System
- Gas Turbine Control System
- Nuclear Power Plant Turbine & Secondary Cycle control system
- Nuclear Power Plant Primary Cycle Control Centre Instrumentation Package (CCIP)
- Power block of solar thermal power plant
- Industrial Automation
- Sub-Station Automation (SAS) and Supervisory Control & data Acquisition System (SCADA) for Substation & PV Plants
- Non-FST HVDC control panels
- Electrical Control System (ECS) for Refineries
- Energy Management System (EMS) for Power Plant
- Electrical Interface System for MV/LV Switchgear

POWER ELECTRONICS

- Excitation system
- AC Drive System
- Static Starters
- Induction Heating Equipment

TRANSMISSION SYSTEM CONTROL

- Converter Valves and controls for HVDC & FACTS.

POWER SEMICONDUCTOR DEVICES

- Diodes- Ranging from 1400-4400 V / 250-2000 A
- Thyristors- Ranging from 1400-7000 V / 150-4950 A
- Rotating Diodes for Turbo generators.

SOFTWARE SYSTEM SOLUTION

- Merit Order rating
- Performance Analysis, Diagnostics & Optimization (PADO) for Thermal Utilities
- Performance Calculation & Optimization system
- OPC connectivity from DCS to third party systems

- Enterprise Asset Management System (EAMS)
- Enterprise Resource Planning (ERP)
- Operator Training Simulator
- Power House intranet software
- Alarm Analysis system
- Real Time Performance Data Monitoring system
- Historical Replay System

SWITCHGEAR

Medium Voltage Vacuum Switchgear of various types for indoor and outdoor applications for voltage ratings up to 36 kV and Gas insulated switchgears (36 kV, 145 kV, 420 kV)

- Indoor switchgears up to 12 kV, 50 kA, 4000 Amp for thermal, nuclear, hydro and combined cycle Power Plant Projects
- Indoor switchgears up to 36 kV, 40 kA, 2500 Amp for Industries and refineries
- Indoor Compact switchgear 12 kV, 25 kA, 1250 Amp for distribution system
- Outdoor Vacuum circuit breakers (12 kV, 25 kA, 1250 Amp / 36 kV, 25 kA , 2000 Amp / 25 kV, 25 kA, 1600 Amp) for distribution network/ track side railway application
- Outdoor pole mounted 12 kV Autorecloser / sectionaliser / capacitor switch for rural segment
- Gas insulated switchgears (36 kV, 40 kA, 2500 Amp/ 145 kV, 40 kA, 2500 Amp/ 420 kV, 40 kA, 3150 Amp) For transmission & distribution network, Refineries / hydro station / metro.
- SF6 circuit breakers ((145 kV, 40 kA, 3150A), (420 kV, 50kA, 4000A))

BUS DUCTS

- Bus-ducts with associated equipment to suit generator power output of utilities of up to 800 MW capacity.

TRANSFORMERS & REACTORS

- Power transformers for voltage upto 1200 kV
  - Generator transformers (up to 500 MVA, 400 kV, 3 Ph / 400 MVA, 765 kV, 1 Ph/400 MVA, 400 kV, 1 Ph)
  - Auto transformers (up to 1000 MVA, 400 kV, 3 Ph / 600 MVA, 400 kV, 1 Ph / 1000 MVA, 765 kV, 1 Ph / 1000 MVA, 1200 kV, 1 Ph)
- Converter Transformers / Smoothing Reactors (up to 600 MVA, ±500 kV)/ (upto 254 MVAr, ±500 kV) for power stations.
- Shunt Reactors (up to 150 MVAr, 420 kV, 3 Ph / 110 MVAr, 765 kV, 1 Ph)
- Controlled Shunt Reactors (up to 200 MVA, 420 kV, 3 Ph / 150 MVAr, 420 kV, 1 Ph / 110 MVAr, 765 kV, 1 Ph)
- Phase Shifting Transformers (up to 315 MVA, 400 kV, 3 Ph, up to 333 MVA 420 kV, 1 Ph, PST (1000 MVA bank in 3 Phase) for transmission lines
- Instrument transformers
  - Current transformers upto 400 kV
  - Electro-magnetic voltage transformers upto 220 kV
  - Capacitor voltage transformers (33KV to 1200 kV)
- Special Transformers
  - Rectifier transformer (Upto 120 kA, 132 kV)
  - Furnace transformer (Upto 33 kV, 60 MVA)
- ESP transformers up to 95 kvp, 1600 mA
- Smoothing reactors upto 3.3 mH , 2700 Amp.
- Dry Type reactor upto 300 mH , 120 Amp.
- DC Choke upto 0.5 mH , 4600 Amp.
- Dry type transformers up to 15 MVA 33 kV.

CAPACITORS

- H.T. Capacitors for Power factor correction (Motor Capacitors) 3.3 to 11 kV delta connected Capacitor banks
- H.T. Capacitors for Shunt, Series & SVC (Static VAR compensation), Harmonic filter & HVDC applications (3.3 kV to 500 kV, 1 Ph/ 3 Ph capacitor banks of rating 0.5 MVAr to 250 MVAr)
- Capacitor Divider for CVT
- Coupling Capacitor for PLCC
- Surge Capacitor for protection of Generators & Transformers (11 kV to 40 kV)
- Roof Capacitor for traction locomotive
  - Capacitor Divider for CVT up to 1200 kV
  - Coupling Capacitor for PLCC upto 400 kV

BUSHINGS

- 52 to 400 kV OIP condenser bushings for transformer applications
- 25 kV Locomotive bushings
- Special application bushings like Oil cable box, wall bushing, higher creepage, high cantilever load, High altitude bushing

ON LOAD TAP CHANGERS (OLTC)

On Load Tap Changer for various application like Power Transformer, Furnace Transformer, Station Transformer, Rectifier Transformer etc.

- On Load Tap Changer up to 765 kV class Transformer
- Off Circuit Tap Switch up to 400 kV class Transformer

CONTROL GEAR

Industrial Control Gear

- Electronic controllers for industries/ power plants
- Digital Excitation control system (1000 A , 400 V DC/, 400 V DC with redundant thyristor stacks & DC field breaker)
- Large current rectifiers with PLC Based digital controls
- Digital Hydraulic/ compact Governors
- Digital AVR (1 Ph, 300 V DC/ 3 Ph, 400 V DC)
- Control panels and cubicles for applications in steel, aluminium, cement, paper, rubber, mining, sugar and petrochemical industries

Contactors

- LT air break type AC for voltages up to 660 V
- LT air break type DC contactors for voltages up to 600 V
- HT vacuum type AC for voltages up to 11kV

Control and Relay Panels

- Control & Protection Panels (up to 400 kV) For EHV Transmission projects
- Synchronizing Trolley / Swing Panels
- Protection panels for large Generators up to 800 MW for thermal, nuclear, hydro and combined cycle Power Plant Projects
- Remote Control and relay panels for MV Switchgear
- Turbine gauge panels for hydro sets
- Outdoor type control panels and marshalling kiosks
- Remote Transformer Tap-Changer Control panels
- LT Switchgear, SCAP, Thyristor, RAPCON and STATCON Panels.

INSULATORS

PORCELAIN INSULATORS

- High-tension Porcelain Disc insulators for AC/ DC applications, ranging from 70 kN to 420 kN electro-mechanical strength, for clean and polluted atmospheres, Suitable for application upto 1200 kV AC & ±800 kV HVDC transmission line & Sub-stations.
- Hollow porcelains up to 765 kV for Transformers & SF_6 circuit breakers.
- Solid core insulators up to 400 kV for Bus Post & Isolators for substation applications.

COMPOSITE INSULATORS

- For 25 kV Railway Traction.
- Long Rod insulator up to 765 kV for transmission lines.
- Hollow Insulators upto 765 kV for Instrument Transformers.

