

# Annual Report 2007-2008





A World-Class Engineering Enterprise Committed to Enhancing Stakeholder Value.

# Mission

To be an Indian Multinational Engineering Enterprise providing Total Business Solutions through Quality Products, Systems and Services in the fields of Energy, Industry, Transportation, Infrastructure and other potential areas.

# Values

Zeal to Excel and Zest for Change
Integrity and Fairness in all Matters
Respect for Dignity and Potential of Individuals
Strict Adherence to Commitments
Ensure Speed of Response
Faster Learning, Creativity and Team-work
Loyalty and Pride in the Company



Powering progress Brightening lives
Touching Every Indian Home



# Contents

1.	Letter to Shareholders	2
2.	Board of Directors	3
3.	Management Committee	4
4.	Corporate Functional Structure	6
5.	Corporate Profile	8
6.	Year at a Glance	14
7.	Awards	17
8.	Directors Report	18
	- Management Discussion and Analysis	22
	- Brief Resume of Directors	48
	<ul> <li>Corporate Governance</li> </ul>	51
	<ul> <li>Conservation of Energy</li> </ul>	76
	<ul><li>Auditors' Report</li></ul>	78
	- Comments of C&AG	85
9.	Annual Accounts	87
	- Significant Accounting Policies	89
	- Audited Accounts with Cash Flow Statement & Schedules	94
10.	Additional Information for Shareholders	133
	- Ten Years Summary	135
	<ul> <li>Net Income under US GAAP</li> </ul>	137
	<ul> <li>Economic Value Added (EVA)</li> </ul>	139
	<ul> <li>Value Addition Statement</li> </ul>	140
	<ul> <li>Performance vis-à-vis Annual Plan</li> </ul>	141
	<ul> <li>Contribution to Exchequer</li> </ul>	141
	<ul><li>Product Profile</li></ul>	142
	- BHEL in India	147
	<ul> <li>BHEL's International Presence</li> </ul>	148
11	Notice	150



## Letter to Shareholders



#### Dear Shareholders,

2007-08 was an eventful and successful year for BHEL. I took over the stewardship of this company in March 2008 when Shri Ashok K. Puri demitted office on his superannuation. Despite the challenges confronting us, we are growing profitably in all our business segments. Let me begin by giving you a brief overview of the financial performance of the company and then share some thoughts from a strategic perspective.

#### Company performance during 2007-08

BHEL notched up its highest-ever turnover of Rs. 21,401 Crore, registering a growth of 14 % over the previous year. Profit Before Tax (PBT) surged 18.6 % at Rs. 4,430 Crore, during the year, moving past the Rs. 4,000 Crore mark for the first time. Net Profit (PAT) rose 18.4 % at Rs. 2,859 Crore against Rs. 2,415 Crore in the previous year. Other key indicators also testify our success:

- BHEL secured highest orders inflow of Rs. 50,270 Crore during the year, from domestic and overseas markets. At the end of the year, outstanding orders in hand for execution in 2008-09 and beyond, stood at about Rs. 85,200 Crore – the highest ever both in physical and financial terms.
- Manufacturing Capacity of 10,000 MW per annum in place and further augmentation to 15,000 MW per annum underway for completion by December, 2009. Also plans are underway to hike the capacity to 20,000 MW by 2011-12.
- Significant landmark achieved with cumulative projects installed worldwide crossing 1,00,000 MW; 7150 MW of power projects commissioned during the year.
- BHEL's R&D spend at Rs. 464 Crore amounting to 2% of the turnover - a 83% growth over last fiscal.
- Earnings Per Share (EPS) is placed at Rs. 58.41 on the post-bonus equity capital – an increase of 18.4 % over that of 2006-07.
- Economic Value Added (EVA) witnessed a jump 9 % at Rs. 1,810 Crore over that of Rs.1,657 Crore in 2006-07 - commendable performance for an engineering company.

• A final dividend of 62.5% has been proposed by the Board, apart from interim dividend of 90% already paid, making a total of 152.5% for the year 2007-08.

#### India - an attractive market

We believe that the power equipment market in India will remain attractive going forward. The ordering pattern and technology drivers were evident in 2007-08 with most of the XI Plan schemes getting ordered. Such business opportunities also result in emergence of competition through entry of new players in the market. BHEL is taking necessary steps to face competition in future. Your company introduced new rating thermal sets of 270 MW, 525 MW & 600 MW in subcritical range. Having tie-up technology for supercritical thermal sets, it broke new ground with the first order for Supercritical Boilers (2x660 MW) from NTPC for Barh Stage-II. In addition it also received orders for four advanced-class gas turbines (Fr.9FA). We believe that future success will be dependent on the partnerships that we build and on our ability to execute projects in time.

On the partnership front, we continued to build strategic relationships that extend our presence and opportunity in the marketplace. During 2007-08, BHEL entered into an MoU with TNEB with the intent of forming a JV to set up 2x800 MW Supercritical Thermal Power Project in Tamil Nadu. An MoU was signed with MMTC for enhancing export of power plant equipment and projects leveraging counter trade & bulk buying. An MoU was also signed with NTPC to form a JV for jointly executing EPC projects and power equipment manufacturing.

To make business more resilient to a variety of risks that might emerge, BHEL is also giving strong thrust to non-power plant business areas. Some of them are entry into Coach Building for Indian Railways, bulk ordering for Electric Locomotives, refurbishment and up-gradation of Onshore Drilling Rigs, development of Disc Insulators for 800 kV HVDC applications etc.

We will continue to focus on project execution, attracting new customers, and forging new partnerships. We are well on our way of attaining a sustainable profitable growth with the objective of reaching a turnover level of Rs. 45,000 crore by 2011-12 as per the Strategic Plan of the company.

#### In conclusion

The Board of Directors and the management have full confidence in the future of the company. All the efforts made in recent years seem to be bearing fruit, and we are putting in place the foundations for our future successes. All this would not have been possible but for our dynamic and motivated employees.

I would like to thank our esteemed customers, shareholders, business associates and various ministries of the Government of India particularly Department of Heavy Industry for their trust, their understanding and their encouragement.

Operating in a challenging environment, we have performed well. Our strategy is sound, and we're well positioned for an exciting future.

With best wishes, New Delhi

July 21, 2008

(K Ravi Kumar) Chairman & Managing Director

# Board of Directors as on 21.07.2008



**Shri K. Ravi Kumar** Chairman & Managing Director



Shri B.S. Meena Director



**Dr. Surajit Mitra**Director



Shri Sanjay M. Dadlika Director



**Shri Ashok K. Aggarwal** Director



Shri Manish Gupta Director



Shri Shekhar Datta Director



Shri Madhukar Director



Shri S. Ravi Director



Shri C.S. Verma Director (Finance)



Shri C.P. Singh Director (E,R&D)



Shri Anil Sachdev Director (HR)



Shri B.P. Rao Director (IS & P)



Shri N.K. Sinha Company Secretary

# Management Committee as on 14.07.2008



S/Shri

Sitting I row (left to right) : R.N. Misra, G.V. Rami Reddy, B.P. Rao, C.P. Singh, K. Ravi Kumar, C.S. Verma, Anil Sachdev, R.K. Singh

Sitting II row (left to right) : S.M. Mahajan, M.L. Sah, R.S.V. Prasad, S.N. Daga, S.T.H. Rizvi, O.P. Bhutani, D.K. Mody, V.Viswanathan

Standing III row (left to right): R.K. Srivastava, Dr. A.L. Chandraker, G. Ganapathiraman, R.K. Pandey, A.V. Krishnan, K.K. Mehrotra,

P.R. Shriram, Atul Saraya, WVK Krishna Shankar



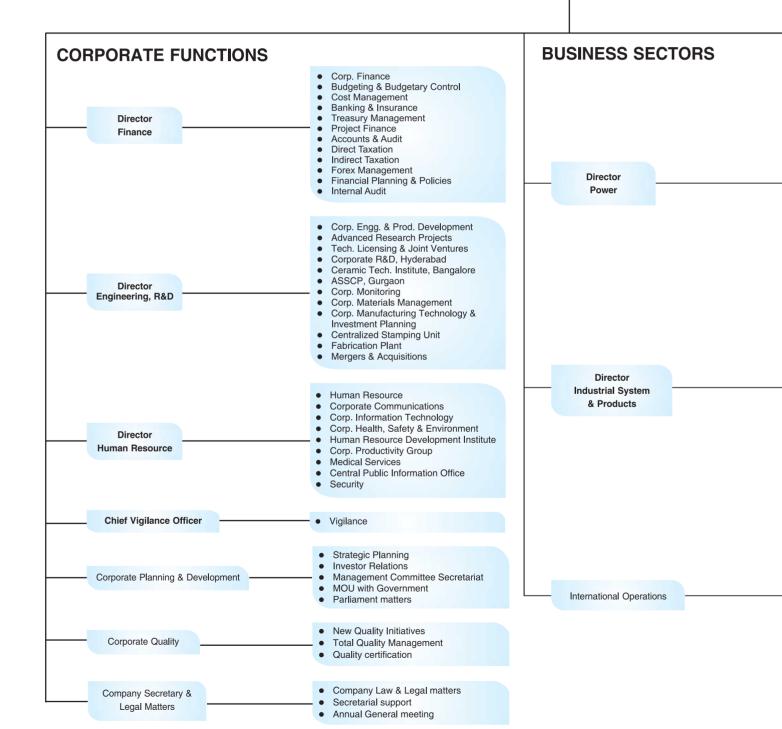
K. Ravi Kumar	-	Chairman & Managing Director Power Business Power Sector Regions- North, East, South & West Spares & Services Business	R.S.V. Prasad	-	Corporate Human Resource Corporate Communication Corporate Productivity Health, Safety & Environment
C.S. Verma	-	Corporate Finance Budgeting, Accounts & Audit Banking, Insurance & Treasury Management Direct & Indirect Taxation	S.N. Daga	-	Corporate Manufacturing Technology & Investment Planning Corporate Monitoring Materials Management
		Cost Management Financial Planning, Policies & Forex Management Internal Audit	S.T.H. Rizvi	-	Corporate Engg. & Product Development Advance Research Projects Technology Licensing &
C.P. Singh	-	Engg. Research & Development Corporate Research & Development Corporate Monitoring Materials Management			Joint Ventures Mergers & Acquisitions Centralised Stamping Unit Fabrication Plant
		Investment Planning Manufacturing Technology	K.K. Mehrotra	-	Power Sector- Western Region
		Centralised Stamping Unit Fabrication Plant	S.M. Mahajan	-	Central Foundry Forge Plant
Anil Sachdev	-	Human Resources Human Resources Development Institute	R.K. Srivastava	-	Regional Operations Component Fabrication Plant Central Marketing Group
		Corporate Information Technology	O.P. Bhutani	-	International Operations
B.P. Rao	-	Industrial Systems & Products Business including Captive Power Plant Business Transmission Business Transportation Business	D.K. Mody	-	Heavy Electrical Equipment Plant Pollution Control Research Institute
		Ceramics Business Unit Component Fabrication Plant	R.K. Pandey	-	Transformer Plant
		Transformation Programme	Permanent Invitees	5	
M.L. Sah R.K. Singh	-	Power Sector- Northern Region  Heavy Electrical Plant	Dr. A.L. Chandraker	-	Corporate Research & Development
Ü		Electrical Machines Repair Plant	G. Ganapathiraman	-	Project Engineering
V. Viswanathan	-	Electronics Division Electronics Systems Division Industrial System Group	A.V. Krishnan	-	Management  Boiler Auxiliaries Plant
G.V. Rami Reddy	_	Heavy Power Equipment Plant	Atul Saraya	-	Power Sector - Eastern Region
R.N. Misra	-	High Pressure Boiler Plant Seamless Steel Tube Plant Industrial Valves Plant	P.R. Shriram	-	Power Sector - Southern Region
		Piping Centre Welding Research Institute	W.V.K. Krishna Shankar	-	Secretary, Management Committee



# Corporate Functional Structure as on 10.06.2008

BOARD OF DIRECTORS

CHAIRMAN & MANAGING DIRECTOR





#### MANAGEMENT COMMITTEE

- Power Sector Marketing
- Power Sector Regions (NR, ER, WR, SR)
- Project / System Engineering Management
- Project Management
- Technical Services
- Spares & Services Business Group \$
- Heavy Equipment Repair Plant, Varanasi
- Human Resources
- Contract Closing Group
- Captive Power Plant Business
- Industrial Products Business (Elect & Mech.)
- Transmission & Distribution Business
- Transportation Business
- Defence Business
- Central Marketing Group for NCES
- Ceramic Business Unit, Banagalore
  - Electro Porcelains Division Bangalore \*
  - Insulator Plant, Jagdishpur \*
- Component Fabrication Plant, Rudrapur \*
- Regional Operations Division
- Project Management & Customer Response
- Transformation Programme Office

Overseas Business

#### **OPERATIONS**

- Heavy Electrical Plant, Bhopal
- Centre for Electric Transportation, Bhopal
- EMRP, Mumbai
- Transformer Plant, Jhansi
- Heavy Electrical Equipment Plant, Haridwar
- Pollution Control Research Institute, Haridwar
- Central Foundry Forge Plant, Haridwar
- Heavy Power Equipment Plant, Hyderabad
  - Industrial Valves Plant, Goindwal
  - High Pressure Boiler Plant, Trichy
  - Seamless Steel Tube Plant, Trichy
  - Welding Research Institute, Trichy
  - Piping Center, Chennai
- Boiler Auxilliary Plant, Ranipet
- Electronics Division, Bangalore
- Electronics Systems Division, Bangalore
- Industrial Systems Group, Bangalore
- \* Operating Units

\$ Matrix reporting to Director (IS&P) for Industry Sector Business



# Corporate profile

BHEL is the largest engineering and manufacturing enterprise in India in the energy related/infrastructure sector. BHEL was established more than 40 years ago, ushering in the indigenous Heavy Electrical Equipment industry in India, a dream which has been more than realized with a well-recognized track record of performance. It has been earning profits continuously since 1971-72.

BHEL caters to core sectors of the Indian Economy viz., Power Generation and Transmission, Industry, Transportation, Renewable Energy, Defence, etc. The wide network of BHEL's 14 manufacturing divisions, 4 power sector regional centres, 8 service centres, 15 regional offices and a large number of Project Sites spread all over India and abroad enables the Company to promptly serve its customers and provide them with suitable products, systems and services-efficiently and at competitive prices.

BHEL has attained ISO 9001 certification for quality management and all the manufacturing units/divisions of BHEL have been upgraded to the latest ISO-9001: 2000 version. All the major units/divisions of BHEL have been awarded ISO-14001 certification for Environmental Management Systems and OHSAS-18001 certification for Occupational Health and Safety Management Systems. BHEL was the first Public Sector Company in the country to win the coveted 'PRIZE' for its Haridwar unit under the CII Exim Award for business excellence, as per the globally recognized model of European Foundation for Quality Management. The company received EEPC's Top Export Award for Project Exports for the seventeenth year in succession. It has also won the SCOPE Meritorious Award for R&D and Innovation 2005-06 for commendable contribution in the area of R&D and Innovation.

The company achieved the perfect MoU score of 1.00 for the year 2006-07 and has also been selected for the MoU award for highest growth rate in market capitalisation among listed PSEs during 2006-07. 12 out of the 13 power stations awarded with the Ministry of Power's Meritorious Productivity Awards for 2006-07 are equipped with BHEL sets, reaffirming the quality and reliability of BHEL's equipment.

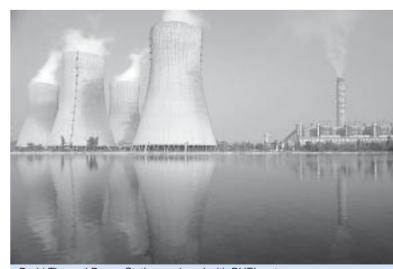
#### **POWER GENERATION**

Power Generation Sector comprises Thermal, Gas, Hydro and Nuclear power plant business. As of 31.3.2008, BHEL-supplied sets account for 85,786 MW or around 64% of the total installed capacity of 1,34,697 MW in the country. Significantly, these sets generated an all-time high 454.59 Billion Units of electricity contributing 73% of the total power generated in the country. The cumulative capacity of projects installed worldwide have crossed 1.00.000 MW.