WEAR RESISTANT MATERIAL (CERALIN)

- Ceramic Liners for Wear Resistant Application in Thermal Power Station and other various applications.
- Ceramic Liners for Ash Slurry Application.

INDUSTRIAL AND SPECIAL CERAMICS

- EWLI –Electronic Water Level Indicators used in Boiler Drum Water Level Monitoring (BHELVISION system)
- Ceramic and Tungsten Carbide Flow Beans for Christmas tree valves.
- Grinding Media for Pulverizing in Thermal Power Plant.

ELECTRICAL MACHINES

AC Squirrel cage, Slip ring, Synchronous, Variable speed motors; Industrial Alternators and Motors for Hazardous areas are manufactured as per range summarized below. Special-purpose machines are manufactured on request.

  - Voltage - AC - 415 V to 13800 V
  - Frequency - 50 Hz & 60 Hz
  - Enclosure - TETV, TEFC, CACW, CACA & Duct Ventilated
- AC Machines for Safe Area Application
  - Induction Motors
  - Squirrel cage motors -150 kW to 21000 kW
  - Slip ring motors - 150 kW to 10000 kW
  - Synchronous motors- 1000 kW to 20000 kW
  - Variable speed Motors
  - 150 kW to 21000 kW (Squirrel cage motors)
  - 1000 kW to 20000 kW (Synchronous motors)
- AC Machines for Hazardous Area Application (Fixed speed or with VFD)
  - Flame-proof squirrel cage Induction motors (Ex 'd') (150 kW to 1500 kW)

  - Non-sparking squirrel cage Induction motors (Ex 'n') (150 kW to 4000 kW (higher ratings on request))
  - Increased safety squirrel cage Induction motors (Ex 'e') (150 kW to 4000 kW (higher ratings on request))
  - Pressurized motors (Ex 'p')
  - 150 kW to 21000 kW (Squirrel cage motors)
  - 1000 kW to 20000 kW (Synchronous motors)
- Mill Duty Motors (150 kW to 5000 kW with speed base speed > 150 rpm) for steel mills.
- Industrial Alternators (Steam turbine, Gas turbine and Diesel engine driven) (1500 kVA to 25000 kVA)
- Induction Generators (300 kVA to 6000 kVA) for mini/ micro HEP.
- 2 Pole Gas Turbine driven Generators up to 330 MW and matching Exciters.
- 4 Pole Gas Turbine driven Generators up to 60 MW and matching Exciters.
- 2 Pole Steam Turbine driven Generators up to 330 MW and matching Exciters.
- 4 Pole Steam Turbine driven Generators up to 60 MW and matching Exciters.
- Permanent Magnet Based Generators up to 5 MW.
- Gas Turbine generators up to 270 MW.

RAIL TRANSPORATION

Transportation Systems

- AC electric locomotives (upto 5000 HP, 25 kV AC)
- AC-DC dual voltage electric locomotives
- ACEMU Coaches
- Urban Transportation Systems
- Traction Propulsion Systems for:
  - 6000 HP IGBT based AC Locomotives
  - 1600 HP AC Electrical Multiple Units (EMUs)
- Diesel-Electric Shunting Locomotives (upto 1400 HP)
- Battery powered locomotive
- OHE recording-cum-test car
- Battery Powered Road Vehicles
- Dynamic track stabilizers
- Rail cum Road vehicle
- Diesel Electric Tower Car
- Utility vehicle

TRANSPORTATION EQUIPMENT

- Traction Converter
- Auxiliary Converter
- Vehicle Control Electronics
- Hotel Load Converter
- Traction Transformer (upto 5400 kVA) for conventional locomotives & upto (7775 KVA) for 3 phase drive locomotives.
- Traction transformers (upto 1050 KVA) conventional AC EMU/ MEMUs & (upto 1578 kVA) for 3 phase EMU
- AC Traction Motors (upto 1150 kW) for Locomotives & EMUs
- DC Traction Motors (upto 630 kW) for Locomotives & EMUs
- AC Traction alternators (upto 3860 kW) for Locomotives & EMUs
- Traction generators up to 2000 kW
- Motor Generator sets (upto 25 kW) for auxiliary requirements
- Auxiliary generators and exciters (upto 50kW)
- Eddy current clutch
- DC blower motors (upto 50 kW) for dynamic braking system
- Traction gears and pinions
- Wagon (Upto 28 axle, 296 Tonne)
- Control Gear equipment for conventional Rolling Stock
- Control cubicles
- Traction Rectifiers
- Bogie Frame
- Wheel & Axle Assembly

OIL FIELD EQUIPMENT

- Oil Rigs – On-shore drilling rigs with AC-VFD and AC-SCR 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, complete with matching draw-works and hoisting equipment including:
  - Mast and substructure
  - Rotating equipment : Draw works; Rotary; Swivels; Travelling Blocks
  - Independent Rotary drive unit
  - Mud System including pumps
  - Power packs and rig electrics
  - Rig instrumentation
  - Rig utilities and accessories

- Refurbishment and up gradation of BHEL and Non BHEL make Oil Rigs
- DC Oil rig motors of all required ranges
- Oil rig alternators of all required ranges

- Well heads and X-mas Trees up to 10,000 psi, Mud Line Suspension, Choke and Kill manifold, CBM Wellheads, DSPM H- Manifold Assembly, Mud valves, ESP hangers, Block type X-mas Trees & Landing Bases for Casing Heads.

Oil Rig Controls

- AC Power Control Room
- DC Power Control Room
- AC Power Pack upto 1450 kVA for DG sets
  - AC Control Module
  - DC Control Module
- Driller's Console
- Cable set, cable trays, cable box and crew room for oil rigs.
- Mobile lightening Tower, Rig Lightening Tower
- DG set for Oil rig application (63/ 250/ 380/ 500 kVA)
- STATCOM for power Factor improvement in AC SCR Rigs

FABRICATED EQUIPMENT AND MECHANICAL PACKAGES

- Air separation Units for extraction of Nitrogen, Oxygen, Argon, etc.
- Cryogenic systems for liquid Nitrogen, Oxygen, Argon, etc.
- Cryogenic storage tanks, Mounded storage systems and storage spheres
- Column and Reactors for Petrochemical plants
- Pressure Vessels, Shell and Tube type and Air Fin Type Heat Exchangers
- Fired Heaters
- Purge Gas Recovery Unit for Fertilizer Industry

INDUSTRIAL SYSTEMS

- Complete Coal Handling Plant and Ash Handling Plant including Civil & Structural, Mechanical, Electrical works and Automation systems
- Complete Mine Winder Systems
- Complete Electrics, Drives, Controls & Automation Systems for Processing & Compacting of Raw Materials, Iron Making, Primary & Secondary Steel Making, Casters & steel Finishing like Mills & process Lines for both long products & flat products
- Complete Raw Material Handling System including Civil & Structural, Mechanical, Electrical and Automation systems for Steel and other industries
- Complete Electrics & Automation Systems for High Current Rectifiers for Aluminium Smelters and Processing Mills for Aluminium Plants
- Automated Storage & Retrieval Systems (ASRS)
- Balance of Plant (BOP) for Hydro power plants

Glossary & Abbreviation

ACS	Auxiliary Control System
APGENCO	Andhra Pradesh Power Generation Corporation
APPDCL	Andhra Pradesh Power Development Company Limited
BPCL	Bharat Petroleum Corporation Limited
BSE	Bombay Stock Exchange
C&I	Control & Instrumentation
CEA	Central Electricity Authority
CFBC	Circulating Fluidised Bed Combustion
CLW	Chittaranjan Locomotive Works
CPSE	Central Public Sector Enterprise
CSR	Corporate Social Responsibility
CVC	Central Vigilance Commission
DDUGJY	Deen Dayal Upadhyaya Gram Jyoti Yojana
DEMU	Diesel Electric Multiple Unit
DETC	Diesel Electric Tower Car
DHDT	Diesel Hydrotreating
DLW	Diesel Locomotive Works
DMW	Diesel-Loco Modernisation Works
DPE	Department of Public Enterprises
DSIR	Department of Scientific and Industrial Research
ED	Executive Director
EHV	Extra High Voltage
EMU	Electric Multiple Unit
EPC	Engineering, Procurement & Construction
ESP	Electrostatic Precipitator
FACTS	Flexible Alternating Current Transmission System
FGD	Flue Gas Desulphurization
GIS	Gas Insulated Substation
GTG	Gas Turbine Generator
GTO	Gate turn-off Thyristor
GVA	Gross Value Added
HEP	Hydro Electric Plant
HFCL	Hindustan Fertilizer Corporation Limited
HP Turbine	High Pressure Turbine
HRSG	Heat Recovery Steam Generator
HVDC	High Voltage Direct Current
HVOF	High Velocity Oxygen Fuel
ICF	Integral Coach Factory
ID Fan	Induced Draft Fan
IGBT	Insulated-Gate Bipolar Transistor
IGCAR	Indira Gandhi Centre for Atomic Research
IOCL	Indian Oil Corporation Ltd
IPDS	Integrated Power Development Scheme
IPMS	Integrated Platform Management system
IPR	Intellectual Property Right
IR	Indian Railway
ISO	International Organization for Standardization
ISRO	Indian Space Research Organisation
KPCL	Karnataka Power Corporation Limited
LCA	Light Combat Aircraft
LIS	Lift Irrigation Scheme
LP Turbine	Low Pressure Turbine
M&A	Merger & Acquisitions
MEIL	Megha Engineering & Infrastructures Limited
MEMU	Mainline Electric Multiple Unit
MHI&PE	Ministry of Heavy Industries & Public Enterprises
MoU	Memorandum of Understanding
MUs	Million Units
NDT	Non Destructive Testing
NPCIL	Nuclear Power Corporation of India Limited
NSE	National Stock Exchange
NSPCL	NTPC-SAIL Power Company Private Limited
OEM	Original Equipment Manufacturer
OHPC	Odisha Hydro Power Corporation
ONGC	Oil and Natural Gas Corporation Limited
PCU	Power Conditioning Unit
PGCIL	Power Grid Corporation of India Limited
PLM	Product Lifecycle Management
PPGCL	Prayagraj Power Generation Co. Ltd
PSEs	Public Sector Enterprises
R&D	Research & Development
R&M	Renovation & Modernisation
RDSO	Research Designs & Standards Organisation
RPCL	Raichur Power Company Limited
RUPPL	Reliance Utilities & Power Private Limited
SCOPE	Standing Conference of Public Enterprises
SCR	Selective Catalytic Reduction
SD	Sustainable Development
SEBI	Securities and Exchange Board of India
SG	Steam Generator
SPDP	Screen Protected Drip Proof
SPV	Solar Photo Voltaic
SRGM	Super Rapid Gun Mount
STATCOM	Static Synchronous Compensator
STPP	Super Thermal Power Plant
TANGEDCO	Tamil Nadu Generation and Distribution Corporation
TCMS	Train Control & Management system
TETV	Totally Enclosed Tube Ventilated
TEFC	Totally Enclosed Fan Cooled
TG	Turbine & Generator
TPS	Thermal Power Station
TSGENCO	Telangana Power Generation Corporation
UHV	Ultra High Voltage
UHVAC	Ultra High Voltage AC
UPRVUNL	Uttar Pradesh Rajya Vidyut Utpadan Nigam
VCU	Vehicle Control Unit
VFD	Variable Frequency Drive
VGO	Vacuum Gas Oil
WAG	W (broad gauge), A (AC traction), G (goods duty)

Bharat Heavy Electricals Limited

(CIN: L74899DL1964GOI004281)

Regd. Office: BHEL House, Siri Fort, New Delhi-110049

Phone: 011-66337000, Fax: 011-66337428

Website: www.bhel.com, E-mail: shareholderquery@bhel.in

Notice

Notice is hereby given that the 53rd Annual General Meeting of the Members of BHARAT HEAVY ELECTRICALS LIMITED will be held on Friday, the 22nd September, 2017 at 10 A.M. at Manekshaw Centre, Parade Road, Khyber Lines, Delhi Cantt., New Delhi – 110010 (route map enclosed), to transact the following businesses:-

ORDINARY BUSINESS

1. To receive, consider and adopt the Audited Standalone and Consolidated Financial Statements of the Company for the Financial Year ended 31st March, 2017 together with the Directors' Report and Auditors' Report thereon.

2. To declare dividend for the financial year 2016-17.

3. To appoint a Director in place of Shri Subrata Biswas (DIN: 07297184), who retires by rotation and being eligible, offers himself for re-appointment.

4. To appoint a Director in place of Shri T. Chockalingam (DIN: 07428614), who retires by rotation and being eligible, offers himself for re-appointment.

5. To authorize the Board of Directors to fix the remuneration of the Auditors for the year 2017-18.

SPECIAL BUSINESS

6. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

   "RESOLVED THAT pursuant to the provisions of Section 148 and other applicable provisions of the Companies Act, 2013 read with the Companies (Audit and Auditors) Rules, 2014 (including any statutory modification(s) or re-enactment thereof, for the time being in force), the remuneration of the Cost Auditors appointed by the Board of Directors of the Company to conduct the audit of the cost records of the Company for the Financial Year ending on 31st March, 2018 as set out in the Statement annexed to the Notice convening this Meeting, be and is hereby ratified by the shareholders of the Company."

   "RESOLVED FURTHER THAT the Board of Directors of the Company be and is hereby authorized to do all such acts, deeds and things as may be necessary, proper or expedient to give effect to this resolution."

7. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

   "RESOLVED THAT Shri Bhaskar Jyoti Mahanta (DIN: 07487571), who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Section 161 (1) of the Companies Act, 2013 w.e.f. 03.01.2017 to hold Office upto the date of this Annual General Meeting and in respect of whom, the Company has received a notice in writing, from the Director himself pursuant to the provisions of Section 160 (1) of the Companies Act, 2013, be and is hereby appointed as a Director of the Company."

8. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

   "RESOLVED THAT Ms. Surama Padhy (DIN: 07681896), who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Sections 149 and 161 (1) of the Companies Act, 2013 w.e.f. 02.02.2017 to hold Office upto the date of this Annual General Meeting and in respect of whom, the Company has received a notice in writing, from the Director herself pursuant to the provisions of Section 160 (1) of the Companies Act, 2013, be and is hereby appointed as an Independent Director of the Company."

9. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

   "RESOLVED THAT in accordance with Section 63 and other applicable provisions of the Companies Act, 2013, or any amendment or re-enactment thereof and Article 86A of the Articles of Association of the Company and subject to the regulations issued by the Securities and Exchange Board of India (SEBI) in this behalf and subject to such approvals, consents, permissions and sanctions as may be necessary

from appropriate authorities, consent be and is hereby accorded to the Board of Directors of the Company ('the Board', which term shall be deemed to include any Committee thereof) for capitalization of a sum not exceeding ₹ 244,76,00,000/- (Rupees Two Hundred Forty Four Crores Seventy Six Lakhs only) from the General Reserves or any other permitted reserves/ surplus of the Company for the purpose of issue of Bonus Shares of ₹ 2/- (Rupees Two Only) each, credited as fully paid up to the holders of the Equity Shares of the Company whose names shall appear on the Register of Members on the 'Record Date' to be determined by the Board or a Committee thereof for the purpose, in the proportion of 1 (One) Bonus Equity Share of ₹ 2/- for every 2 (Two) fully paid up Equity Shares of ₹ 2/- each held by them and that the Bonus Shares so distributed shall, for all purposes, be treated as an increase in the paid up Capital of the Company held by each such Member, and not as income".