BHEL has proven turnkey capabilities for executing power projects from Concept to Commissioning. The company has introduced new rating thermal sets of 270 MW, 525 MW & 600 MW in subcritical range and possesses the technology & capability to produce large capacity thermal sets with super critical parameters and gas turbine-generator sets. Co-generation and Combined cycle plants have been introduced to achieve higher plant efficiencies. To make efficient use of the high ash content coal available in India, BHEL also supplies Circulating Fluidized Bed Combustion (CFBC) boilers for thermal plants.

The Company manufactures 220/235/500/540 MWe, nuclear turbine-generator sets. Custom-made hydro sets of Francis, Pelton and Kaplan types for different head-discharge combinations are also engineered and manufactured by BHEL.

The Company has proven expertise in Plant Performance Improvement through Renovation, Modernization and Uprating of a variety of power plant



Dadri Thermal Power Station equipped with BHEL sets -Unit 1& 2 achieved PLF of above 100 per cent during the year

equipment, besides specialized know-how of residual life assessment, health diagnostics and life extension of plants. BHEL built thermal sets consistently exceed the national average efficiency parameters and have achieved the highest-ever Plant Load Factor (PLF) of 80.4% during 2007-08, which is 2.5% higher than the national average. Operating Availability (OA) was also the highest-ever at 86.7%.

BHEL is one of the few companies worldwide, involved in the development of Integrated Gasification Combined Cycle (IGCC) technology which would usher in clean coal technology. BHEL has set up Asia's first 6.2 MW IGCC power plant with an indigenously designed pressurised fluidised bed gasifier. The company has also signed an MoU with APGENCO for setting up a 125 MW IGCC plant at Vijayawada.

#### **INDUSTRIES**

BHEL manufactures and supplies major capital equipment and systems like Captive power plants, Centrifugal compressors, Drive Turbines, Industrial boilers and auxiliaries, Waste heat recovery boilers, Gas turbines, Pumps, Heat exchangers, Electrical machines, Valves, Heavy castings and forgings, Electrostatic precipitators, ID/FD fans, Seamless pipes etc. to a number of industries, like metallurgical, mining, cement, paper, fertilizers, refineries & petro-chemicals etc., other than power utilities. BHEL has also emerged as a major supplier of controls and instrumentation systems, especially distributed digital control systems for various power plants and industries.



220 kV Switchyard commissioned by BHEL at HVPNL, Salempur

#### **TRANSPORTATION**

Most of the trains in Indian Railways, whether electric or diesel powered, are equipped with BHEL's traction propulsion system and controls. The systems supplied are both with conventional DC drives and state-of-the-art AC drives. India's first underground metro at Kolkata runs on drives and controls supplied by BHEL. The company also manufactures complete Rolling stock i.e. Electric locomotives up to 5000 HP and EMU coaches and Diesel Electric locomotives from 350 HP to 3100 HP for both mainline and shunting duty applications.

BHEL also undertakes retrofitting and overhauling of rolling stock. In the area of urban transportation, BHEL is geared up for turnkey execution of electric trolley bus systems, light rail systems and metro systems. BHEL is contributing to the supply of electrics for EMUs for 1500V DC & 25 kV AC to Indian Railways. Almost all the EMUs in service in India are with the electrics manufactured and supplied by BHEL. BHEL has also diversified into the area of track maintenance machines and coach building for Indian Railways.

#### RENEWABLE ENERGY

BHEL has been manufacturing and supplying a range of Renewable Energy systems and products. It includes Solar Energy systems viz. PV modules, PV power plants, Street lighting, Solar pumps and Solar water heating systems. A large number of small hydro power stations have also been completed.

In line with the efforts being made at national level for development of remote areas, BHEL has commissioned six stand alone Solar Photovoltaic (SPV) power plants of 3x110 KWp and 3x55 KWp capacities in Sunderbans (West Bengal). 57 Sets of Solar PV operated petrol pumps are being supplied to M/s HPCL to illuminate and run the company-owned petrol pumps smoothly irrespective of Grid power outage.

#### **OIL AND GAS**

BHEL is supplying onshore drilling rig equipment viz. Draw works, Rotary-table, Traveling block, Swivel, Mast and Sub structure, Mud systems and Rig electrics to ONGC and Oil India Ltd. Well heads & X-Mas tree valves upto 10,000 psi rating for onshore as well as offshore application are being supplied to ONGC, Oil India Ltd. and Private Drilling Companies. BHEL has also supplied Casing Support System, Mudline



Suspension System and Block Valves to ONGC for offshore application.

It also has the capability to supply complete onshore Drilling rigs, Super-deep drilling rigs, Desert rigs, Mobile rigs, Work over rigs and sub-sea well heads. Currently, BHEL is executing orders for refurbishment and upgradation of onshore Oil Rigs from ONGC & Oil India Ltd.

BHEL has supplied GT driven centrifugal compressor packages to GAIL India Ltd. for their gas compressor stations for the Dahej - Vijaipur gas pipeline project.

#### **TRANSMISSION**

BHEL supplies a wide range of products and systems for transmission and distribution applications. The

products manufactured by BHEL include Power transformers, Instrument transformers, Dry type transformers, Shunt reactors, Capacitors, Vacuum and SF6 switchgear, Gas insulated switchgears, Ceramic insulators, etc.

BHEL has developed and commercialised the country's first indigenous 36 kV Gas Insulated Substation (GIS) and has also developed 145 kV GIS which has undergone successful field trials at Hyderabad. HVDC Disc insulators of rating 320kN/420kN have been developed for the first time in the country for use in +/- 800kV HVDC application.

For enhancing the power transfer capability and reducing transmission losses in 400 kV lines, BHEL has indigenously developed and executed fixed series



BHEL demonstrated its in-house technical expertise by successfully refurbishing the Romanian F6100 rig with multiple damages, installed at an ONGC location

compensation schemes and has developed thyristor controlled series compensation scheme, involving thyristor controlled reactors, popularly known as Flexible AC Transmission System (FACTS). BHEL has indigenously developed and commercialized state-of-the-art controlled shunt reactor for reactive power management of long transmission lines. With a strong engineering base, the company undertakes turnkey execution of substations up to 400 kV and has the capability to execute 765 kV substations. High Voltage Direct Current (HVDC) systems have been supplied for economic transmission of bulk power over long distances.

#### **INTERNATIONAL BUSINESS**

BHEL has, over the years, established its references in 70 countries across all inhabited continents of the world. These references encompass almost the entire range of BHEL products and services, covering Thermal, Hydro and Gas-based turnkey power projects, Substation projects, Rehabilitation projects, besides a wide variety of products like Transformers, Compressors, Valves, Oil field equipment, Electrostatic Precipitators, Photovoltaic equipment, Insulators, Heat Exchangers, Switchgears, Castings and Forgings etc.

Some of the major successes achieved by BHEL have been in Gas-based power projects in Oman, Libya, Malaysia, Saudi Arabia, Iraq, Bangladesh, Sri Lanka, China, Kazakhstan; Thermal power projects in Cyprus, Malta, Libya, Egypt, Indonesia, Thailand, Malaysia, Sudan; Hydro power plants in New Zealand, Malaysia, Azerbaijan, Bhutan, Nepal, Taiwan, Tajikistan, Thailand, Afghanistan; and Substation projects & equipment in various countries. Execution of these overseas projects has also provided BHEL the experience of working with world renowned consulting organizations and inspection agencies.

The company has been successful in meeting the demanding requirements of international markets in terms of complexity of work as well as technology, quality and other requirements viz. HSE requirements, financing packages and associated O&M services, to name a few. BHEL has proved its capability to undertake projects on fast-track basis. The company has also established its versatility to successfully meet the varying needs of different sectors, be it captive power, utility power generation or the oil sector. Besides

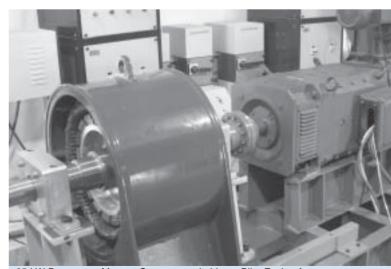
undertaking turnkey projects on its own, BHEL also possesses the requisite flexibility to interface and complement other international companies for large projects, and has also exhibited adaptability by manufacturing and supplying intermediate products.

The company is taking a number of strategic business initiatives to fuel further growth in overseas business. This includes firmly establishing itself in target export markets, positioning of BHEL as a regular EPC contractor in the global market both in utility and IPP segments and exploring various opportunities for setting up overseas joint ventures etc.

# TECHNOLOGY UP-GRADATION, RESEARCH & DEVELOPMENT

To remain competitive and meet customers' expectations, BHEL lays great emphasis on the continuous up-gradation of products & related technologies, and development of new products. The Company has upgraded its products to contemporary levels through continuous in-house efforts as well as through acquisition of new technologies from leading engineering organisations of the world.

The Corporate R&D Division at Hyderabad leads BHEL's research efforts in a number of areas of importance to BHEL's product range. Research and product development centres at each of the manufacturing divisions play a complementary role. Centres of excellence have been set up for Simulators, Computational Fluid Dynamics, Permanent Magnet Machines and Surface Engineering. As the fifth in the



65 kW Permanent Magnet Generator suitable as Pilot Excitor for 500 MW & 800 MW TGs



series, BHEL is establishing a Centre of Excellence for Intelligent Machines and Robotics (COE-IMAR). In addition to the Corporate R&D Division, BHEL has four specialized institutes, viz., Welding Research Institute at Trichy, Ceramic Research Institute at Bangalore, Centre for Electric Traction and Hydro lab at Bhopal and Pollution Control Research Institute at Haridwar.

BHEL has introduced, in the recent past, several stateof-the-art products viz. 60 MW Bubbling Fluidised Bed Combustion Boiler for power generation, 260 MW steam turbine designed to suit combined cycle power plants, Bypass Over Fire Air (BOFA) system for reduction of NOx from coal based thermal power plants, highefficiency Francis and Pelton hydro turbines, new LP turbine variant which can be retrofitted in old Russian (LMW) 210 MW thermal sets, Automatic Storage & Retrieval System (ASRS) for storage and inventory management system of the Indian Army, Solar Panels with 5500 watts output consisting of high- efficiency multi-junction solar cells, Satellite Batteries for INSAT 4A, Controlled Shunt Reactor (CSR) for 400 kV Transmission lines, Flexible AC Transmission Systems (FACTS), STATCOM, Phase Shifting Transformer (PST), 145 kV Gas Insulated Switchgear (GIS), Micro controller based flame scanner, a more energy efficient single cylinder non-reheat steam turbine for 100-140 MW application, IGBT based 3-phase drive system for 700 HP diesel electric locomotives, technology for manufacture of 400 kV long-rod composite insulators with improved properties by adding nano materials, Performance Analysis, Diagnostics and Optimization (PADO) package for power plants, 91 ton BHEL 280 Bowl Mill, etc.

Reinforcing its position as a total solution provider, BHEL has developed and successfully commissioned a Maintenance Controller (an Integrated Asset Management and Decision Support System) at the Western Mountain Power Project, Libya. Based on PowerPac-G, a software jointly developed by BHEL and TCS, this is a system for complete power plant maintenance for Combined Cycle Power Plant application and takes care of all the maintenance needs of a power station.

The company is also engaged in research in futuristic areas like fuel cells for distributed environment-friendly power generation, clean coal technology applications, super conductivity applications in transformers, generators/ motors etc. and nano technology for various applications.

#### HUMAN RESOURCE DEVELOPMENT INSTITUTE

The Human Resource Development Institute (HRDI) situated in Noida, is the corner stone of BHEL's learning Infrastructure, along with the Advanced Technical Education Centre (ATEC) at Hyderabad and the Human Resource Development Centres (HRDCs) at different units. Through various organizational developmental efforts, these centres ensure that the prime resource of the organization – the Human Capital - is always in a state of readiness to meet the dynamic challenges posed by the fast changing environment. It is their constant endeavour to take the HRD activities to the strategic level of becoming an active partner in achieving the organizational goals.

Guided by the HRD Polestar statement "To create an environment supportive of blossoming of full potential of employees", the HRDI along with the HRDCs and the ATEC, through a systematic strategic long term training process and several short-term need based programmes based on comprehensive organizational research, enable the human resources to unearth and polish their potential. The HRDI is spearheading the HRD initiatives in the company and focusing on competency, commitment and culture building.

Some of the core programmes are Advanced Management Programmes, General Management Programmes, Strategic Management Programmes, Senior Management Programmes, Middle Management Programmes, and Young Managers Programmes.

In addition, the HRDI provides professional support to Corporate HR and HRDCs at Units/Divisions.

# HEALTH, SAFETY AND ENVIRONMENT MANAGEMENT

BHEL is committed to be an environment friendly company in all its areas of activities, products and services, providing safe and healthy working environment to all stakeholders. In fact this aspect has become an integral part of the company's business performances. Significantly, BHEL has also taken initiatives on Clean Development Mechanism (CDM) projects to reduce greenhouse gas emissions in a more

focused way and vigorous efforts are being made to achieve milestones in this area.

In line with the company's strategy, BHEL undertakes a host of Environment Improvement Projects and Community Development Programmes. Some of the major EIPs executed in the past at BHEL plants & townships included tree plantation drives, installation of rain water harvesting plants, efficient water & energy management, reduction in noise level, improvement in chemical storage & handling systems etc. In conformity with BHEL's concern for society and environment, a more energy efficient single cylinder non-reheat steam turbine for 100-140MW application has been developed, suitable for plants where large amounts of waste heat is available and reheat option is not feasible. This is the largest single cylinder steam turbine engineered so far by BHEL.

#### **CORPORATE SOCIAL RESPONSIBILITY**

As part of its Corporate Social Responsibility, BHEL adopted 56 villages having nearly 80,000 inhabitants. Other examples of CSR activities are Blood Donation and Health Check-up camps, besides providing

infrastructure support at these villages. In addition, BHEL provides financial assistance to various NGOs/Trusts/Social Welfare Societies that are engaged in social activities throughout the country.

# PARTICIPATION IN THE UN'S GLOBAL COMPACT PROGRAMME

As the world's largest global corporate citizenship initiative, the Global Compact is the first and the foremost concern which is exhibiting and building the social legitimacy of business and markets. BHEL is committed to United Nations Global Compact Programme, the set of core values enshrined in its ten principles and the intent to advance Global Compact principles within the company's sphere of influence. BHEL has made these a part of the strategy, culture and day-to-day operations. As part of this programme, BHEL continues to play a lead role in the activities of the Global Compact Society in India, which acts as an apex level nodal agency representing Indian corporate bodies and institutions/ organizations that are committed to UN's Global Compact Programmes.



## Year at a Glance

(Rs. in crore)

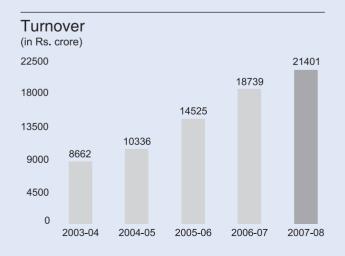
	2007-08	2006-07	CHANGE (%)
Orders Received	50270	35643	41.0
Orders Outstanding	85200	55000	54.9
Turnover	21401	18739	14.2
Value Added	8323	7182	15.9
Employee (Nos.)	43636	42124	3.6
Profit Before Tax	4430	3736	18.6
Profit After Tax	2859	2415	18.4
Dividend	746	600	24.4
Corporate Dividend Tax	127	93	36.8
Retained Earnings	1986	1722	15.3
Total Assets	29352	22280	31.7
Net Worth	10774	8788	22.6
Total Borrowings	95	89	6.3
Debt : Equity	0.01	0.01	0.0
Per Share (in Rupees):			
- Net worth	220.1	179.5 #	22.6
- Earnings	58.4	49.3 #	18.4
Economic value added	1810	1657	9.2
(US \$ in million)			
Turnover	5419	4344	24.8
Profit Before Tax	1122	866	29.5
Profit After Tax	724	560	29.3

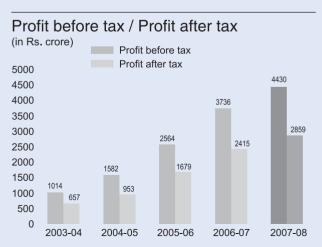
#### Conversion Rates (Rate as on 31st March):

1 US \$ = Rs.39.49 for 2007-08

1 US \$ = Rs. 43.14 for 2006-07

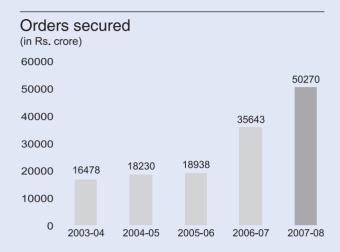
# The paid up share capital has increased from Rs. 244.76 crores in 2006-07 to Rs. 489.52 crores in 2007-08 on account of issue of bonus shares. Accordingly previous year figures are reworked out based on enhanced share capital for comparison.

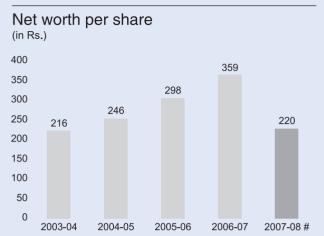






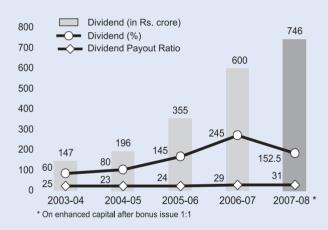
## **Financial Charts**

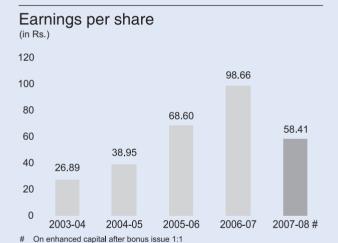


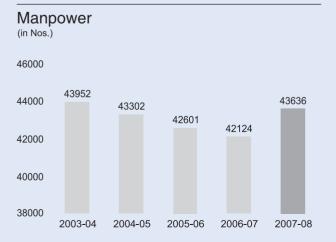


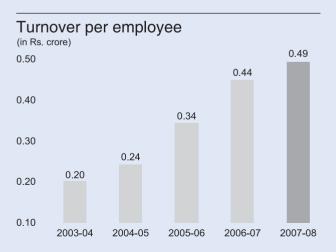
# In 2007-08 paid up share capital increased from Rs. 244.76 crore in earlier years to Rs. 489.52 crore on account of issue of bonus shares. Hence 2007-08 is not comparable with earlier years.

#### Dividend ratios

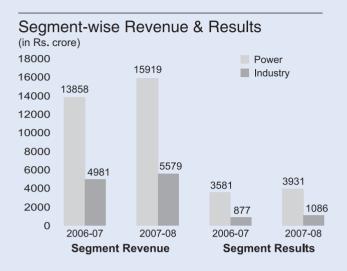


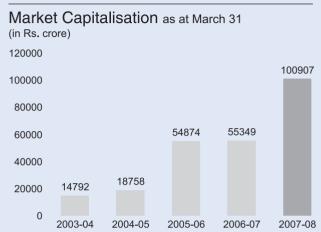






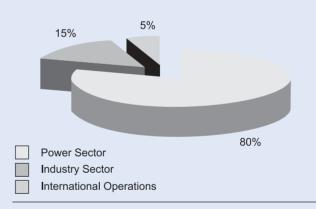






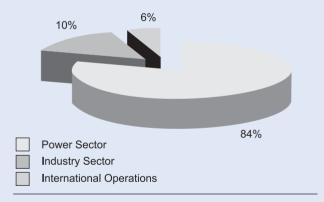
#### Sector-wise order book 2007-08

Rs. 50270 crore



# Sector-wise order book outstanding as at March 31, 2008

#### Rs. 85200 crore





## **Awards**



Hon'ble Prime Minister of India presents Shram Bhushan award to a BHEL employee, Shri S.P. Gupta from Haridwar Plant



Former CMD of BHEL, Shri Ashok K. Puri receiving Meritorious award for R&D and Innovation for the year 2005-06 from the Minister of HI & PE



Director (Finance), Shri C.S. Verma receiving ICWAI Award for Excellence in Cost Management



## Directors' Report

To the members,

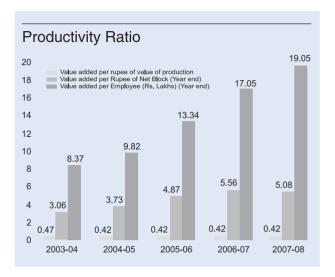
We are delighted to present our 44<sup>th</sup> Annual Report on the business and operations of the Company for the year ended March 31, 2008.

#### **FINANCIAL RESULTS**

(Rs. in Crore)	2007-08	2006-07
(a) Turnover	21401	18739
(b) Profit before depreciation,	4700	4050
interest & tax	4763	4052
(c) Less: Depreciation	297	273
(d) Less: Interest & Finance charges	36	43
(e) Profit before tax	4430	3736
(f) Less: Provision for Taxes (including deferred tax & Fringe benefit tax)	1571	1321
(g) Profit after Tax	2859	2415
(h) Add:/(less) Statutory appropriation	1	1
(i) Distributable Profit	2860	2416
(j) Add: Balance brought forward from the previous year	443	219
k) Balance available for appropriation	3303	2635
<ul> <li>i) Dividend (including interim dividend)</li> </ul>	746	600
<ul><li>ii) Corporate Dividend tax (incl. on interim dividend)</li></ul>	127	92
iii) Amount transferred to General Reserve	2000	1500
Balance in P&L account to be carried forward	430	443
(m) Earnings per Share based on enhanced Share capital (Rs.)	58.4	49.3
(n) NAV per share based on enhanced Share capital (Rs.)	220.1	179.5
(o) Economic Value Added (Rs. crore)	1810	1657

#### FINANCIAL HIGHLIGHTS

During the year the turnover increased by 14.2% to Rs. 21401 crore from Rs. 18739 crore in the previous year. Profit after tax registered an increase of 18.4% to Rs. 2859 crore as against Rs. 2415 crore in the previous year. The increase in profit is driven by the higher volume of operations and enhanced interest income. Net worth of the company has gone up from Rs. 8788 crore in 2006-07 to Rs. 10774 crore in 2007-08 registering an increase of 22.6%. NAV per share, based on enhanced share capital, has increased from Rs. 179.5 in 2006-07 to Rs. 220.1 in 2007-08.



#### **DIVIDEND**

The Board has recommended a final Dividend of 62.5%, Rs. 306 crore, for the year 2007-08. An interim dividend of 90%, Rs. 440 crore, on share capital of Rs. 490 crore, has already been paid for the year 2007-08. Thus the total dividend payment for the year 2007-08 is Rs. 746 crore (exclusive of dividend tax) as against Rs. 600 crore paid in the previous year.

Provision of Rs. 52 crore has been made for Corporate Dividend Tax on the final dividend proposed. Corporate Dividend Tax of Rs. 75 crore has already been paid on the interim dividend.

#### **ORDERS RECEIVED**

Orders received during the year increased by 41% from Rs. 35643 crore in 2006-07 to Rs. 50270 crore in 2007-08. Sector wise orders booked are as follows:

(Rs. in Crore)	2007-08	2006-07
Power Sector	41069	27730
Industry Sector	7860	6556
International Operations	2312	1903
Total Orders Booked*	50270	35643
Order Book outstanding at the end of the year	85200	55000

<sup>\*</sup> Net of Inter Sectoral Orders

#### RATING OF BHEL VIS-À-VIS MOU TARGETS

Performance of the BHEL for the year 2006-07 has been rated as 'Excellent' in terms of MoU signed with the Government of India. For the first time, BHEL has been awarded the MoU Composite score of perfect '1.00'. The MoU rating for 2007-08 is under finalization by the Government.

#### MANAGEMENT DISCUSSION AND ANALYSIS

A report on Management Discussion and Analysis is placed at Annexure -1.

#### **BOARD OF DIRECTORS**

#### **Appointment**

Shri R.S. Sirohi, IAS, Additional Secretary and Financial Adviser, Ministry of Heavy Industries and Public Enterprises was appointed as a Part-time Official Director w.e.f. 29th October, 2007.

Shri S. Ravi was appointed as Part-time, Non-Official Director w.e.f. 29th November, 2007.

Shri B.S. Meena, IAS, Additional Secretary and Financial Adviser, Ministry of Steel was appointed as a Part-time Official Director w.e.f. 25th January, 2008.

Shri K.Ravi Kumar, Director (Power), BHEL was entrusted with additional charge of the post of Chairman & Managing Director in addition to his existing duties for a period of six months w.e.f. 1st March. 2008.

#### Cessation

Shri N. Gokulram, IAS, Additional Secretary and Financial Adviser, Ministry of Commerce and Industry ceased to be Part-time Official director w.e.f. 29th October, 2007.

Shri R.S. Sirohi, IAS, resigned as Part-time Official Director w.e.f. 28th December, 2007 due to relinquishment of charge of the post of Additional Secretary and Financial Adviser in the Ministry of Heavy industries and Public Enterprises.

Shri Ashok K. Puri laid down the office of Chairman & Managing Director on attaining the age of superannuation on 29th February, 2008.

The Board of Directors places on record its deep appreciation of the valuable service rendered/advice and guidance provided by S/Shri N. Gokulram, Parttime Official Director, R.S. Sirohi, Part-time Official Director and Ashok K. Puri, Chairman and Managing Director.

Pursuant to Article 67 (i) of the Articles of Association of the Company, S/Shri Ashok K. Aggarwal, Manish Gupta and Shekhar Datta retire by rotation at the ensuing Annual General Meeting and being eligible, offer themselves for re-appointment.

In compliance with Clause 49 IV (G) (i) of the Listing Agreement, brief resume of the Directors proposed for appointment and reappointment, nature of their expertise in specific functional areas and names of Companies in which they hold directorship and

Membership of Committees of the Board are given at Annexure-2 forming part of the Directors' Report.

#### OFFICIAL LANGUAGE IMPLEMENTATION

- The Company continued its thrust on official language implementation in-line with GOI's Policy on the same.
- Some of the activities undertaken during the year included
  - a) imparting training in Hindi to employees in Region 'C'
  - b) organising Hindi workshops
  - organising inter-unit and inter-departmental competitions.
- Further, to promote Hindi writing in the company, a scheme for "Maulik Hindi Lekhan Puraskar" has been launched. To create interest among the employees in Hindi and to make the libraries well equipped with Hindi Books, an amount of Rs. 0.07 crore was spent on purchase of Hindi Books during the year.
- Committee of Parliament on Official Language inspected our PS-SR, Chennai office in the month of October, 2007 and appreciated the efforts being made in implementation of official language.
- Further, Hindi magazines were also brought out by various units. The Hindi magazine "Poorvabha" by Power Sector-Eastern Region received TOLIC and Maya Ram Surjan Awards during the year.
- TOLIC Incentive award was received by Corporate Office for Rajbhasha Implementation. Two employees of Corporate Office received 1<sup>st</sup> prize in the competitions held under the auspices of TOLIC. R.C.Puram Hyderabad and Power Sector-Northern Region were awarded prizes by TOLIC for excellent implementation of Rajbhasha.
- All the Units of the company, including Corporate Office, celebrated Hindi Diwas on 14<sup>th</sup> September, 2007. 'Hindi Fortnight' was also celebrated during which various Hindi competitions were organised and awards were given to employees & their wards. Republic Day & Independence Day Celebrations were conducted in Hindi at our Noida Township.

# PARTICIPATION IN THE GLOBAL COMPACT OF THE UNITED NATIONS

BHEL reiterates its commitment to United Nations Global Compact Programme and set of core values



enshrined in its ten principles on human rights, labour standards, environment and anti corruption. Company intents to advance G.C. Principles as a responsible corporate citizen.

BHEL has taken a lead role in promoting G.C. principles in other Indian organizations through Global Compact Society (GCS) – an apex level nodal agency, formed by the leading Indian Organizations. BHEL continued to remain in the forefront in all activities of the Society-as Secretary /GCS being BHEL nominee. Notable activities of the year were a National Convention organized on 10<sup>th</sup> December,2007, attended by Mr. Georg Kell, head of Global Compact in United Nations and holding of monthly meetings of the Society, through case studies/organizational experience sharing, addressing the Global Compact principles in Indian context.

In recognition of BHEL's contribution in support of Global Compact programme and its outstanding Communication on Progress (COP), UNGC has placed BHEL under 'Notable COP' category among 177 organisations world over.

BHEL is an environment friendly company in all its activities, products & services, besides providing safe and healthy working environment to all its stakeholders and has made UNGC programme as part of the Company's strategy, culture and day-to-day operations,.

#### Clean Development Mechanism

BHEL has taken initiatives on Clean Development Mechanism (CDM) projects to reduce green house gas emissions in a more focused way and vigorous efforts are being made to achieve milestones in this area. During the year, CDM Awareness Programs for the Nodal Officers of the units were conducted and in each unit a CDM projects Committee has been formed to identify projects, oversee the registration, implementation and generate carbon credit. A broad reference list of CDM activity projects both of in house implementation and joint claim projects with customers has been generated. CDM is now a planned activity for each unit.

#### **Corporate Social Responsibility**

Environment Improvement Projects (EIPs) undertaken by the Company included mass aforestation (over 31 lakhs), host of rain water harvesting plants, water, energy & precious resource conservation plants besides projects which helped in reduction of noise level, improvement in fume extraction, utilisation of NCES products etc. As a result of these projects BHEL has

been able to maintain healthy environment at its work places & townships besides savings accrued through various resource conservation projects.

All manufacturing units/regions of the company are accredited to latest international standards viz. ISO-14001 certification for Environmental Management and OHSAS-18001 certification for Occupational Health and Safety Management Systems.

The company is well recognised as a social conscious organisation and continues to play an active role through a host of community development & other measures in and around its plants and surrounding areas. As part of this, number of welfare projects was undertaken at the Company's 56 adopted villages having nearly 80,000 inhabitants. These included Blood Donation Camps and Health Check-up camps besides providing infrastructure support at these villages.

#### **VIGILANCE**

The vigilance organisation of BHEL is headed by the CVO. Each Unit / Region of BHEL has a vigilance set up headed by a senior vigilance executive reporting to the CVO.

Preventive vigilance was one of the thrust areas of BHEL Vigilance during 2007-08. Greater awareness of the Company's policies, rules and procedures amongst employees through training programmes was undertaken as a measure of preventive vigilance. 42 such programmes were organized during the year 2007-08 in various Units, Regions and offices of BHEL. During the year 2007-08, System Studies on 'Vendor Registration', 'Procurement of Capital Equipment', 'Scrap Disposal', 'Recruitment of Artisans' etc. were carried out with a view to make systems more effective and transparent. Interactive sessions were held with line executives representing different functional areas, in order to create vigilance awareness and to enhance their knowledge of the Company's policies, rules and procedures.

CVC has decreed that Vigilance objectives can be better achieved through implementation of Transparency Measures in various areas of Company operations, especially those requiring interface with customers and suppliers. Some of these successfully implemented measures include hosting of tender details on the Company's web site, personal and vendor payments through Electronic mode and vendor applications tracking system.



#### **SECURITY**

The security of most of the plants of the company is being managed by the CISF. In some smaller plants, the company has its own security, while in other plants, Corporate office and regional offices the security is being looked after by the Private agencies like EATS sponsored by DGR.

Security audit of major plants is being done by the Intelligence Bureau periodically and the additional requirements, wherever pointed out by them, are immediately complied with by the concerned units. Review of security is done internally also from time to time.

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

#### **DIRECTORS' RESPONSIBILITY STATEMENT**

Pursuant to Section 217(2AA) of the Companies Act, 1956, it is hereby confirmed:

- that in the preparation of the annual accounts for the financial year ended 31st March, 2008 the applicable Accounting Standards have been followed along with proper explanation relating to material departures;
- (ii) that the Directors have selected such accounting policies and applied them consistently and made judgments and estimates that were reasonable and prudent so as to give a true and fair view of the state of affairs of the Company as at the end of the financial year 2007-08 and of the profit of the company for that period;
- (iii) that the Directors have taken proper and sufficient care for the maintenance of adequate accounting records in accordance with the provisions of the Companies Act, 1956 for safeguarding the assets of the Company and for preventing and detecting fraud and other irregularities;
- (iv) that the Directors have prepared the annual accounts for the financial year ended 31st March, 2008 on a 'going concern' basis.