"RESOLVED FURTHER THAT the Bonus Shares so allotted shall rank pari passu in all respects with the fully paid up Equity Shares of the Company as existing on the Record Date, save and except that they shall not be entitled to any dividend that may be declared before the Record Date."

"RESOLVED FURTHER THAT no letter of allotment shall be issued in respect of the Bonus Shares and in the case of Members who hold Shares or opt to receive the Shares in dematerialized form, the Bonus Shares shall be credited to the respective beneficiary accounts of the Members with their respective Depository Participants and in the case of Members who hold Equity Shares in certificate form, the share certificates in respect of the Bonus Shares shall be dispatched, within such time as prescribed by law and the relevant authorities."

"RESOLVED FURTHER THAT fraction shares, if any, arising out of the issue and allotment of the Bonus Shares shall not be allotted by the Company and the Company shall not issue any Certificate or coupon in respect thereof but all such fractional entitlements, if any, shall he consolidated and the Bonus Shares, in lieu thereof, shall be allotted by the Board to nominee(s) to be appointed by the Board, who shall hold the same as trustee(s) for the members entitled thereto and sell the said Shares so arising at the prevailing market rate and after adjusting therefrom the cost and expenses in respect of such sale, distribute the net sale proceeds to Members in proportion to their fractional entitlements."

"RESOLVED FURTHER THAT the issue and allotment of the Bonus Shares to Non-Resident Members, Foreign Institutional Investors (FIIs) & other foreign investors and /or distribution of net sale proceeds in respect of fractions to which such members may be entitled, be subject to compliance requirements of RBI, as may be necessary."

"RESOLVED FURTHER THAT the Board be and is hereby authorized to take necessary steps for listing of such shares on the Stock Exchanges where the securities of the Company are listed as per the provisions of the Listing Agreements with the concerned Stock Exchanges and other applicable guidelines, rules and regulations."

"RESOLVED FURTHER THAT for the purpose of giving effect to the aforesaid resolution, the Board / Committee of the Board be and are hereby authorized to do all such acts, deeds, matters and things whatsoever, including, but not limited to settling any question, doubt or difficulties that may arise with regard to or in relation to the issue or allotment of the bonus shares, settlement of rights of fraction as a result of the bonus issue and to accept on behalf of the Company, any conditions, modifications, alterations, changes, variations in this regard as prescribed by the statutory authority (ies) and which the Board / Committee of the Board in its discretion thinks fit and proper."

By Order of the Board of Directors



(I.P. Singh)
Company Secretary

Place: New Delhi
Dated: August 11, 2017

NOTES:-

1. A MEMBER ENTITLED TO ATTEND AND VOTE AT THE MEETING IS ENTITLED TO APPOINT A PROXY TO ATTEND AND VOTE INSTEAD OF HIMSELF/ HERSELF AND THE PROXY NEED NOT BE A MEMBER OF THE COMPANY. A PERSON APPOINTED AS PROXY SHALL ACT ON BEHALF OF SUCH MEMBER OR NUMBER OF MEMBERS NOT EXCEEDING FIFTY AND HOLDING IN AGGREGATE NOT MORE THAN TEN PERCENT OF THE TOTAL SHARE CAPITAL OF THE COMPANY CARRYING VOTING RIGHTS. HOWEVER, AS PER RULE 19(2) PROVISO OF THE COMPANIES (MANAGEMENT AND ADMINISTRATION) RULES, 2014, A MEMBER HOLDING MORE THAN 10% OF TOTAL SHARE CAPITAL OF THE COMPANY CARRYING VOTING RIGHTS MAY APPOINT A SINGLE PERSON AS PROXY AND SUCH PERSON SHALL NOT ACT AS PROXY FOR ANY OTHER PERSON OR SHAREHOLDER. PROXY FORM DULY COMPLETED SHOULD BE DEPOSITED AT THE REGISTERED OFFICE OF THE COMPANY NOT LESS THAN FORTY-EIGHT HOURS (48 HOURS) BEFORE THE SCHEDULED TIME OF THE ANNUAL GENERAL MEETING. BLANK PROXY FORM IS ENCLOSED.
2. Corporate Members are requested to send a duly certified copy of the Board Resolution/ Power of Attorney authorizing their representative to attend and vote on their behalf at the Annual General Meeting.
3. Relevant Explanatory Statement pursuant to Section 102(1) of the Companies Act, 2013, in respect of Special Business, as set out above is annexed hereto.
4. S/shri Subrata Biswas and T. Chockalingam, Directors, retire by rotation and being eligible, offer themselves for re-appointment. However, as per the terms of their appointment, the tenure of S/ shri Subrata Biswas and T. Chockalingam as Directors of the Company will expire on 28.02.2019 and 30.11.2017 respectively. Brief resume of each of the Directors proposed for re-appointment is given at Annexure to the Notice.
5. The Register of Members and Share Transfer books of the Company shall remain closed from Saturday, 26th August, 2017 to Wednesday, 30th August, 2017 (both days inclusive), for determining names of the shareholders eligible for final dividend, if declared, at the meeting.
6. Members are advised to submit their National Electronic Clearing Service/Electronic Clearing Service (NECS/ECS) mandate in the form (given elsewhere in the Annual Report) duly filled in and signed, to enable the Company to make remittance by means of NECS/ ECS.
7. The Board of Directors has recommended a final dividend of 39% on the Paid-up Equity Share Capital (₹ 0.78 per share) of the Company in addition to an interim dividend of 40% (₹ 0.80 per share) already paid during the year 2016-17.
8. The final dividend on the Equity Shares as recommended by the Board of Directors for the year ended 31.03.2017, if approved by the shareholders at the Annual General Meeting, will be payable within 30 days from the date of declaration of dividend i.e. on or before 21.10.2017, to those shareholders whose name appear:-
   i. As Beneficial Owners of shares as at the closure of business hours on 25th August, 2017 as per the list to be furnished by NSDL/ CDSL in respect of the shares held in the Electronic mode; and
   ii. As Members in the Register of Members of the Company after giving effect to all valid share transfer requests in physical form which are lodged with the Company/ RTA on or before the close of business hours on 25th August, 2017.
9. Pursuant to Section 124 read with Section 125 of the Companies Act, 2013, the dividend amounts which remain unpaid /unclaimed for a period of 7 years, are required to be transferred to the "Investor Education and Protection Fund" constituted by the Central Government. Accordingly, the final dividend for the financial year 2009-10 and interim dividend for financial year 2010-11, which remains unclaimed, are proposed to be transferred to the said account on 22.10.2017 and 18.04.2018 respectively.

   Members who have not claimed/encashed their Dividend so far for the financial year ended 31.03.2010 or any subsequent financial year(s) may approach the Company for obtaining payments thereof before expiry of the stipulated 7 years period.
10. Members may avail facility of nomination in terms of section 72 of the Companies Act, 2013, by nominating any person to whom their shares in the Company shall vest in the event of their death.
11. Pursuant to Section 139 (5) read with Section 142 (1) of the Companies Act, 2013, the Auditors of a Government Company are appointed by the Comptroller and Auditor General (C&AG) of India and their remuneration is fixed by the Company in the Annual General Meeting. The shareholders may authorize the Board to fix up an appropriate remuneration of Auditors for the year 2017-18 as may be deemed fit by the Board.
12. Members are requested to notify immediately any change of address and other relevant correspondence including NECS/ ECS details and submission of Permanent Account Number (PAN):-

i. to their Depository Participants (DPs) in respect of their electronic share accounts; and

ii. to the Company at its registered office or the Registrar & Share Transfer Agent, M/s. Karvy Computershare Private Ltd. (Karvy Selenium Tower B, Plot 31-32, Gachibowli, Financial District, Nanakramguda, Hyderabad-500032) in respect of their physical shares, if any, quoting their folio number, Banker's name and account number to ensure prompt and safe receipt of dividend warrants.

13. Members who hold shares in dematerialized form are requested to write their Client ID and DP ID Numbers and those who hold shares in physical form are requested to write their Folio Number in the attendance slip for attending the Meeting. However, entry to the Auditorium will be strictly on the basis of entry slip, available at the counters at the venue and to be exchanged with attendance slip.

14. In compliance with section 108 of the Companies Act, 2013, read with Rule 20 of the Companies (Management and Administration) Rules, 2014 and Regulation 44 of the Listing Regulations, the Company is pleased to provide the facility to members to exercise their right to vote by electronic means through M/s Karvy Computershare Private Limited. The members, whose names appear in the Register of Members / list of Beneficial Owners as on Friday, September 15, 2017 will be eligible to vote for the purpose of E-voting/AGM and a person who is not a member as on the cut-off date should treat this notice for information purposes only. The e-voting period will commence from Tuesday, September 19, 2017 at 9.00 a.m. and will end at 5.00 p.m. on Thursday, September 21, 2017. The e-voting module will be blocked on September 21, 2017, at 5.00 p.m. The members desiring to vote through electronic mode may refer to the detailed procedure on e-voting sent separately with the Notice alongwith necessary user id & password. Once the vote on a resolution is cast by the shareholder, the shareholder shall not be allowed to change it subsequently. The voting right of shareholders shall be in proportion to their share in the paid up equity share capital of the Company as on the cut-off date being, September 15, 2017.

15. The facility for voting through ballot paper shall be made available at the AGM and members attending the meeting who have not cast their vote by remote e-voting shall be able to exercise their right at the meeting through ballot paper.

16. The members who have cast their vote by remote e-voting prior to the AGM may also attend the meeting but shall not be entitled to cast their vote again.

17. The Company has appointed Ms. Ashu Gupta of M/s Ashu Gupta & Co., Practicing Company Secretary, to act as a Scrutinizer, to scrutinize the e-voting process in a fair and transparent manner. The Scrutinizer shall, immediately after the conclusion of voting at the AGM, first count the votes cast at the meeting, thereafter unblock the votes cast through e-voting in the presence of at least two witnesses not in the employment of the Company and make, not later than three days of conclusion of the AGM, a Consolidated Scrutinizer's Report of the total votes cast in favour or against, if any, to the Chairman of the Company. The results along with the Scrutinizer's Report shall be available on the Company's website (www.bhel.com) and on the website of the agency immediately after the declaration of result by the Chairman/ person authorized by him in writing. The results shall also be immediately forwarded to the Stock Exchanges.

18. Members are requested to:-

i. bring their Attendance Slip duly completed and signed at the venue of the meeting along with Photo-id proof.

ii. quote their Folio/DP & Client ID Nos. in all correspondence.

iii. note that no briefcase or bag will be allowed to be taken inside the auditorium for security reasons.

iv. note that no gifts will be distributed at the AGM.

By order of the Board of Directors



(I.P. Singh)
Company Secretary

Place: New Delhi
Dated: August 11, 2017

Annexure to the Notice

EXPLANATORY STATEMENT PURSUANT TO SECTION 102(1) OF THE COMPANIES ACT, 2013

The following explanatory statement sets out the material facts relating to the business mentioned in Item Nos. 6 to 9 of the accompanying Notice dated August 11, 2017.

ITEM NO. 6

Section 148 of the Companies Act, 2013 read with the Companies (Audit and Auditors) Rules, 2014 requires remuneration of the cost auditors as approved by the Board to be ratified by shareholders subsequently.

Based on the recommendation of Audit Committee, the Board of Directors in its meeting held on 19th July, 2017 has approved the names of Seven Cost Accountants/Firms for appointment for a total remuneration of ₹ 14.70 Lakhs as detailed under:

₹ In Lakhs

Sl. No.	Name of the Cost Auditors	Unit	Remuneration of 2017-18
1	M/s R. J. Goel & Co., Delhi (Lead Cost Auditor)	Consolidation Audit Report	0.91
		HEEP Haridwar	1.82
		CFFP Haridwar	0.36
2	M/s Sanjay Kasliwal & Associates, Bhopal	Jhansi	0.73
		HERP Varanasi	0.36
		Bhopal	1.82
3	M/s Narasimha Murthy & Co., Hyderabad	Hyderabad	1.82
4	M/s M. Krishnaswamy & Associates, Chennai	Trichy	2.42
		BAP Ranipet	1.21
5	M/s J. H & Associates, Bengaluru	EPD Bengaluru	0.48
		EDN Bengaluru	0.61
6	M/s K B Saxena & Associates, Lucknow	IVP Goindwal	0.36
		FP Jagdishpur	0.24
		CFP Rudrapur	0.36
		IP Jagdishpur	0.48
		CSU Jagdishpur	0.24
7	M/s Velamarthi & Associates, Visakhapatnam	HPVP Visakhapatnam	0.48
		Total	**14.70**

The above fee is exclusive of applicable taxes and out-of-pocket expenses which are payable extra.

Accordingly, members are requested to ratify the remuneration payable to the Cost Auditors for the Financial Year ended on 31st March, 2018.

None of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 6.

The Board of Directors commends the resolution for the approval of the Shareholders.

ITEM NO. 7

Shri Bhaskar Jyoti Mahanta (DIN: 07487571) aged 54 years was inducted as Part-time Official Director on the Board of BHEL w.e.f. 3rd January, 2017.

Shri Bhaskar Jyoti Mahanta, an IPS Officer (1988 Batch), holds a Master's Degree in Social Work from Delhi University. Shri Mahanta is presently working as Joint Secretary, Department of Heavy Industry, Ministry of Heavy Industries and Public Enterprises, Government of India.

Shri Mahanta has varied experience in the field of Public Service and Governance issues. He has previously held key posts like DIG of Police, IGP and Additional DGP, Assam Police. During his posting in Assam he spearheaded 'Project Ashwas', an Assam Police project run for the benefit of children hit by terrorist violence for which he received the Chief Minister's Medal for Outstanding Service in 2008.

He is also Part-time Official Director on the Boards of Andrew Yule & Co. Limited, Tide Water Oil Co India Limited and Hindustan Paper Corporation Limited.

Being a Government of India nominee on the Board of BHEL, Shri Mahanta does not receive any remuneration from BHEL.

Shri Mahanta does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ KMP of Company.

Shri Mahanta has attended one (of the two) Board meetings held during his tenure in FY 2016-17.

By virtue of Section 161 of the Companies Act, 2013 read with Article 67(iv) of the Articles of Association of the Company, Shri Bhaskar Jyoti Mahanta holds office till the date of ensuing Annual General Meeting and is eligible for appointment. As per requirement of Section 160 of the Companies Act, 2013, the Company has received a Notice in writing, proposing candidature of Shri Mahanta for the Office of Director of the Company.

Except Shri Bhaskar Jyoti Mahanta, being an appointee, none of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 7.

The Board of Directors commends the resolution for approval of the Shareholders.

ITEM NO. 8

Ms. Surama Padhy (DIN: 07681896) aged 56 years was inducted as Part-time Non-official (Independent) Director on the Board of BHEL w.e.f. 2nd February, 2017.

She holds Masters Degree in Home Science and a degree in Law from Utkal University, Orissa and is an Advocate.

She has held various positions such as Chairperson, Orissa State Cashew Dev. Corporation Ltd, Governing Board Member of Rashtriya Mahila Kosh (New Delhi) & National Council Member, NIRTAR, Govt. of India. Ms. Surama Padhy is actively involved in social activities including Self Help Group (SHG) formation, organizing blood camps, service to elderly, self defence and personality development programe for women. Her literary activities include articles written on women emancipation and association with Orissa Lekhika Sansad. Ms. Padhy also has varied experience in the field of cultural and sports activities.