#### **CORPORATE GOVERNANCE**

As per the requirements of Clause 49 of the Listing Agreement a detailed report on Corporate Governance together with the following is given at Annexure-3:

- (i) CEO/CFO Certificate [as per Clause 49(V)] and
- (ii) Certificate from the Company's Auditors [as per Clause 49(VII)].

#### OTHER DISCLOSURES

Information in accordance with the provisions of Section 217(1)(e) of the Companies Act, 1956 read with Companies (Disclosure of Particulars in the Report of the Board of Directors) Rules, 1988 regarding conservation of energy, technology absorption and foreign exchange earnings and outgo is given at Annexure – 4.

None of the employees of the Company is drawing remuneration in excess of the limits prescribed under section 217(2A) of the Companies Act, 1956 read with Companies (Particulars of employees) Rules, 1975.

#### **AUDITORS**

The Auditors of your Company are appointed by the Comptroller and Auditor General of India. The names of auditors appointed for the year 2007-08 are printed separately in the Annual Report.

The replies to the points referred to in the Auditors' Report and to the Comments of the Comptroller and Auditor General of India are given at Annexure-5.

#### **ACKNOWLEDGEMENTS**

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

The Board also gratefully acknowledges the support and guidance received from various ministries of the Government of India, particularly the Department of Heavy Industry, in Company's operations and developmental plans. The Directors express their grateful thanks also to the Comptroller and Auditor General of India, Chairman and Members of Audit Board, Statutory auditor, Branch auditors and Cost auditors. The Company also wishes to place on record its appreciation of the continued co-operation received from all the Technology Collaborators and Suppliers and support provided by the Financial Institutions and Bankers. The Board wishes to record its deep gratitude to all members of the BHEL family whose enthusiasm, dedication and co-operation has made the achievement of an excellent performance possible.

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

K. RAVI KUMAR CHAIRMAN & MANAGING DIRECTOR

Uh WI

Place: New Delhi Dated: July 21, 2008



#### ANNEXURE - 1 TO THE DIRECTORS' REPORT

### Management Discussion and Analysis

#### A. FINANCIAL OPERATIONS

Analysis of the financial performance of the Company

#### **BALANCE SHEET**

#### I. SHARE CAPITAL

	Figures in Rs. Crore		
	2007-08 2006-07		
Authorised Share capital	2000	325	
Issued, subscribed &			
Paid up Share Capital	490	245	

In the Extraordinary General Meeting of the Shareholders of the company held on 30<sup>th</sup> April, 2007 the Shareholders approved increase in Authorised Share Capital from Rs. 325 crore to Rs. 2000 crore of Face Value of Rs. 10/- per Equity Share and issue of bonus shares in the ratio of 1:1. Bonus shares were allotted on 6<sup>th</sup> June, 2007 to the shareholders, whose names were recorded in the Register of Members as on 1<sup>st</sup> June, 2007. Consequent to the above, the authorised share capital and paid-up share capital stand increased to Rs. 2000 crore and Rs. 490 crore respectively.

#### 2. RESERVES & SURPLUS

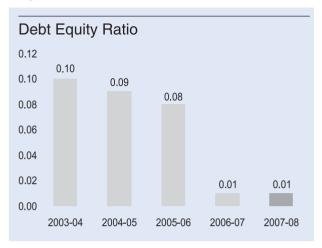
	Figures in Rs. Crore		
	2007-08 2006-07		
Capital Reserve	3	3	
Foreign Project Reserve	3	4	
General Reserve	9849	8094	
Profit & Loss Account	430	443	
	10285	8544	

The Reserve & Surplus has increased by Rs. 1986 crore during 2007-08 after addition of profit after dividend distribution. During the year, an amount of Rs. 245 crore was transferred from Reserve & Surplus to paid up share capital consequent to issue of bonus shares. With this the net increase in reserve & surplus in 2007-08 is Rs. 1741 crore.

#### 3. LOANS FUNDS

	Figures in Rs. Crore			
	2007-08 2006-07			
Secured Loans	0	0		
Unsecured Loans	95	89		

Unsecured Loans represent assets taken on lease.



#### 4. FIXED ASSETS

Figures in Rs. Crore

	2007-08	2006-07
Gross Block	4443	4135
Less:Depreciation/amortisation	3403	3117
Add:/( Less):Lease Adjustment Account	-59	-29
Net Block	981	989
Capital Work-in-Progress	658	303

Gross Block and capital Work in progress increased by Rs. 308 crore and Rs. 355 crore respectively during the year due to Capital expenditure incurred on ongoing capacity augmentation programme at various manufacturing units and the erection and commissioning facilities at project sites.

#### 5. INVESTMENTS

	Figures in	Rs. Crore		
	2007-08 2006-0			
Long Term Trade Investments	8	8		

There was no change in the Investments during the year.

#### 6. DEFERRED TAX ASSETS (NET)

	Figures in	Rs. Crore		
	2007-08 2006-07			
Deferred Tax Assets (Net)	1338	935		

Deferred Tax assets have increased by Rs. 403 crore. The increase is mainly on account of provisions including provision for wage revision due w.e.f. 01.01.2007.

#### 7. INVENTORIES

Figures in Rs. Crore

	2007-08	2006-07
Inventories	5736	4218

Inventory increased by Rs. 1518 crore over previous year in tune with the increase in volume of operations. In terms of days of turnover, it has increased from 82 days in 2006-07 to 98 days in 2007-08. The inventory build up is also part of the strategies of the management considering long lead time for certain special steel material and to meet shorter delivery requirements of the customers.

#### 8. SUNDRY DEBTORS

Figures in Rs. Crore

	_	
	2007-08	2006-07
Sundry Debtors (Gross)	11975	9613

Debtors in absolute terms increased by Rs. 2362 crore mainly due to increase in turnover. In terms of days of turnover it increased from 187 days in 2006-07 to 204 days in 2007-08. The increase in debtors is also partially due to change in payment terms. Debtors also include goods dispatched which could not be billed immediately due to required documentation for billing.

#### 9. CASH AND BANK BALANCES

Figures in Rs. Crore

	2007-08	2006-07
Cash & Bank Balances	8386	5809

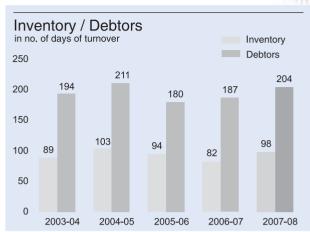
The cash and cash equivalents have increased from Rs. 5809 crore in 2006-07 to Rs. 8386 crore in 2007-08 reflecting the sound liquidity of the company.

# 10. LOANS AND ADVANCES & OTHER CURRENT ASSETS

Figures in Rs. Crore

	2007-08	2006-07
Loans & advances	1186	1141
Other Current assets	421	200
	1607	1341

Loans & advances have increased by Rs. 45 crore. Other current assets represent interest accrued on bank deposits and investments.



#### 11. CURRENT LIABILITIES & PROVISIONS

Figures in Rs. Crore

	2007-08	2006-07
Current Liabilities	16576	11733
Provisions	3244	2604
	19821	14337

The increase in current liabilities is mainly due to increase in advances received from customers by Rs. 3702 crore and in sundry creditors & liabilities by Rs. 1141 crore.

Increase in provisions was mainly due to provisioning for wage revision due w.e.f. 01.01.2007.

#### **PROFIT & LOSS ACCOUNT**

#### 12. TURNOVER

Figures in Rs. Crore

	19305	17238
Less: Excise duty & service Tax	2096	1501
Gross Turnover	21401	18739
	2007-08	2006-07

Turnover increased by 14.2% during the year, Power segment and industry segment contributed 74% and 26% respectively for the total revenue of the company.

#### 13. OTHER INCOME

Figures in Rs. Crore

	2007-08	2006-07
Other operational Income	422	377
Misc/Other income	127	129
Interest Income	896	318
	1445	824

The increase in interest income was contributed by higher level of short term investments and interest on Income Tax refunds.



#### 14. CONSUMPTION OF MATERIAL, ERECTION & **ENGINEERING EXPENSES**

	Figures in Rs. Crore	
	2007-08	2006-07
Consumption of Material,		
Erection &		
Engineering Expenses	11821	10018

The increase in Consumption of Material, Erection & Engineering Expenses by Rs. 1803 crore or 18% was on account of increase in Turnover / volume of operations.

#### 15. EMPLOYEES REMUNERATION & BENEFITS

	Figures in	Rs. Crore
	2007-08	2006-07
Employees Remuneration &		
Benefits	2608	2369

Employees Remuneration & Benefits increased by Rs. 239 crore or 10.1% during the year compared to the previous year. It includes Rs.199 crore of adhoc payment made during the year against wage revision, pending final settlement.

#### 16. OTHER EXPENSES OF MANUFACTURING, **ADMINISTRATION, SELLING & DISTRIBUTION**

	Figures in Rs. Crore	
	2007-08	2006-07
Manufacturing, Administration,		
Selling & Distribution	1644	1660

Other Expenses of manufacturing, Administration, Selling & Distribution are marginally lower in 2007-08 as compared to 2006-07.

#### 17. PROVISIONS

	Figures in	Rs. Crore
	2007-08	2006-07
Provisions (Net)	778	172

The increase in provisions (net) in 2007-08 is mainly due to provision for wage revision due w.e.f. 01.01.2007.

#### 18. INTEREST AND OTHER BORROWING COSTS

Figures in	Rs. Crore
2007-08	2006-07

	2007-08	2006-07
Interest and other		_
borrowing costs	35	43

The interest cost represents the interest component of the lease rentals on leased assets.

#### 19. DEPRECIATION

	Figures in Rs. Crore		
	2007-08	2006-07	
Depreciation	297	273	

The increase in depreciation by Rs. 24 crore was on account of increase in gross block on commissioning of facilities, as part of on going capacity augmentation schemes.

#### 20. PROVISION FOR TAXATION

Figures in Rs. Crore

	2007-08	2006-07
Income Tax - Current Year	1935	1421
- Earlier Years	12	14
Deferred tax	(-)403	(-)163
Fringe Benefit Tax	27	49
	1571	1321

Tax liability has been provided as per the provisions of Income Tax. The increase in Income Tax was due to increase in the taxable profit for the year. The increase in deferred tax assets is due to higher provisions.

Fringe Benefit Tax has decreased by Rs. 22 crore due to changes introduced in the FBT Act in Finance Bill, 2007 and change in expenses.

#### 21. PROFIT AFTER TAX

	Figures in Rs. Crore		
	2007-08	2006-07	
Profit after Tax	2859	2415	

The Net profit for the year rose by Rs. 444 crore or 18.4%.

#### 22. DIVIDEND

The company has paid interim dividend of 90%, Rs. 440 crore, on share capital of Rs. 490 crore during the year 2007-08. The Board has also recommended a final dividend of 62.5% i.e. Rs.306 crore.

The total dividend payment for the year 2007-08 is Rs. 746 crore (exclusive of dividend tax) as against Rs. 600 crore in the previous year.

Provision of Rs. 52 crore has been made for corporate dividend tax on the final dividend proposed. Corporate dividend tax of Rs. 75 crore has already been paid on the interim dividend.

#### 23. TRANSFER TO GENERAL RESERVE

Rs. 2000 crore has been transferred to General Reserve for the year 2007-08 as against Rs. 1500 crore in 2006-07.



# **Power Sector**



2x250 MW Korba East TPS



#### **B. PERFORMANCE OF BUSINESS SEGMENTS**

#### **POWER SECTOR**

Power Sector booked orders worth Rs.41069 crore for supply and installation of 14555.6 MW of generating equipment as well as services and supply of spares. This is the highest ever order booked by Power Sector in financial and physical terms, in any financial year.

Successful initiatives of the company have resulted in up-gradation of technology and a foray into new product segment & ratings:

- First Order for 660 MW Supercritical (SG package) of coal based TPP received
- First Order for Advance Class 9 FA GT CCPP received
- First Order for new rating of 270 MW, 525 MW, 600 MW received
- First Order for 500 MW Turbine Generator and Secondary Piping for Nuclear Set based on Fast Breeder Reactor from Bhavini for Kalpakkam Project.

To the credit are successful strategic initiatives resulting in :

- MOU with TNEB for formation of JV for setting up Udangudi (2x800 MW) Super critical Power Project in Tamil Nadu.
- MOU with NTPC for formation of JV for EPC business for Power Projects.
- CEA's recommendations qualifying BHEL for 600 MW sets based on 500 MW experience.

Year witnessed receipt of orders for the largest number, in any year, of the coal sets in the rating of 490 - 600 MW - 17 Nos & also of Hydro sets - 29 Nos.

Orders worth Rs 2357 crore towards Spare & Services business received.

Following significant orders for main equipment were received during the year :

#### **COAL (11140 MW)**

#### (a) Turnkey/EPC Orders:

 2x500 MW (Main Plant excluding CHP & Water System) at Koderma TPP and Durgapur Steel TPS of Damodar Valley Corporation(DVC)

- 2x270 MW at Sikka 3 & 4 and 1x490 MW at Ukai of Gujarat State Electricity Corporation Limited (GSECL)
- 2x500 MW (excluding CHP & Switchyard) at Anpara 'D' of Uttar Pradesh Rajya Vidyut Utpadan Nigam Ltd. (UPRVUNL)
- 1x600 MW at North Chennai Stg II-1 of Tamil Nadu Electricity Board (TNEB)

#### (b) Power Plant Packages:

- 2x660 MW at Barh Stg II & 3x250 MW at Bongaigaon from National Thermal Power Corporation (NTPC)
- 3x500 MW at Indira Gandhi STPP (Jhajjar) of Aravali Power Company Pvt Ltd (APCPL - a Joint Venture of NTPC, HPGCL & Delhi Govt).
- 2x500 MW at Ennore TPS of Tamil Nadu Energy Company Limited (NTECL - Joint Venture Company of NTPC & TNEB).
- 4x250 MW at Nabinagar of Bhartiya Rail Bijlee
   Co. (Joint Venture Company of NTPC & Railways).
- 1x210 MW at Rayalseema 5 Stg III of Andhra Pradesh Power Generation Corporation (APGENCO)
- 2x525 MW at Maithon of Maithon Power Ltd. (MPL - Joint venture between Tata Power and Damodar Valley Corporation)
- 2x250 MW at Satpura of Madhya Pradesh Power Generating Co. Ltd. (MPPGCL)
- 1x500 MW at Korba (W) of Chhattisgarh State Electricity Board (CSEB)

#### GAS: (1416.6 MW)

- 2x350 MW CCPP at Pipava of GSPC Pipava Power Co. Ltd. (GPPC)
- 1x350 MW CCPP at Hazira Gujarat State Energy Gen. Ltd. (GSEG).
- 345.6 MW CCPP at Nagathone of Reliance Industries Ltd. (RIL)



Hon'ble Prime Minister of India dedicating Tarapur Atomic Power Station - Units 3 & 4 to the Country

#### **NUCLEAR (500 MW)**

 1x500 MW TG & Secondary Cycle System at Bhavini (PFBR) Kalpakkam of Bharatiya Nabhikiya Vidyut Nigam Ltd.( BNVNL)

#### **HYDRO (1499 MW)**

- 4x40 MW Teesta Low Dam IV, 3x15 MW Nimoo Bazgo & 4x11 MW Chutak HEP of National Hydro Power Corporation Ltd. (NHPC)
- 10x40 MW Maheshwar HEP of Shree Maheshwar Hydel Power Corp. Ltd.(SMHPCL)
- 4x130 MW Tapovan Vishnugad HEP of National Thermal Power Corporation (NTPC)
- 4x82.5 MW Srinagar HEP of GVK Group Company

#### **SERVICE AFTER SALES (SAS):**

Orders worth Rs 2174 crore for supply of Operation & Maintenance (O&M) spares and R& M Equipment as well as Rs 183 crore orders for services works including PPIB were received.

#### **OTHER THERMAL ORDERS:**

In addition to above, order for supply of spares, services & revival of Block I & III of Ratnagiri Gas & Power Pvt. Ltd.(RGPPL) was received during the year.

#### **COMMISSIONING:**

Power sector commissioned 40 sets totaling 6837.5 MW during the year within the country and abroad. This includes 22 domestic BHEL utility sets totaling 5004 MW. With this, BHEL built sets now



Unit 6 of Mejia TPS commissioned during the year

account for 85786 MW, which is nearly 64% of Country's total installed capacity. Thermal sets commissioned during the year were Bhatinda(LM) – 3 (250 MW) in Punjab, Mejia-6 (250 MW), Santaldih-5 (250 MW) & Bakreswar-4 (210 MW) in W. Bengal, Paras 1 (250 MW) in Maharashtra, Birsingpur-5 (500 MW) in M. Pradesh, Raigarh-1,2 &3 (3x250 MW), Korba (E)-2 (250 MW) & Sipat-4 (500 MW) in Chhattisgarh, Bellary-1 (500 MW) in Karnataka, Rayalseema-4 (210 MW) in A. Pradesh, Kahalgaon 6 (500 MW) in Bihar, Dholpur STG (110 MW), Dholpur GT2 (110 MW) in Rajasthan and Dhuvaran ST (40 MW) in Gujarat.

Hydro sets namely Madhikheda-3 (20 MW) in Madhya Pradesh & Maneribhali 1, 2, 3 & 4 (4x76 MW) in Uttaranchal were also commissioned.

In addition to above BHEL commissioned 3 sets totaling 378 MW abroad Viz Gas based set of (2x126 MW) at Mukhaizana & (1x126 MW) at Quran Alam in Oman.

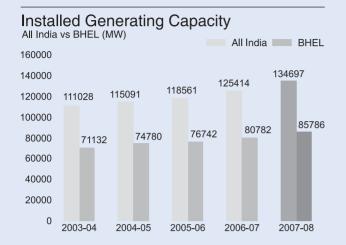
11 industrial sets of 495.5 MW were commissioned by Power Sector during the year. BHEL also erected & commissioned 4 Non BHEL make sets ie. Ratnagiri Block III (740 MW) and 1 Nuclear sets Kaiga 3 (220 MW).

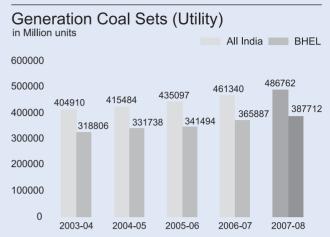
#### PERFORMANCE OF BHEL UTILITY SETS

Performance of BHEL thermal sets during the year was best ever and better than the national average.

 BHEL Thermal sets achieved the highest ever Plant Load Factor (PLF) of 80.4% an increase of 2% over last year and 2.5% higher than National Average of 77.9%.







- 195/200/210/250 and 500 MW BHEL thermal sets which jointly form the backbone of Country's Thermal Power Generation generated 350735 MUs with peak performance and achievement of highest ever PLF of 85.0%. The combined O.A. of these sets was also highest ever of 90.4%.
- 500 MW and 250 MW BHEL thermal sets recorded PLF of 90.0% and 93.7% highest ever respectively during the year.
- 190 BHEL supplied Thermal sets (65% of total BHEL sets in the country) achieved PLF of over 70%. Of these, 84 sets registered PLF of over 90% and 65 sets achieved PLF between 70% - 80%.
- 8 thermal sets achieved PLF above 100% viz.
   Sabarmati Extn.-1, Dahanu-1, Dadri 1&2,
   Unchahar -3, Sabarmati F, Kota -6 and Korba STPS -5.

- BHEL Coal Sets registered the Operating Availability (O.A.) of 86.7%
- 129 Thermal Sets of BHEL make achieved O.A. higher than or equal to 90%.
- 152 BHEL Thermal Sets clocked uninterrupted operation for more than 90 days during the year, out of which:
  - 51 sets ran twice continuously for more than 90 days.
  - 30 sets ran continuously for more than 200 days

BHEL continued its endeavour to render efficient customer service aimed at facilitating uninterrupted power supply and keeping power plants in good running condition. During the year, Power Sector overhauled 97 thermal utilities and industrial sets including 1 non BHEL set covering various products e.g. Boilers, TGs and Auxiliaries. 22 Hydro sets were also overhauled during the year.



# **Industry Sector**



2X77 MW CPP built by BHEL for Hindustan Zinc Ltd.



In Industry Sector, BHEL secured record orders worth Rs. 7860 crore in FY 2007-08 achieving a growth rate of 20% over previous year. Each of the business segment registered a high growth and the year witnessed a number of first time ever achievements.

Major orders received during the year/ other business highlights- Industry segment-wise include:

#### **Captive Power Plants**

- Highest value order ever received in Industry Sector from HZL for 4 x 80 MW CPP (2 units for Dariba, Rajasthan and 2 units for Dahej, Gujrat) on EPC basis. This is the fourth consecutive order from this Customer for 80 MW unit configuration.
- Largest-ever order from SAIL for Integrated Power and Blowing station for IISCO Steel plant, Burnpur on EPC basis.
- RINL, Vizag Steel Plant Customer reposed confidence in BHEL by placing repeat order for 1 x 67.5 MW STG + 1 x 330 TPH Multi Fuel Fired Boiler based CPP.
- Repeat Order for 2 x Fr. 9E GTG sets from M/s Vadinar Power (Essar Group).
- Prestigious order for 2 x Fr. 6 GTG based Cogen.
   Plant for IOCL, Vadodara, Gujrat Refinery on EPC basis under international competitive bidding.
- Order for 1 x Fr. 6 GTG based Cogen Plant for KRL, Kochi Refinery on EPC basis under international competitive bidding. This order includes our Max based DCS system which is being supplied for the first time to the refinery segment.
- Fr. 6 GTG for Silk Road Sugar Refinery Kakinada (JV of M/s EID Parry) - First GTG order from Sugar Industry & first order for supply to SEZ.
- 2 x 25 MW STG order received from Cethar Vessels Pvt. Ltd.
- Order received for 1 x 34.5 MW STG set from West Coast Paper Mills Ltd. This being first STG order received from this group.
- 1 x 15 MW STG for Lalitha Cement First order for Steam Injection Turbine for Cement Industry a new customer.
- Repeat order for 1 x 33 MW STG from HEG Mandideep and 1 x 43 MW STG from Arasmeta Captive Power Co. Ltd

Highest ever "EPC Contracts" in CPP segment has been the other major business highlight during the year.



Dual voltage 5000 hp, 25 kV AC electric locomotive

#### **Transportation**

- Breakthrough in transportation business with bulk order for 50 nos. 25 kV Electric Locomotive type WAG 7 from Indian Railways after a gap of more than 8 years.
- Orders from CLW Chittaranjan for 52 nos Loco Convertor/ Invertor, 41 nos. Auxiliary Convertors for 3 phase locos, 70 nos. 5400KVA Freight Transformers & 150 nos Light weight traction motors.
- Steel / Cement industries orders for 15 nos. Diesel
   Shunting Locomotives

#### Other business highlights in this segment include:

- BHEL making entry into coach building for Indian Railways with developmental order for 9 AC EMU coaches.
- Capability building for development of 3 phase IGBT based propulsion system for AC EMU and AC DEMU. Agreement entered into with M/s Strukton for association during such developments.

#### **Industrial Products (Mechanical)**

- Highest ever orders for Centrifugal compressors from Petrochemical & Refinery Industries.
- Single largest order in last 5 years secured from BPCL-Kochi Refinery for supply of 3 nos. Compressors.



220 kV / 66 kV Transformers manufactured and commissioned by BHEL at a substation

- Largest capacity (66000 m3/ hour) Wet Gas Compressor order received from IOCL Baroda.
- A major long term rate contract finalized with ONGC for supply of Well Heads and X-Mas trees.

#### **Industrial Products (Electrical)**

- Highest ever order-booking achieved in the Electrical machines segment from various industries. Orders totaling 1208 motors including 226 nos from various Cement plants received.
- Major order received from BHAVINI, for 3 nos. each of 2700 KW and 3600 KW Vertical Motors with AC Drives.
- Single largest rate contract for supply of HT motors finalized with M/s Essar Construction (I) Limited.
   The expected business in next 1½ years from this shall be for about 604 nos. of HT motors.

 First order for 7 nos. New Design vertical Synchronous motors (4000 KW each) from WPIL.

New compact motors of LA4 series have been introduced & are likely to constitute about 15% of next year's turnover of medium range HT motors.

#### **Transmission Systems**

- Order for 2 x 50 MVAr Controlled Shunt Reactor at Dhule from Maharashtra State Electricity Transmission Co. Ltd. in the area of new indigenous technologies in Transmission.
- Initiatives taken to address future HVDC business.
   The initiatives involve setting up of state of art manufacturing facilities for manufacture of equipment for Ultra High Voltage transmission systems.



 BHEL has undertaken in-house development of 765kV class equipment and design of 765 kV substations for addressing future requirements.

#### **Transmission Products (ROD)**

- Continuing technology and market leadership in transformers and reactors, BHEL secures orders for 400 MVA, 400 kV transformers from Adani Power and 125 MVAr, 400 kV shunt reactors from Powergrid – the largest ratings to be installed in India.
- BHEL's leadership in transformer business reaffirmed with NTPC placing an order for 22 nos.
   400 kV transformers totaling 3,398 MVA – the largest order for power transformers ever placed in India.
- Large Order for 4 x 315 MVA Transformers from L&T, Chennai.
- Breakthrough in NTPC for indoor VCBs first order for 434 nos. panels.

#### **NCES**

 Major order for supply and installation of 57 nos of Solar PV powered systems, each rated 5.94 kWp for dispensing petrol at the retail outlets of M/s HPCL, at locations all over India. This is the first ever large scale order of its kind released by any PSU in Petroleum Sector in the country and the system offered by BHEL will enable HPCL to illuminate and run the Company Owned Company



5 KWp integrated photvoltaic system installed at IISc, Bangalore

Operated petrol pumps smoothly irrespective of Grid Power Outage.

 A development order for 2 Nos. of 600 KW Induction Generators received from Vestas RRB Chennai. These will be first supplies of the Generators to the growing wind sector.

#### **Projects Commissioning:**

- Captive Power Plant equipment (STG & GTG) ranging from 15 MW to 125 MW commissioned for various Industries, creating capacity addition of 807 MW during 2007-08.
- In Transmission Sector, Powergrid's 220 KV Rae Bareilly Substation got dedicated to the Nation on 16.10.2007 besides commissioning of several other 400 KV, 220 KV substations.



# **International Business**



2x126 MW (ISO) GTG based Mukhaizana Power Station, Oman, commissioned by BHEL on EPC basis during the year



In International Business, BHEL secured physical export orders of Rs. 2312 crore during the year in comparison to last year's order book of Rs. 1903 crore, an increase of 21%.

The year marked significant steps towards globalization with maiden entries in new markets and new product areas, apart from firmly establishing in existing markets and areas.

#### Major Achievements during 2007-08

During the year BHEL secured several prestigious orders:

- Entry into new market New Caledonia Secured an order for 2x135 MW Circulating Fluidised Bed Combustion Boilers (CFBC) from Koniambo Nickel SAS an overseas Joint Venture of Extrata, Switzerland. This is the first ever overseas order for CFBC Boiler for utility application. This prestigious reference of BHEL is expected to open up new markets for this environment friendly product with a large growing demand.
- First ever order for Power Generating equipment from UAE – Order secured from Ras Al Khaimah Investment Authority (RAKIA), UAE for supply & supervision of 2x42MW (Fr6B) Gas Turbine Generator sets for their Al Ghail Power Plant to be installed in Ras Al Khaimah, one of the seven emirates of UAE. This ground breaking achievement in UAE market in Power Generation equipment is expected to pave way for more opportunities not only in UAE but in other countries of Middle East & North African region.
- Second consecutive order for Gas Turbine base power plant secured from Libya 300 MW Gas Turbine (2xV94.2) based power plant on EPC basis at Western Mountain Extension, Libya from General Electric Company of Libya (GECOL), Libya. This project is an extension of recently commissioned 600 MW Western Mountain Power Plant by BHEL, which is the highest capacity Gas Turbine based Power Plant installed by BHEL.
- First ever order for Steam Turbine & Generators from Ethiopia – Secured three orders for Tendaho Sugar Factory (Phase-1, 2x20MW & Phase-2, 2x40MW Steam Turbine & Generators) and Finchaa Sugar Factory (2x12 MW Steam Turbine

- & Generators) from Ethiopia for co-generation application. This is the largest overseas order for co-generation application secured by BHEL.
- Export order for Steam Turbine Generators & CFBC Boilers secured from Indonesia – 1x15MW Steam Turbine & Generators along with 120TPH CFBC Boiler Package received from PTIBR, Indonesia for their captive power & steam application.
- Export order for CFBC Boilers for Mine Mouth Power Plant in Indonesia – 2x126 TPH CFBC Boiler package for utility application.
- Maiden export orders for motors from UAE & Kuwait – First ever orders received from UAE & Kuwait for supply of Motors.
- Maiden order for Soot Blowers for New Zealand & UAE – First ever orders received for supply of Soot Blowers to Ras Al Khaimah, UAE & RCR Easteel Energy, New Zealand.
- First ever export order for Well Heads for Myanmar has been secured .
- First ever export order for transformers from Azerbaijan – This order for 2x240MVA, 330kV class; 2x75MVA & 1x63MVA, 110kV class transformers from Azerenrgi, Azerbaijan, is a World Bank funded project.
- Other notable export orders received include Hydrogen Recycle Gas Compressor from Iran, Wellheads from Oman and Reactors from PPC, Greece.
- Continued focus on After Sales Services led to orders for Spares & Services from Oman, Kazakhstan, Malaysia, Sri Lanka, Indonesia, Cyprus, Libya, Kenya, New Zealand, Thailand, Saudi Arabia, UAE, France, Jordan, Philippines & Iran.

#### **Execution of Major overseas orders:**

 Commissioning of three Gas Turbine generating units (126 MW ISO each) with two units at Mukhaizana & one unit at Qarn Alam Power Plants of Petroleum Development, Oman. Both projects have been executed by BHEL on EPC basis. With this, BHEL has now successfully commissioned



- seven power plants in Oman alone in last one decade in diverse segments viz. utility, oil & gas and industry. With this achievement, BHEL has so far contracted 26 large size Gas Turbine Generating sets of 100MW+ ratings to a number of countries including Oman, China, Bangladesh, Vietnam, Italy, Iraq, Libya & Sri Lanka a forte of only few manufacturers in the world in this size of gas turbines.
- Export of nearly 3300 MVA of Transformers/ Rectors to a host of countries including Greece, Egypt, Sudan, Afghanistan, Bangladesh & Ethiopia both for Substations & Power generating units. This is the largest ever export of transformers achieved by BHEL in a single year.
- Commissioning of five Compressor systems in Oman at Lekhwair, Yibal & Marmul sites for gas lifting & boosting applications. The 14.8 MW Motor driven Compressor supplied for Lekhwair is largest Compressor train ever supplied by BHEL. Similarly the 13 MW Yibal Compressors are equipped with the biggest pressurized type synchronous motors ever manufactured & supplied by BHEL. Successful running of these systems for varied applications in oil & gas sector establishes BHEL's versatility and will pave way for many more opportunities in this booming oil & gas sector.
- Supplied two Gas Turbine Generators (2x42 MW) to UAE in a record time of three months from the receipt of order. With this, BHEL has established its reference for Power Generating equipment in UAE, one of fastest growing market.



126 MW (ISO) GTG based Qarn Alam Power Plant in Oman - commissioned by BHEL on EPC basis during the year



## Capital Investment



Sh. Rahul Gandhi, M.P., at the foundation stone laying ceremony of BHEL's new plants at Jagdishpur

#### C. CAPITAL INVESTMENT

#### Capital investment for year 2007-08:

During the year capital investment of Rs. 726 Crore was made towards augmentation of manufacturing capacities and modernisation of the facilities in manufacturing units and at power project sites registering an increase of 100% as compared to the capital investment of Rs. 362 crore in 2006-07.

#### • Rebuilding of ageing facilities:

Focused attention was given on rebuilding and retrofitting of existing ageing facilities to enhance their life, accuracy, reliability and productivity through an additional expenditure of Rs. 56 Crore.