Ms. Surama Padhy's appointment is upto 26.01.2020 or until further orders whichever event occurs earlier. As an Independent Director, she is entitled to sitting fee for Board Meetings and Board Level Committee Meetings attended by her.

Ms. Surama Padhy does not hold any shares in BHEL and she does not have any relationship with other Directors/ Manager/ KMP of Company.

Ms. Padhy has attended one (of the two) Board meetings held during her tenure in FY 2016-17.

By virtue of Section 161 of the Companies Act, 2013 read with Article 67(iv) of the Articles of Association of the Company, Ms. Surama Padhy holds office till the date of ensuing Annual General Meeting and is eligible for appointment. As per requirement of Section 160 of the Companies Act, 2013, the Company has received a Notice in writing, proposing candidature of Ms. Padhy for the Office of Independent Director of the Company.

The Company has received a declaration from Ms. Surama Padhy that she meets the criteria of independence as prescribed both under sub-section (6) of Section 149 of the Companies Act, 2013 and under Regulation 16 of the Listing Regulations. Keeping in view her vast expertise and knowledge, it will be in the interest of the Company that Ms. Surama Padhy is appointed as an Independent Director. In the opinion of the Board, Ms. Surama Padhy fulfills the conditions specified in the Companies Act, 2013 and Rules made thereunder for her appointment as an Independent Director of the Company and is independent of the Management.

Except Ms. Surama Padhy, being an appointee, none of the Directors or Key Managerial Personnel of the Company or their relatives is in any way, concerned or interested, financially or otherwise, in the resolution set out at item no. 8.

The Board of Directors commends the resolution for approval of the Shareholders.

ITEM NO. 9

The Authorised Share Capital of the Company is ₹ 2000 Crore (comprising 1000 Crore equity shares of ₹ 2 each) and the Paid-up Share Capital is ₹ 489.52 Crore. The Reserves as per the audited financial statement as on 31st March 2017 is ₹ 31804.92 Crores. The Board of Directors at their meeting held on 10th August 2017 have recommended the issue of bonus shares in the proportion of 1 (One) new equity share of ₹ 2/- each of the Company for every 2 (Two) existing equity share of ₹ 2/- each fully paid up of the Company held by the shareholders on Record Date to be hereafter fixed by the Board / Committee of the Board, by capitalization of a sum of ₹ 244.76 Crores from the Reserves. The same is proposed to be applied in full by issuing at par 122,38,00,000 new equity shares of ₹ 2/- each as bonus shares. Consequently, the paid up equity share capital of the Company would increase to ₹ 734.28 Crores consisting of 367,14,00,000 equity shares of ₹ 2/- each.

The proposed issue of bonus shares will be made in line with the provisions of Section 63 of the Companies Act 2013, guidelines issued by Securities & Exchange Board of India (SEBI) and subject to such approvals, if required, from the statutory authorities. As per Article 86A of the Articles of Association of the Company, it is necessary to obtain the approval of the members for issue of bonus shares by capitalization of reserves.

Further, it is proposed to authorize the Board of Directors / Committee of the Board of the Company to complete all the regulatory formalities as prescribed by SEBI, RBI and Stock Exchanges on which the Company's shares are listed and/or any other regulatory or statutory authority in connection with the issue of bonus shares.

The Directors of the Company and their relatives may be deemed to be concerned or interested in the proposed resolution to the extent of their shareholding in the Company.

The Board of Directors of the Company commends the Ordinary Resolution for approval of the shareholders.

By Order of the Board of Directors



(I.P. Singh)
Company Secretary

Place : New Delhi

Date : August 11, 2017

DETAILS OF DIRECTORS PROPOSED FOR RE-APPOINTMENT

SHRI SUBRATA BISWAS

Shri Subrata Biswas (DIN: 07297184), aged 58 years, was appointed as Director (Engineering, Research & Development) on the Board of BHEL on 24th September, 2015.

An Electronics Engineer from BHU-IT (now IIT-Varanasi) and an MBA from the Indian Institute of Management, Kolkata, Shri Biswas also completed a Fellowship Program from Purdue University, USA.

Shri Biswas has nearly 36 years of diversified and versatile professional experience through working in major R&D segments of BHEL. He was involved in the formulation and finalisation of BHEL's R&D Policy in 2013 and is presently overseeing its implementation at all units/ divisions of the company.

Starting his career in BHEL as an Engineer Trainee at BHEL's Corporate Research & Development Division, Hyderabad in 1981, Shri Biswas has put in years of efforts towards company-wide increase in patent applications, R&D investment, commercialization of new products & processes, interaction with all IITs and Indian/ foreign academia for collaborative R&D. He was instrumental in organizing the meetings of the R&D Advisory Council consisting of eminent scientists, policy makers and academicians, and interaction with institutions like CSIR, ISRO, DRDO and IITs for accelerated R&D. As a result of his efforts, DSIR recognition of 12 R&D/ RPD units of BHEL has been obtained for R&D functions.

Shri Biswas spearheaded the development of products like automated guided vehicle, flexible manufacturing system for automation in production shop floor, automated storage and retrieval system, robotic welding systems for manufacturing of compressor components, RFID and GPS based systems for material tracking at units and sites, tracking system for Solar PV arrays, fuel cells, etc.

To his credit, Shri Biswas has more than 30 patents/ copyrights granted/ applied for, and over 40 technical papers published/presented at national/international journals and conferences.

Shri Subrata Biswas has hands on experience in developing and commissioning of new products in the area of manufacturing automation like automated material handling/ storage system, RFID based tracking and control, project Management and monitoring functions leading to timely completion of assignments etc. He has developed and commissioned GPS based consignment tracking system. He was also responsible for networking, communication and supervisory controls for group of

CNC machines for improving productivity. In his current role, Shri Biswas is also responsible for networking with Academia and R&D organisations for widening of R&D activities of BHEL.

Shri Biswas' appointment is upto 28.02.2019 or until further orders whichever event occurs earlier in the pay scale of ₹ 75,000 - ₹ 1,00,000 p.m. on terms & conditions approved by Government of India.

Shri Biswas does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of Company.

Shri Biswas has attended all the Board Meetings (8) held during FY 2016-17.

SHRI T. CHOCKALINGAM

Shri T. Chockalingam, (DIN: 07428614) aged 59 years, has been inducted as Director (Finance) on the Board of BHEL w.e.f 11th February, 2016.

He is a Commerce Graduate from Madura College in Tamil Nadu and a Chartered Accountant of the 1981 batch besides holding additional qualifications in Business Finance from the Institute of Chartered Financial Analysts of India and Diploma in Management from Indira Gandhi National Open University. He started his career in BHEL as Executive Trainee Finance in 1982 at Corporate Office, New Delhi. Prior to his appointment to the Board of Directors, he was heading the Finance function of BHEL's largest manufacturing division at Tiruchirappalli.

His rich and diverse experience of more than 34 years in all aspects of Finance Management gave him true insight into the entire financial operations of BHEL. He played a pivotal role in the successful design, adaptation and implementation of Enterprise Resource Planning (ERP) systems at BHEL Tiruchirappalli. The Unit also registered highest ever Turnover and Profitability under his leadership as Head of Finance. Earlier, the financial turnaround of BHEL's Electroporcelains Division (EPD) and company's Industrial System Group (ISG), at Bengaluru also goes to his credit while he served these units as Head of Finance.

He also oversaw the successful implementation of the biggest ever modernization and capacity augmentation schemes in the history of Trichy Unit and the setting up of BHEL's new greenfield Power Plant Piping Unit at Thirumayam in the Pudukkottai district of Tamil Nadu. A keen proponent of best costing and financial practices that reflect changing business dynamics, he has played a key role in the implementation of a wide range of cost reduction measures aimed at improving profitability in addition to strategic pricing to meet market expectations.