#### Augmentation of capacity to 10,000 MW per annum:

By virtue of implementation of investment schemes of 1st phase of capacity augmentation, BHEL has enhanced its manufacturing capacity to 10,000 MW per annum for power plant equipment in December 2007. BHEL is fully geared up to supply higher rating thermal sets (800/1000 MW) with super critical parameters.

#### Capital Investment planned during 11th Plan:

During 11th plan period, a capital investment of Rs.4200 Crore has been envisaged. BHEL has planned to enhance its manufacturing capacity to 15000 MW per annum by December 2009 to meet



A new CNC Hydro Block, set-up in Bhopal Plant, to further increase hydro equipment manufacturing capacity



Ultra modern blade shop set-up in Haridwar Plant

the power plant requirements of the Eleventh plan. Besides capacity augmentation of existing products in the areas of Thermal, Gas, Hydro and Nuclear, other major areas of investment include the facilities for higher rating Nuclear Sets up to 700 MW, 765 KV transformers & other associated distribution & transmission equipment and capacity augmentation of transformers from 20500 MVA to 45000 MVA.

#### **D. JOINT VENTURES**

The two Joint Venture Companies promoted by BHEL viz. "BHEL-GE Gas Turbine Services Ltd." (BGGTS) with GE, USA for repair & servicing of GE designed Gas Turbines and "Powerplant Performance Improvement Ltd." (PPIL) with Siemens AG, Germany for plant performance improvement of old fossil fuel power plants, have now completed ten full financial years of operation.

#### a) BGGTS

BGGTS achieved a sales turnover of Rs. 327 crore during the year 2007-08 with a profit after tax of Rs. 46 crore. Orders for Rs. 392 crore were booked by BGGTS during the year including export orders from overseas GE shops viz. GTS-Abu Dhabi, GE Basil don and GE-MEELSA. BGGTS successfully completed gas turbine servicing & supply of spares to various customers like RGPPL, ONGC-Uran, TNEB, RIL- Jamnagar, ONGC – Hazira, IOCL, PPCL, BPCL etc. BGGTS also completed export orders for repair of FR 6 and FR 7 gas turbine



shrouds for GE-MEELSA and replacement of damaged rotor for BPDB, Bangladesh. For the year 2007-08, BGGTS has declared a dividend of 600% thereby maintaining its consistent record of improved performance. BGGTS has also successfully completed surveillance audit for ISO 9001, ISO 14001 & OHSAS 18001 certification.

#### b) PPIL

PPIL has made further progress in settlement of outstanding issues and collection of withheld payments for pending contracts. Since, sufficient business to ensure viability of the company has not been forthcoming both the promoter partners have mutually agreed to gradually wind up the company.

#### c) New Joint Ventures Launched

1) During the year 2007-08 BHEL has also entered into a Joint Venture Agreement with NTPC for setting up of 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 JV Company can also take up manufacture and supply of equipments, for power plants and other infrastructure projects, which are not subject to any limitation or restriction under any ongoing collaboration agreement of promoter companies.



Former CMD, BHEL exchanging MoU documents with the then CMD, NTPC for setting-up a JV for EPC activities in India and abroad



BHEL signs MoU with TNEB for JV to set-up a Supercritical Thermal Power Project

The JV Company has subsequently been incorporated in April, 2008 and detailed business plans are being worked out.

- A MoU has been signed between BHEL and TNEB to set up a joint venture company to build, own and operate a 1600 MW (2X800 MW) Super Critical Thermal Power Plant at Udangudi, Tamilnadu.
- 3) A MoU has been signed between BHEL and Nuclear Power Corporation of India Ltd. to form a joint venture to carry out EPC activities for power plants (conventional island only) based on atomic energy both within the country and outside.



CMD, BHEL, Shri K. Ravi Kumar and CMD, NPCIL exchanging MoU documents to form a JV to carry out EPC activities for power plants based on atomic energy in India and abroad

#### E. R&D AND TECHNOLOGICAL ACHIEVEMENTS

BHEL's products and systems are highly technology intensive and R&D and technology development are of strategic importance to the company. During the year, BHEL spent Rs.464 crore on R&D efforts – nearly 83% higher than the previous year which is on top of 68% growth over 2005-06. A turnover of Rs. 2982 crore was achieved through products and systems developed in-house. BHEL also filed 175 patents and copyrights, enhancing the company's intellectual capital to 664 patents and copyrights filed, which are in productive use in the company's business.

Some significant developments carried out during the year are as follows:

- Reinforcing its commitment to conservation of natural resources, BHEL has developed a new variant of 500 MW Steam Turbine. This design improves efficiency and saves coal consumption by around 8200 Tonnes annually. This design is being commercialised in 11 sets of 500 MW being supplied and commissioned countrywide.
- Consistently offering tailor-made designs to suit customer needs, BHEL has developed a new Steam Turbine model for rating range of 30-45 MW for application in the Paper industry. The Turbine provides a large quantity of controlled extraction steam for the paper mill.
- For the benefit of its customers by way of developing more efficient products/technologies,



Integrated Gasification Combined Cycle Demonstration Plant at BHEL Tiruchirappalli



Centre of Excellence for Surface Engineering commissioned in Corporate R&D Division

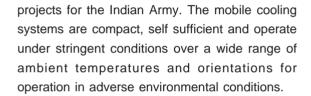
BHEL is establishing a Centre of Excellence for Intelligent Machines and Robotics (COE-IMAR) – the fifth in the series. The centre will focus on implementation of computer integrated manufacturing, advanced radio frequency identification technology for material identification and tracking and paperless manufacturing. Pilot projects are underway for integration of computer aided design, manufacturing, numerical controls and inspection. Consignment and vehicle tracking using global positioning system (GPS) and GSM technologies have also been taken up.

- In line with its developmental work in futuristic areas, BHEL realised the immense potential of Nanotechnology and initiated several programmes to accelerate development in this area. For the first time in the country, BHEL has commissioned a Gas-fired Spray Pyrolysis System for pilot-scale synthesis of tailor-made nano materials with a production capacity of 0.5-1 kg/hour. The system is specifically designed for different metal oxide nano materials. Areas of application include nano structured coatings, additives for improving wear resistance in metals, development of nano composites, nano porous membrane coatings etc.
- As its contribution to the armed forces, BHEL has designed, manufactured and supplied 15 nos.
   Cooling Systems for Travelling Wave Tube, an electronic device for use in one of BEL's strategic

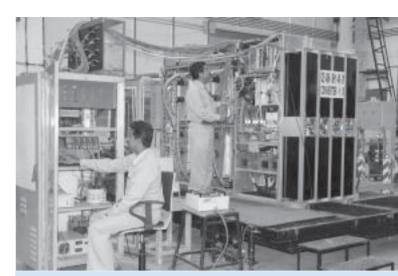




BHEL commissioned Gas-fired Spray Pyrolysis System for pilot-scale synthesis of tailor-made nano materials at CTI Bangalore



- As part of its customer-centric product upgradation process, BHEL has designed and manufactured, India's largest rating (7161 kW) Pressurised Squirrel Cage Induction Motor for HPCL Vizag. The motor offers enhanced safety features and is designed for driving Blower with very high Inertia and meeting stringent starting current limitation of 450%.
- Continually striving to improve the economies of solar PV systems, BHEL has developed its largest size 220-Watt PV Module. This will meet customer demand for larger wattage modules, especially for grid-connected applications, as it will reduce the number of modules required per system thereby improving reliability.
- BHEL has developed a new non-electrical UHF-PD (Ultra High Frequency-Partial Discharge) measurement technique for assessing the condition of Transformer Insulation. The method is important for High Voltage (800-1200 kV) transmission systems.
- Reinforcing its position as a total solution provider,
   BHEL has developed and successfully



Micro-processor based Drive Controls and Vehicle Controls for 3 Phase 6000 HP AC Locos for application in freight and passenger trains

commissioned a Maintenance Controller (an Integrated Asset Management and Decision Support System) at the Western Mountain Power Project, Libya. Based on PowerPac-G, a software jointly developed by BHEL and TCS, this is a system for complete power plant maintenance for Combined Cycle Power Plant application and takes care of all the maintenance needs of a power station

- As part of BHEL's efforts to provide modern and more efficient transportation solutions, BHEL has successfully developed, manufactured and tested for the first time, a Traction Motor for 350 HP Diesel Electric Multiple Unit (DEMU), against an export order of 20 numbers, to be supplied to Angolan Railways.
- Aimed at enhancing value for customers in the oil sector, BHEL has designed for the first time a higher rating 1430 kVA Brushless Alternator for oil rig application against an order from ONGC. The alternator will offer self start facility in rigs located in remote areas which was not possible in the existing 1215 kVA alternators.
- To augment its range of disc insulators for meeting customer requirements, BHEL has developed HVDC Disc Insulators of 320kN / 420kN rating for the first time in the country. For application in ± 800 KV HVDC transmission systems, BHEL will be the first manufacturer to develop and test these insulators in the world.

#### F. HUMAN RESOURCE MANAGEMENT

#### 1) Industrial Relations

Thrust on participative culture continued during the year and the Industrial Relations in various Units and Service Divisions of the Company remained harmonious and cordial.

## During the year the company and its employees contributed their award winning straits.

#### Awards won by BHEL, Units & employees

- Vishwakarma Rashtriya Puruskar 2006 (given by Ministry of Labour)
- Vishwakarma Rashtriya Puruskars are given to recognize outstanding contribution made by a worker or a group of workers in an organization through his/her/their suggestions to improve productivity. Eight employees of BHEL have won three awards out of 28 Vishwakarma Rashtriya Puruskars declared by Ministry of Labour.
- National Safety Awards 2006 (given by Ministry of Labour)
- National Safety Awards are given to recognize good safety performance on the part of Industrial understanding (covered under Factories Act, 1986) and to stimulate and maintain interest of both the management and the workers in accident prevention programmes. 3 number National Safety Awards (Two by EPD & one by EDN) have been won by BHEL units.

#### Energy Awards

HPEP, Hyderabad being Energy Efficient unit has won National Award for Excellence in Energy Management 2007. The award was given by CII on completion of the National Competition for Excellence in Energy Management held on 12-13 Sept. 2007 at Hyderabad.

#### 3) Human Resource Development

A total of 23,004 employees (including Engineer Trainees, Supervisory Trainees and Artisan Trainees etc.) were exposed to different training programmes amounting to 14.86 training man days per employee. As a part of our social commitment, over 4016 Act Apprentices and 726 customer

personnel were also trained at various units. Customer personnel trained belong to organizations such as PGCIL, ONGC, IOCL, MPEB, GAIL, GRASIM, NCTPS, IPCL, HINDALCO, Jindal Steel and Power, various Electricity Boards & Power Corporations and many more.

Over 3791 Technical / Management students underwent their vocational training at different units and divisions.

#### Other highlights are as follows:

- In continuation with previous year's initiative the width and depth of skills of Artisans were enhanced through extension of Multiskill and skill upgradation training to other units. Over 320 Artisans were trained in this. In a workshop held in July'07, skill proficiencies and scale for their measurement have been worked out. Skill templates have been developed for multi-skill and skill upgradation training.
- Competency-based training programmes on the basis of developmental needs chosen by our executives in E-Map throughout the organisation were organized to ensure need-based developmental input.
- Competency Mapping Pilot Project commenced in Haridwar this year with an external consultant – M/s Hewitt Associates, India. 75 executives underwent competency mapping. Feedback and Developmental Plans were discussed with the individuals on the basis of the results.
- In order to acculturise newly inducted employees and make them ready for performance in the minimum possible time, the Induction training module for all levels of inductees have been redesigned this year.
- As a module in ETs Induction Training programme, all ETs joining during the year have been exposed to Human Process Laboratory for their personal growth.
- A Handbook of "Job Specific Training" has been developed at Human Resource Development Institute (HRDI), Noida to help Reporting officers in giving Job Specific Training to executives and supervisors.



- HRDI obtained ISO 9001:2000 certification.
- Half-day workshops have been organized at various units for Reporting Officers of ETs, to familiarize them with the basic concepts and implementation of the system.
- Bhopal HRD Workshop was declared Best Establishment under Apprentice Act based on 79th AITT conducted in May 2007 – with 715 nos. appearing from BHEL Bhopal. Four apprentices from Bhopal unit won Silver medals at state level.
- 5 Act Apprentices from HRDC Trichy won Medals in the Regional Skill Competition. Participants from the Trades R&AC, Wireman and Elec. Mechanic stood first and those from Trades Turner and Welder trades were Runner-ups.
- HRDI took an initiative to host a programme on 'Synergising Management Development'. The programme was attended by the top management representatives from management training institutions. In addition to the executives of HRDI, nineteen senior officials from ten institution, participated in the first programme.
- A Memorandum of Understanding with Periyar Centenary Polytechnic College (PCPC), Vallam, Thanjavur, was taken up by HRDC Trichy, as a step towards furthering commitment to improve the Industry – Institution cooperation, for a period of two years with effect from 13.11.2007. This MoU covers various areas for mutual cooperation.

#### 4) Manpower strength

The manpower strength of the Company as on 31.03.2008 was 43636.

#### 5) Information regarding Presidential Directives

 Activities of the company for welfare and advancement of SCs and STs

The company has been following the Presidential Directives and guidelines issued by the Government of India from time to time regarding reservation for SCs and STs in letter and spirit. During the year, various Community Development activities focused on Socio-Economic development of SCs and STs have been carried out by BHEL in 56 adopted villages.

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

The representation of SC/ST/OBC employees in total manpower was 19%, 4.5% and 9.7% for SCs, STs and OBCs respectively as on 01.01.2008.

The Annual Statement in the revised prescribed format showing the representation of SCs, STs and OBCs as on 01.01.2008 and number of appointments made during the preceding calendar year, as furnished to the Government, is given at Annexure-A.

 We have a total of 494 Physically Challenged employees in BHEL. The group-wise manpower strength of Physically Challenged employees in the Company is given at Annexure-B.

#### G. RIGHT TO INFORMATION ACT, 2005

- BHEL is a frontrunner in implementing the Right to Information Act, 2005 in letter & spirit. A CPIO at the company level and 13 CPIOs for each of the administrative units within BHEL along with Appellate Authority is functioning as part of RTI.
- Proactive disclosures were made in line with Section 4(1) (b) of the Act through BHEL web site. Suitable guidelines have been placed on RTI web page on BHEL web site for convenience of the applicants, seeking information. Guidelines have also been issued to administrative units and the concerned senior official to ensure compliance to the mandatory requirement of the Act.
- 380 applications were received, seeking information during the year 2007-08. All applications and first appeals received in BHEL have been disposed off within specified time frame, in line with the provisions of the Act.
- Training programmes have been organized for better understanding of the provisions of the Act for the designated officers and other senior officials.

#### H. INTERNAL CONTROL SYSTEM

The company has sound system of internal control measures in major risk areas with a view to provide reasonable assurance regarding effectiveness and efficiency of company's operations, reliability of financial controls and compliance with applicable laws and



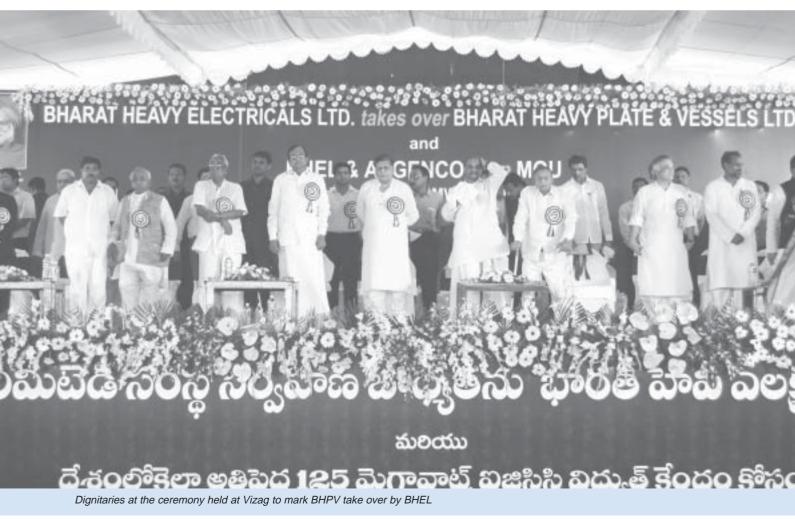
regulations. These measures are in the form of various codes, manuals and procedures issued by the management covering all critical and important activities viz., Budget, Purchase, Material, Stores, Works, Finance, Personnel etc. These codes, manuals and procedures are reviewed and updated from time to time and are subject to strict compliance, which are monitored by Internal Audit.