Shri Chockalingam has also undergone an advanced program on Cutting Edge Leadership and Strategic Thinking at the International Management Institute (IMI), New Delhi and the Robert H. Smith School of Management at the University of Maryland, USA.

His regular focus and thrust on cash collection from debtors resulted in generating cash surplus amidst extremely stressed & volatile business environment in power sector and resulted in reduction of no. of days of receivables. Prudent financial planning, stringent budgetary and cost control helped in turnaround of the Company during FY 2016-17.

Shri Chockalingam's appointment is upto 30.11.2017 or until further orders, whichever event occurs earlier, in the pay scale of ₹ 75,000 - ₹ 1,00,000 p.m. on terms and conditions approved by the Government of India.

Shri Chockalingam does not hold any shares in BHEL and he does not have any relationship with other Directors/ Manager/ Key Managerial Personnel of Company.

Shri Chockalingam has attended all the Board Meetings (8) held during FY 2016-17.

By Order of the Board of Directors



(I.P. Singh)
Company Secretary

Place: New Delhi
Dated: August 11, 2017

BHARAT HEAVY ELECTRICALS LIMITED

(CIN: L74899DL1964GOI004281)
Regd. Office: BHEL House, Siri Fort, New Delhi-110049
Phone: 011-66337000, Fax: 011-66337428
Website: www.bhel.com, E-mail: shareholderquery@bhel.in

ATTENDANCE SLIP

53rd Annual General Meeting to be held on Friday, 22nd day of September, 2017 at 10.00 AM at Manekshaw Centre, Parade Road, Khyber Lines, Delhi Cantt., Delhi-110010

NAME OF THE ATTENDING MEMBER (IN BLOCK LETTERS)	
Folio. / DP ID- CLIENT ID No.	
No. of shares held	
Name of PROXY (IN BLOCK LETTERS, TO BE FILLED IN IF THE PROXY ATTENDS INSTEAD OF THE MEMBER)	

I hereby record my presence at the 53rd Annual General Meeting on 22nd September, 2017.

_____
Signature of Member/ Proxy

THIS ATTENDANCE SLIP DULY FILLED IS TO BE HANDED OVER AT THE ENTRANCE OF THE MEETING HALL

TEAR HERE

BHARAT HEAVY ELECTRICALS LIMITED

(CIN: L74899DL1964GOI004281)
Regd. Office: BHEL House, Siri Fort, New Delhi-110049
Phone: 011-66337000, Fax: 011-66337428
Website: www.bhel.com, Email: shareholderquery@bhel.in

[Pursuant to Section 105(6) of the Companies Act, 2013 and Rule 19(3) of the Companies (Management and Administration) Rules, 2014]

PROXY FORM

Name of the Member(s):	
Registered Address:	
Folio No/ DP ID- Client Id:	
E-Mail Id:	
No of Shares held:	

I/We, being the member (s) of ..... shares of the above named company, hereby appoint:

1.	Name :		Signature:	
	Address:			
	E-mail Id:			
Or failing him/ her				
2.	Name :		Signature:	
	Address:			
	E-mail Id:			
Or failing him/ her				
3.	Name :		Signature:	
	Address:			
	E-mail Id:			

as my/ our proxy to attend and vote (on a poll) for me/ us and on my/ our behalf at the 53rd Annual General Meeting of the Company, to be held on Friday, the 22nd day of September, 2017 at 10:00 A.M. at Manekshaw Centre, Parade Road, Khyber Lines, Delhi Cantt., Delhi-110010 and at any adjournment thereof in respect of such resolutions as are indicated below:

Sl. No.	Resolutions
Ordinary Business	
1.	Adoption of Financial statements of the Company for the year ended 31st March, 2017 together with the Directors' Report and Auditors' Report thereon
2.	Declaration of Dividend for the financial year 2016-17
3.	Re-appointment of Shri Subrata Biswas (DIN: 07297184) who retires by rotation
4.	Re-appointment of Shri T.Chokalingam (DIN: 07428614) who retires by rotation
5.	Authorize the Board of Directors to fix the remuneration of the Auditors for the year 2017-18
Special Business	
6.	Ratification of Remuneration of Cost Auditors for financial year 2017-18
7.	Appointment of Shri Bhaskar Jyoti Mahanta (DIN: 07487571) as Director
8.	Appointment of Smt.Surama Padhy (DIN: 07681896) as Director
9.	Issue of Bonus Share

Signed this..... day of..... 2017

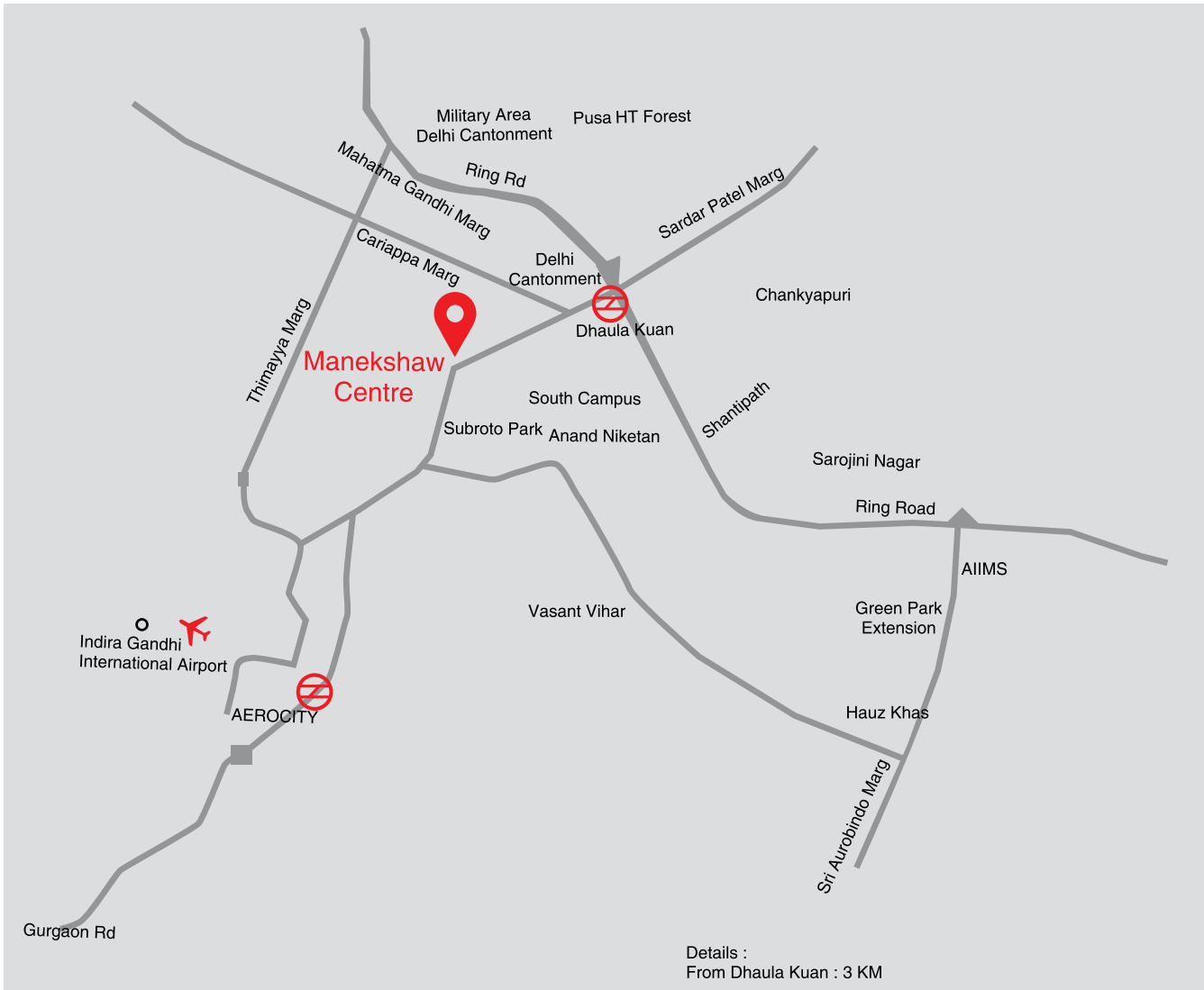
_____
Signature of shareholder (s)

Please affix Revenue Stamp

_____ _____ _____
Signature of first proxy holder Signature of second proxy holder Signature of third proxy holder

Notes: (a) The form should be signed as per specimen signature registered with the RTA/DP
(b) This form of proxy in order to be effective should be duly completed and deposited at the Registered Office of the Company, not less than 48 hours before the commencement of the Meeting.