The company has full fledged Internal Audit Cells located at major manufacturing units and regional offices of the company which reviews checks and balances in the system, adequacy and effectiveness of Internal Control Systems through regular audits, system reviews and monitors compliance of various manuals and procedures. Functioning of Internal Audit and adequacy of Internal Control System are reviewed by Board Level Audit Committee which is supported by Unit Level Audit Committees.

#### I. MERGERS & ACQUISITIONS

BHEL has successfully completed acquisition of Bharat Heavy Plate & Vessels (BHPV), a Government of India owned PSU engaged in manufacturing of Industrial Boilers, process equipment & allied products and cryogenic equipment catering to the petrochemical, refinery & fertilizer segments. With this acquisition completed in May, 2008, BHEL plans to expand BHPV's offerings to Industrial Boilers for Captive power plants. BHPV, as a 100% owned subsidiary of BHEL, would be strengthened financially and would be better placed to successfully compete for securing orders in the process segment also. Further, BHEL plans to modernize & augment BHPV's manufacturing capabilities and is in the process of strengthening the management capabilities of BHPV.

Apart from the acquisition of BHPV, BHEL is also actively pursuing acquisition opportunities in Europe





and USA, offering opportunities to acquire niche technologies and market access, as well as opportunities to rapidly ramp up manufacturing capacities.

#### J. OPPORTUNITIES AND THREATS

#### World

As per the World Economic Outlook by IMF, global growth is projected to slow to 3.7% in 2008 and remain broadly unchanged in 2009. By contrast, growth in emerging and developing economies is expected to ease modestly but remain robust in both 2008 and 2009. They face the challenges of controlling inflation while being alert to downside risks from the slowdown in the advanced economies and the increased stress in the financial markets.

The World Energy Council in its report of November 2007 projects that to meet the energy demand of all households worldwide, energy supplies must double by 2050. While fossil fuels will continue to account for the largest proportion of primary energy requirements through the next four decades, effective management of greenhouse gases and addressing climate change are of utmost importance.

The International Energy Agency in its World Energy Outlook 2007 projects the world's primary energy needs to grow by 55% between 2005 and 2030. Developing countries, whose economies and populations are growing the fastest, contribute 74% of the increase in global primary energy use, with India and China accounting for 45% of the increase in demand.

However, continued growth in energy related emissions of carbon dioxide and increased reliance of consuming countries on imports of oil and gas would increase concerns about climate change and energy security. China's and India's growing participation in international trade heightens the importance of their contribution to the collective efforts to enhance global energy security and how these two countries respond to the rising threats to their energy security will also affect the rest of the world.

#### India

According to the revised estimates of national income released by the Central Statistical Organisation (CSO), the GDP growth for 2007-08 has been revised to 9%. The projected growth rate for 2008-09 has been

moderated by many agencies, both domestic and international on the backdrop of heightened uncertainty in global markets.

As per RBI, the Indian economy is expected to grow around 8% in 2008-09, barring domestic or external shocks. As per CMIE, the industrial growth could accelerate in 2008-09 led by growth in manufacturing, mining and electricity sectors. On the whole, the industrial rebound is expected to be well-spread across all the sectors and would be fuelled by growth in capital goods in the wake of large capital goods imports, investments and healthy order-book position.

As per the World Energy Outlook 2007, primary energy demand in India is expected to more than double and power generation capacity more than triple by 2030. Between now and 2030, the country needs to invest about \$ 1.25 trillion in energy infrastructure with three quarters in the power sector. Gross power generation capacity additions are expected to exceed 400 GW and attracting electricity investment in a timely manner will be crucial for sustaining economic growth.

#### **Power Sector**

The XI Plan envisages a capacity addition of 78,577 MW and during the XII plan, 82,000 MW addition is planned, which may end up at around 1,00,000 MW. This translates into average capacity additions of around 15,000 to 17,000 MW per annum during these two plan periods. As rapid economic expansion continues to drive up the country's energy needs, power generation accounts for much of the increase in primary energy demand, with most of the new generating capacity fuelled by coal.

The country will continue to rely on imported coal for reasons of quality in the steel sector and for economic reasons in the power sector for power plants located a long way from mines but close to ports.

Growing demand for large power capacity additions in the country would warrant that the Power Plant Equipment manufacturing industry should gear-up to the challenge and meet the requirements of the country.

Higher rating thermal sets with super critical parameters, Ultra High Voltage Transmission Systems, advanced class Gas Turbines and higher rating Nuclear Power Plants are planned to be introduced during the

XI Plan and beyond. Capacity creation in future would demand up-gradation to higher range equipment, faster capacity augmentation and shorter cycle times with better project execution cycles.

Ageing of power plants worldwide will improve the opportunities for renovation & modernisation and up-rating of the existing plants. The issue of Global Climatic Change is attracting the attention of everybody as it affects all parts of society. This will create the need to make energy supply more viable for the future and use the energy resources more efficiently. This is going to provide continued growth opportunities for the company as power equipment is the major business of BHEL.

#### **Industry Sector**

During 2007-08, the Indian economy continued to expand at a robust pace for the fifth consecutive year, although there was some moderation in the growth momentum during the course of the year. According to the revised estimates released by Central Statistical Organisation (CSO), the growth rate in Index of Industrial production (IIP) moderated to 8.1% in 2007-08 from 10.63% in 2006-07. The moderation in growth occurred mainly in manufacturing and mining sectors. The growth in the electricity sector improved to 6.27% during 2007-08 from 5.98% a year ago.

Notwithstanding the moderation, the growth performance was in tune with the high average real GDP growth of 8.8% per annum during the five year period 2003-04 to 2007-08.

As per CMIE, the industrial growth is expected to accelerate to 10% in 2008-09 on the back of strong pick-up in consumption demand as well as demand for capital goods.

#### K. POSITIONING FOR THE FUTURE

Sustained growth has been witnessed in the Indian economy in the last few years. Large capacity additions to the installed power generating base of the country are planned during the XI and XII Plans. Riding on this growth, BHEL plans to be a Rs.45,000 crore turnover company by 2011-12 driven by capacity and capability enhancement that will leverage the company's efforts in its core area of power, supported by industry, transportation, transmission, exports and spares & services businesses.

- expansion to 10,000 MW p.a. as of end Dec'07 and in the second phase, the company is enhancing this further to 15,000 MW p.a. which is expected to be completed by Dec'09. During the XI plan period, a capital investment of Rs. 4,200 Crore has been envisaged towards capacity augmentation of existing products along with introduction of higher rating nuclear sets, 765 kV transformers and other associated transmission and distribution equipment. Capacity augmentation of transformers is planned from 20,500 MVA p.a. to 45,000 MVA p.a.
- BHEL has tied up technology for higher rating thermal sets based on super critical technology. Though the focus is presently on coal-based projects in view of the volatility of gas prices, BHEL is geared up to introduce advanced class gas turbines for which orders have also been bagged against international competitive bidding especially for 9FA GE machines.
- BHEL's nuclear sets account for 80% of the country's installed nuclear generating capacity and the largest nuclear set manufactured by BHEL so far is of 540 MWe rating. The company is now gearing up for manufacture of higher rating Nuclear turbines & generators. An MoU has been signed with Nuclear Power Corporation to take up EPC activities for the nuclear power plant business.
- While Power business will continue to be the most important constituent of BHEL's portfolio in the coming years. The Industry sector is also expected to exhibit continued growth momentum. Railway transportation is expected to expand in a big way and initiatives like IGBT based propulsion system, manufacturing of metro coaches etc. are being put in place to gain from the emerging opportunities in this business segment. In the T&D segment, focus will be on introduction of products and systems for 765 kV transmission projects and development of 1200 kV transformers and circuit breakers.
- BHEL has established its footprints in 70 countries
  of the world and further stimulation in the growth
  of BHEL's international business will be achieved
  through consolidation in existing markets, widening
  the export base through expansion of its existing
  basket of products and services, and by entering



new markets, with the EPC business being the key driver of growth plans.

- Having supplied nearly 65% of India's total installed power generating capacity, Renovation & Modernisation will be a growth opportunity in Spares & Services business for the company. BHEL reinforces its commitment to providing prompt and efficient customer service through proximity of service centres spread across the country, aimed at keeping the power plants in good running condition and facilitating uninterrupted power supply.
- Associated with the growth agenda will be the strengthening of the engineering & technology character of the organization with enhanced focus on innovation and R&D. BHEL plans to increase R&D spend to at least Rs.900 crore by 2011-12.
- Towards enhancing and strengthening manpower, inductions of 18000 to 20000 people has been planned up to year 2012, out of which around 4000 persons have been recruited during 2007-08.
- As part of its Corporate Social responsibility (CSR), BHEL has formulated a CSR Policy comprising eight thrust areas. Accordingly, the company will enhance its responsibility towards socio-economic and community development programmes in various villages located near its manufacturing plants and projects sites spread across the country.



Director (HR), Shri Anil Sachdev presents Kidney Dialyser to patients at AIIMS

BHEL will continue with its commitment towards environment conservation by taking various Environment improvement projects like Tree plantation, Rain water harvesting, conservation of energy, water, fuel oil, coolant, lubricant besides installation of proper system for storage/ handling of chemical waste, using state of the art technologies.

#### L. RISKS AND CONCERNS

The fast pace of growth of the Indian economy in the past few years has sharply pushed up the energy needs, a growing share of which is to be imported. Higher prices of oil and gas are making coal more competitive as a fuel for base load generation. The outlook for coal use would depend largely on relative fuel prices, government policies on fuel diversification, climate change & air pollution and developments in clean coal technologies in power generation. Faster economic growth accelerates alleviation of energy poverty but results in higher energy imports, local pollution and CO<sub>2</sub> emissions.

As India continues to be one of the fastest growing economies of the world, the need for public-private partnership in the power sector has been fully recognized. Policies have been put in place in power and petroleum, and in a limited way even in coal sector, which encourage private sector participation.

In the value chain of setting up of power projects, commensurate addition to capacities is required by suppliers of Balance of Plant like coal and ash handling systems, water treatment plants, cooling water systems, air-conditioning & ventilation systems, cooling towers, construction equipment, civil works & services, etc.

When every project is engineered, tendered and ordered afresh, the associated business risks prevent aggressive investment decisions by vendors, leading to further contraction of capacities. As advised in the Integrated Energy policy against indiscriminate imports, committing capacity additions over long term may help other players in the supply chain in taking prudent investment decisions to increase the capacity of the complete chain.

In most of the business areas in which BHEL operates, the growth prospects are also dependent on policy decisions at the national level and prevailing business trends.



### ANNEXURE - A

Annual Statement showing the Representation of SCs, STs and OBCs as on 01.01.2008 and No. of appointments made during the preceding calendar year 2007

	Representation of			No. of appointments made during the calendar year										
		s/STs/C n 01.0			Ву Д	irect F	Recruit	ment	Ву Р	romoti	on**	_	Deputa sorpti	
Groups	Total No. of Employees	SCs	STs	OBCs	Total	SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs
Group A	11285	1523	519	978	564	77	43	161	0	0	0	0	0	0
Group B	11690	1799	306	331	0	0	0	0	0	0	0	0	0	0
Group C	17123	4037	981	2337	1665	315	141	556	0	0	0	0	0	0
Group D (Exc. Sanitary Workers)	1773	444	96	418	0	0	0	0	0	0	0	0	0	0
Group D (Sanitary Workers)	216	203	1	3	0	0	0	0	0	0	0	0	0	0
Total	42087	8006	1903	4067	2229	392	184	717	0	0	0	0	0	0

<sup>\*\*</sup> In BHEL there is no appointment at induction level by promotion

### **ANNEXURE - B**

Groupwise Status of Physically Challenged in the Total Manpower in BHEL as on 1st January, 2008

Group	No. of Employees	No. of Physically Challenged
Group A	11285	86
Group B	11690	121
Group C	17123	261
Group D	1989	26
Total	42087	494





# Brief Resume of Directors Proposed for Appointment and Re-appointment as per Listing Agreement [(Clause 49 IV (G) (i)]

#### PART-TIME OFFICIAL DIRECTOR

#### SHRI B.S. MEENA

Shri B.S. Meena, aged 57 years, was inducted as a Part-time Official Director on the Board of BHEL on 25th January, 2008. He is an IAS Officer of the 1975 batch from Maharashtra Cadre. He is a Graduate in Arts and also holds a Post Graduate Degree in History. Presently he is Additional Secretary and Financial Adviser, Ministry of Steel. He has held important positions at senior levels in the Central Government for nearly 31 years.

Shri B.S.Meena is also holding Directorship on the Boards of the following Companies :

- (i) Steel Authority of India Ltd., New Delhi.
- (ii) Rashtriya Ispat Nigam Ltd., Visakhapatnam.
- (iii) National Mineral Development Corporation, Hyderabad.
- (iv) Kudremukh Iron Ore Co. Ltd., Bangalore.
- (v) MECON Ltd., Ranchi.
- (vi) HMT Ltd., New Delhi.

Shri B.S.Meena does not hold any shares in the Company.

#### PART-TIME NON OFFICIAL DIRECTOR

#### SHRI ASHOK K AGGARWAL

**Shri Ashok K. Aggarwal**, aged 57 years, is an Industrialist.

A graduate in Arts with a degree in Law, post graduate diploma in personnel management and industrial relations and a diploma in labour laws.

He has vast and rich experience of 26 years of working at Senior Management and Top Management positions both in Public/Private Sectors including multinationals. He is a member of the CII, FICCI, PHDCCI, HRD Network & NMA. He has been associated with different Management Institutes in developing Educational Programmes and Educational Curriculum for Masters Courses.

Presently, he is Managing Director of Gopal Group and director on the Boards of ASDA Foods Pvt. Ltd., Gopal Corporation Ltd, Gopal Infrastructure Pvt. Ltd., Gopal Group Foods & Tobacco Pvt. Ltd., GG Marketing Pvt. Ltd., Gopal Retail Pvt. Ltd., Therapeutic India Pvt. Ltd. and partner in Flakesn-Flavourz and Gopal Magic Moments.

He is not holding Membership of the Committees of Board of any other company.

Shri Ashok K. Aggarwal does not hold any shares of BHEL.

#### SHRI MANISH GUPTA

**Shri Manish Gupta**, aged 66 years, is a retired Civil Servant (IAS).

A Certificate holder in Field Engineering (Civil, Mechanical & Electrical) from College of Military Engineering, CME, Pune, he also holds a Post Graduate Certificate in Business Management from Calcutta University.

During his career, Mr. Gupta has presided over myriad responsibilities under the State and Central Governments in various positions. As Chief Secretary in the Government of West Bengal, he was the head of several critical Task Forces and Committees; notably as the Chairman of the Committee on Public Enterprises Restructuring, High Power Committee on Industry and Committee on Industry Urban Land Use. Apart from holding the office of Home Secretary & Principal Secretary in the Home Department and being Director of Calcutta Urban Transport Project, he was also the Principal of the Higher Education Department where he pioneered the setting up of privately funded engineering colleges.

In 2001, Microsoft, USA organized a Government World Leaders Conference in Seattle, USA in which he was formally selected to participate.

Presently, Shri Manish Gupta is a director in Tata Metaliks Ltd., Texmaco Ltd. and Calcom Cement India Ltd. He is a member of SPS Synergy Foundation and the Aeronautical Society of India.

He is the Chairman of the Shareholders' Grievance Committee of Tata Metaliks Ltd. and member of Audit Committee of TEXMACO Ltd., and also member of Remuneration Committee of Calcom Cement India Ltd.

Shri Manish Gupta does not hold any shares of BHEL.

#### SHRI SHEKHAR DATTA

**Shri Shekhar Datta**, aged 70 years is a Graduate in Mechanical Engineering from London and is F.I.M.A.

Shri Datta has held directorships in reputed companies including Greaves Cotton Limited, Industrial Development Bank of India Ltd, Business Consultant to a number of Indian and overseas companies and former member of International Business Advisory Council of UNIDO.