Route Map for 53rd AGM of BHEL



BHARAT HEAVY ELECTRICALS LIMITED

(CIN: L74899DL1964GOI004281)
Regd. Office: BHEL House, Siri Fort, New Delhi-110049
Phone: 011-66337000, Fax: 011-66337428
Website: www.bhel.com, Email: shareholderquery@bhel.in

Dear Shareholder(s),

Re: Payment of dividend through National Electronic Clearing Services (NECS)/Electronic Clearing Services (ECS)

Pursuant to SEBI (Listing Obligations & Disclosure Requirements) Regulations, 2015, all listed companies shall use any of the electronic modes of payment facility approved by RBI such as ECS/NECS/Direct Credit etc. for payment of dividend.

In case you have not already sent the NECS/ ECS/ Bank Account particulars to our Registrars, viz. M/s Karvy Computershare Pvt. Ltd. or to your Depository Participant (DP) (in case of demat holding), we would request you to provide the said particulars in the format given below to facilitate prompt, safe & correct payment of dividend, if declared in the 53rd Annual General Meeting of the Company to be held on 22nd September, 2017.

Please ensure that the details submitted by you to the Registrars/ Depository Participant are correct as any error therein could result in the dividend amount being credited to wrong account.

Kindly help us in this endeavour to serve you better.

Yours faithfully

(I.P. Singh)
Company Secretary

P.S. In case you are holding shares in demat form, kindly advice your Depository Participant to take note of your Bank account particulars/ NECS/ ECS/ Direct Credit mandate.

TEAR HERE

FORM FOR NECS/ECS MANDATE/ BANK ACCOUNT PARTICULARS

I / We..... do hereby authorise BHEL/my Depository Participant to

☐ Print the following details on my/ our dividend warrant

☐ Credit my dividend amount to my Bank account by NECS/ ECS/ Direct Credit

(Strike out whichever is not applicable)

My/ our Folio No ..... or DP ID No ..... Client A/c No .....

Particulars of Bank Account:

A. Bank Name : .....

B. Branch Name : .....

(Address for Mandate only) .....

C. 9 digit code number of the bank & branch as appearing on the MICR cheque : .....

D. IFSC Code : .....

E. Account Type (Saving/ Current) : .....

F. Account No as appearing on the cheque book : .....

G. STD code & Telephone No. of Shareholder : .....

I / we shall not hold the Company responsible if the NECS/ ECS could not be implemented or the Bank discontinues the NECS/ ECS, for any reason.

Mail to

M/s Karvy Computershare Pvt. Ltd.
UNIT: BHEL
Karvy Selenium Tower B, Plot 31-32,
Gachibowli Financial District, Nanakramguda,
HYDERABAD-500032

.....
Signature of the Shareholder

Please attach (i) photocopy of a cheque or a blank cancelled cheque issued by your bank relating to your above account for verifying the accuracy of the 9 digit code number AND (ii) a copy of your **PAN card** with this form.

Bankers

Allahabad Bank
Andhra Bank
Bank of Baroda
Canara Bank
Corporation Bank
Central Bank
Indian Bank
Indian Overseas Bank
Oriental Bank of Commerce
Punjab National Bank
Punjab & Sindh Bank
State Bank of India
State Bank of Hyderabad
Syndicate Bank
State Bank of Travancore
UCO Bank
Union Bank of India
United Bank of India
Vijaya Bank
IDBI
CITI Bank N.A
Deutsche Bank AG
The Hongkong and Shanghai Banking Corporation Limited
Standard Chartered Bank
J P Morgan
Axis Bank
The Federal Bank Limited
HDFC
Kotak Mahindra Bank
ICICI
Indusind Bank
Yes Bank

Registered Office

Regd. Office: BHEL House, Siri Fort,
New Delhi-110 049 (India)
CIN: L74899DL1964GOI004281
Phone: 011-66337000
Fax: 011-66337428
Website: www.bhel.com
E-mail: shareholderquery@bhel.in

Auditors

Wahi & Gupta, New Delhi
DSP & Associates, New Delhi
SBA & Co., Bhopal
V. Narayanan & Co., Trichy
Rao Associates, Bengaluru
Anjaneyulu & Co., Hyderabad
M Srinivasan & Associate, Chennai
M. B. Gabhawala & Co., Varanasi

Cost Auditors

Jugal K Puri & Associates, New Delhi
Sanjay Kasliwal & Associates, Bhopal
Narasimha Murthy & Co., Hyderabad
Vishwanath Bhat & Co., Bengaluru
Sunil Singh & Co., Lucknow
RKMS & Associates, Chennai
Velamarthi & Associates, Visakhapatnam

Cost Audit Report

a) For FY 2015-16, Cost audit report was filled on 29.09.2016 against due date of 07.10.2016.

b) For FY 2016-17, Cost audit report will be filled within prescribed time period.

Share Transfer Agent

M/s Karvy Computershare Private Ltd.
UNIT: BHEL

Delhi: 305, New Delhi House
27, Barakhamba Road
New Delhi – 110 001
Tel : 011-43681700
Fax: 011-43681710
E-mail: ksbldelhi@karvy.com
einward.ris@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



Efficient Transmission...
across India - North to East

BHEL-supplied India's first 800 kV Thyristor Valve at Agra terminal for the World's largest Multi-terminal North-East Agra (NEA) UHVDC project.

BHEL is executing the North-East Agra 6000 MW, ± 800 kV, multi-terminal HVDC link jointly with ABB, Sweden. The Bipole-1 was successfully commissioned in September, 2016 and Bipole-2 is under commissioning February, 2017 onwards.

The project will enable transmission of 6,000 MW power over a distance of 1,728 Km from Biswanath Chariali in Assam and Alipurduar in West Bengal to Agra in Uttar Pradesh. The link is designed with 33% continuous overload capability, thus achieving maximum 8,000 MW conversion of power and making it World's largest Multi-terminal UHVDC project.



HARNESSING THE SUN ...
SINCE 1983

BHEL is one of the first engineering enterprises to manufacture Solar Photovoltaic (SPV) cells and modules in the country, and was successfully able to demonstrate its capability even before the solar sector witnessed active growth and development in India.

Since then, BHEL has been continuously developing its solar portfolio and today, is one of the few companies in India which provides end to end in-house solutions for all solar power needs - including conceptualisation, design, engineering, manufacturing, erection, testing, commissioning and O&M - with proven expertise of over three decades.

With state-of-the-art manufacturing facilities, best-in-class cell efficiency, a dedicated R&D centre and proven quality, support & assurance - BHEL is a one stop solution for all your solar power needs - be it on ground, rooftops, on water or in space.

Bharat Heavy Electricals Limited

Registered Office : BHEL House, Siri Fort, New Delhi 110049, India
www.bhel.com
Corporate Identity Number : L74899DL1964GOI004281

ASSOCIATED ADVT.