Shri Datta has been President of Confederation of Indian Industry (CII), Bombay Chamber of Commerce & Industry and Indo-Italian Chamber of Commerce & Industry.

He has been honoured with the citation of 'Commendatore' in the Order for Merit of the Italian Republic, by the President of Italy; as 'Companion' of the Institution of Mechanical Engineers, U.K. and awarded 'Winner' of the Indo-British Trophy conferred by Her Majesty Queen Elizabeth II.

Presently, Shri Shekhar Datta is a Director on the Board of Wockhardt Ltd, and Vesuvius India Ltd.

He is member of Audit Committee of Wockhardt Ltd. and Vesuvius India Ltd, and also member of Share Transfer and Investor Grievance Committee of Vesuvius India Ltd.

Shri Shekhar Datta does not hold any shares of BHEL.

#### SHRI S. RAVI

**Shri S. Ravi**, aged 49 years is a Fellow Member of the Institute of Chartered Accountants of India and holds a Masters Degree in Commerce.

He held a number of positions on the Board of Banks, Financial Institutions, Asset Management Company, Company involved in Merchant Banking and Company operating as a primary dealer.

He has a rich experience in Banking Sector which includes tenure as director of UCO Bank. During the course of his practice as Chartered Accountant, he is specialized in field of Accounting & Auditing, Financial and Management Consulting, Business Valuations and Brand Valuation, Mergers and Acquisitions, Rehabilitation, Restructuring and Turnaround Strategies, Business Advisory Services, Monitoring of Financially assisted companies on behalf of FIs and Banks, Bank Audits.

As Shareholder's Director of Dena Bank during 2000-02, he was member in the Audit Committee, Asset-liability and Risk Management Committee and Board's Committee for monitoring NPA's. He was also Chairman of Board's Financial Review



Committee. Presently he is a member on the Board of Corporation Bank, Technical Expert's Committee of Punjab & Sind Bank and Working Group formed by Reserve Bank of India for preparation of the Draft Government Securities Regulations within the framework of the Government Securities Bill, 2004.

Shri S. Ravi is a member of various professional, social & cultural institutions viz..

- Finance and Review Committee of Voluntary Health Association of India (VHAI)
- Review Committee of UP VHAI
- Indian Federation of United Nations India (IFUNA), etc.

At present Shri S. Ravi is a Chairman on the Board of IFCI Ltd., LIC Housing Finance Ltd., IDBI Homefinance Ltd., and director on the Board of M/S Ravi Rajan & Co. Pvt. Ltd., S. Ravi Financial

Management Services Pvt. Ltd., Corporation Bank, IDBI Capital Markets Services Ltd., Batiliboi Ltd, Mahindra Ugine Steel Co. Ltd., Gujarat Pipavav Port Ltd., Kudremukh Iron Ore Co. Ltd., Hindustan Aeronautics Ltd., UTI Trustee Company Pvt Ltd., Inter-connected Stock Exchange of India Ltd. and Managing Partner in M/s Ravi Rajan & Co., Chartered Accountants.

He is a Chairman of Audit Committee of LIC Housing Finance Ltd., IDBI Homefinance Ltd. and IFCI Ltd., and member of Audit Committee of Corporation Bank and IDBI Capital Markets Services Ltd. He is also a Chairman of Shareholders' Grievance Committee of IFCI Ltd. and member of Shareholders' Grievance Committee of Mahindra Ugine Steel Co. Ltd., and member of Investment Committee of SME Growth Fund of SIDBI Venture capital Ltd.

Shri S. Ravi does not hold any shares of BHEL.

#### ANNEXURE - 3 TO THE DIRECTORS' REPORT

### Corporate Governance

#### 1. Our Philosophy on Corporate Governance

BHEL endeavours to transcend much beyond the basic requirements of Corporate Governance focusing consistently towards value propositions for its stakeholders including shareholders, customers, employees, suppliers and the society at large. The Company has developed a framework for ensuring transparency, disclosure and fairness to all, especially minority shareholders.

The Vision of BHEL envisages being a World Class Engineering Enterprise committed to enhancing Stakeholders Value and its Mission is to be "An Indian Multinational Engineering Enterprise providing total business solutions through quality products, systems and services in the fields of energy, industry, transportation, infrastructure and other potential areas."

The Corporate Governance Policy of BHEL rests upon the four pillars of Transparency, Full Disclosure, Independent Monitoring and Fairness to all. BHEL believes that proper Corporate Governance facilitates effective realisation of goals simultaneously ensuring a high level of business ethics. BHEL's Corporate Governance policy is based on the following principles:

- i) Independence and versatility of the Board
- ii) Integrity and ethical behaviour of all personnel
- iii) Recognition of obligations towards all stakeholders– shareholders, customers, employees, suppliers and the society
- iv) High degree of disclosure and transparency levels
- v) Total compliance with laws in all areas in which the company operates
- vi) Achievement of above goals with compassion for people and environment

The company believes that conducting business in a manner that complies with the Corporate Governance procedures and Code of Conduct, exemplifies each of our core values and positions us to deliver long-term returns to our shareholders, favourable outcomes to our

customers, attractive opportunities to our employees and making the suppliers our partners in progress & enriching the society.

#### 2. Board of Directors

i. Composition & category of Directors

Pursuant to Section 617 of the Companies Act, 1956, BHEL is a 'Government Company'. Presently 67.72% of the total paid-up share capital of the Company is held by the President of India.

The Board of Directors has appropriate mix of executives represented by Functional Directors and Non-executive Directors represented by Government Nominees and Independent Directors to maintain the independence of the Board and to separate the Board functions of management and control. The Chairman is an executive director. Therefore, Independent Directors comprise half of the strength of the Board.

The composition of the Board of Directors is as follows:

Chairman & Managing Director	1
Whole-time Executive (Functional) Directors	5
Part-time Official Directors	
(Government Nominees) representing the	
Ministry of Heavy Industries & Public	
Enterprises, Government of India	2
Part-time Non-official (Independent) Directors	8
Total	16

As on 31.03.2008, in addition to the vacancy of Chairman and Managing Director, two casual vacancies of Independent Directors existed on the Board of Directors of the Company. Government of India has entrusted additional charge of the post of Chairman and Managing Director to Shri K Ravi Kumar, Director (Power)/BHEL in addition to his existing duties for a period of six months w.e.f. 1st March, 2008 or until further orders, whichever is earlier. The matter of filling up of vacancies is under process at the end of Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, Government of India.



## ii. Attendance of each Director at the Board meetings during 2007-08 and the last AGM

	0		
Director's Name	No. of Bo	pard Meetings	Last AGM (held on
S/Shri	Held	Attended	17.09.2007)
K. Ravi Kumar Chairman & Managing Director and Director (Power) (From 1st March, 2008)	8	8	Yes
Ashok K. Puri Chairman & Managing Director (Upto 29.02.2008)	7	7	Yes
S.K.Jain Director (HR) (Upto 31.08.2007)	4	4	_
A.K.Mathur Director ( IS & P) (Upto 31.08.2007)	4	3	_
C.S.Verma Director (Finance)	8	8	Yes
Anil Sachdev Director (HR) (From 01.09.2007)	4	3	Yes
B.P Rao Director (IS & P) (From 01.09.2007)	4	4	Yes
C. P. Singh Director (E,R& D)	8	7	Yes
Dr. Surajit Mitra Part-time Official Director	8	7	_
N. Gokulram Part-time Official Director (Upto 29.10.2007)	4	2	Yes
R.S. Sirohi* Part-time Official Director (From 29.10.2007 upto 28.12.2007)	1	1	_
B.S. Meena* Part-time Official Director (From 25.01.2008)	2	2	_
Sanjay M. Dadlika Part-time Non Official (Independent) Director	8	8	Yes
Ashok K. Aggarwal Part-time Non Official (Independent) Director	8	7	_
Manish Gupta Part-time Non Official (Independent) Director	8	5	Yes
Shekhar Datta Part-time Non Official (Independent) Director	8	6	Yes
Madhukar Part-time Non Official (Independent) Director	8	8	Yes
S. Ravi* Part-time Non Official (Independent) Director (From 29.11.2007)	3	3	_
Note: (*) denotes the respective person is not a Director of B	PHEL on an last ACM	Joto	

Note: (\*) denotes the respective person is not a Director of BHEL as on last AGM date



## iii. Number of other Boards or Board Committees in which Director of BHEL is a member or Chairman as on 31/03/2008

Director's Name S/Shri	Details of Directorships in other Companies	Details of Committee Memberships and Committee Chairmanship
Dr. Surajit Mitra Part-time Official Director	<ol> <li>Bharat Bhari Udyog Nigam Ltd.</li> <li>Cement Corporation of India Limited.</li> <li>HMT Machine Tools Ltd.</li> <li>HMT International Ltd.</li> <li>HMT Ltd.</li> <li>Engineering Projects (I) Ltd.</li> </ol>	-NIL-
B. S. Meena Part-time Official Director	<ol> <li>Steel Authority of India Ltd.</li> <li>Rashtriya Ispat Nigam Ltd.</li> <li>National Mineral Development Corporation Ltd.</li> <li>Kudremukh Iron Ore Co.Ltd.</li> <li>MECON Ltd.</li> <li>HMT Ltd</li> </ol>	-NIL-
Sanjay Madanlal Dadlika, Part-time Non-Official, Director	1. Aditya Realtor Pvt. Ltd	-NIL-
Ashok K Aggarwal Part-time Non-Official Director	<ol> <li>ASDA Foods Pvt. Ltd</li> <li>Gopal Corporation Ltd.</li> <li>Gopal Infrastructure Pvt. Ltd.</li> <li>Gopal Group Foods &amp; Tobacco Pvt. Ltd.</li> <li>GG Marketing Pvt. Ltd.</li> <li>Gopal Retail Pvt. Ltd.</li> <li>Therapeutic India Pvt. Ltd.</li> </ol>	-NIL-
Shekhar Datta Part-time Non-Official Director	<ol> <li>Bombay Stock Exchange Ltd. (Chairman)</li> <li>Vesuvius India Limited</li> <li>Wockhardt Limited.</li> </ol>	Audit Committee  1. Bombay Stock Exchange Ltd. (Member)  2. Wockhardt Limited (Member)  3. Vesuvius India Ltd. (Member)
		Share Transfer and Investor Grievance Committee  1. Vesuvius India Ltd. (Member)
		HR & Remuneration Committee  1. Bombay Stock Exchange Ltd. (Member)
		Strategy & Business Development Committee  1. Bombay Stock Exchange Ltd. (Chairman)



Director's Name	Details of Directorships in other Companies	Details of Committee Memberships and Committee Chairmanship
		Defaulters Committee  1. Bombay Stock Exchange Ltd. (Member)
		Listing Committee  1. Bombay Stock Exchange Ltd. (Member)
Manish Gupta Part-time Non-Official Director	Tata Metaliks Ltd.     Texmaco Ltd.	Shareholders' Grievance Committee  1. Tata Metaliks Ltd (Chairman)
Madhukar Part-time Non-Official Director	1. Ajanta Pharma Ltd.	-NIL-
S. Ravi Part-time Non-Official Director	<ol> <li>IFCI Ltd.</li> <li>Corporation Bank</li> <li>IDBI Capital Markets Services Ltd.</li> <li>Batiliboi Ltd.</li> <li>Mahindra Ugine Steel Co.Ltd.</li> <li>Gujarat Pipavav Port Ltd.</li> <li>LIC Housing Finance Ltd.</li> <li>IDBI Home finance Ltd.</li> <li>Hindustan Aeronautics Ltd.</li> <li>UTI Trustee Company Pvt. Ltd.</li> </ol>	Audit Committee  1. IFCI Ltd. (Member)  2. Corporation Bank (Member)  3. IDBI Capital Markets Services Ltd. (Member)  4. LIC Housing Finance Ltd. (Chairman)  5. IDBI Home finance Ltd. (Chairman)  Shareholders' Grievance Committee  1. IFCI Ltd. (Member)  2. Mahindra Ugine Steel Co. Ltd. (Member)

No Director of the company is a member in more than ten (10) committees or is a Chairman of more than five (5) committees across all companies in which he is a Director.

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

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

The members of the Board have access to all information of the Company and are free to recommend inclusion of any matter in agenda for discussion. In case of need, the senior management is invited to attend

the Board Meetings to provide additional inputs relating to the items being discussed and / or giving 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 3rd , 2007	(ii)	April 30th ,2007
(iii)	May 25th, 2007	(iv)	July 30th, 2007
(v)	October 29th, 2007	(vi)	January 7th,2008
(vii)	January 25th, 2008	(viii)	March 7th, 2008

The maximum time gap between any two meetings was not more than three calendar months.

#### 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 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 Board has established various committees such as the Audit Committee, Shareholders / Investors Grievance Committee, Share Transfer Committee, Remuneration Committee, Project Review Committee, Merger & Acquisition Committee and HR Policy Committee.

In terms of Clause 49 of the Listing Agreement, the Audit Committee, Shareholders / Investors Grievance Committee and the Remuneration Committee are chaired by an Independent Director and the said committees' functions are within the defined terms of reference. The minutes of committee meetings are circulated and discussed in the Board meetings.

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

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

- 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.
- The information on recruitment and remuneration of senior officers just below the Board level.

- Details of any joint venture or R&D project or technical collaboration agreement requiring approval of Board of Directors.
- Significant labour problems and their proposed solutions. Any significant development in Human Resources / Industrial Relations front like signing of wage agreement, implementation of Voluntary Retirement Scheme etc.
- Sale of material, nature of investments, subsidiaries, assets, which is not in normal course of business.
- Action Taken Report on all pending matters.
- 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.
- Short term Investment of surplus funds.
- Any contract(s) in which Director(s) are deemed to be interested.
- Status of shareholder's grievances on quarterly basis.
- Information / status in respect of Power & Industry Sectors and International Operations division on quarterly basis.
- Significant Capital Investment proposals.
- Changes in significant accounting policies and practices and reasons for the same.
- Detailed presentation on performance of various units / functions.
- Any other information required to be presented to the Board either for information or approval.

#### viii. Selection of New Directors

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



and also nominates Part-time Non-official Directors (Independent Directors) on the Board of BHEL.

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

#### ix. Membership term & Retirement policy

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

Two Part-time Official Directors i.e. Additional Secretary & Financial Advisor, Ministry of Steel and Additional Secretary of Department of Heavy Industry, the Ministry of Heavy Industries & Public Enterprises are nominated by the Government of India on the Board of BHEL. They continue to be on the Board of BHEL at the discretion of 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. All such appointees are liable to retire by rotation in terms of the provisions of the Articles of Association of BHEL.

#### 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' has been laid down for all Board Members and Senior Management personnel.

The Code encompasses:

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

A copy of the said Code has been placed on the company's website 'www.bhel.com'. Additional suggestions / ideas to improve upon the said Code are gladly invited.

#### xi . CEO / CFO certification

CEO / CFO certification pursuant to clause 49(V) of the Listing Agreement is enclosed.

#### 3. Audit Committee

#### i. Brief description of terms of reference:

The terms of reference of the Audit Committee specified by the Board are in conformity with the requirements of revised Clause 49 of the Listing Agreement as well as Section 292A of the Companies Act, 1956. They are as follows:

- 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.
- Recommending to the Board, the appointment, re-appointment and, if required, the replacement or removal of the statutory auditor and the fixation of audit fees.
- Approval of payment to statutory auditors for any other services rendered by the statutory auditors.
- Reviewing, with the management, the annual financial statements before submission to the Board for approval, with particular reference to:
  - a. Matters required to be included in the Director's Responsibility Statement to be included in the Board's report in terms of clause (2AA) of section 217 of the Companies Act, 1956
  - b. Changes, if any, in accounting policies and practices and reasons for the same.
  - Major accounting entries involving estimates based on the exercise of judgment by management.
  - d. Significant adjustments made in the financial statements arising out of audit findings.
  - e. Compliance with listing and other legal requirements relating to financial statements.
  - f. Disclosure of any related party transactions

- g. Qualifications in the draft audit report.
- Reviewing, with the management, the quarterly financial statements before submission to the Board for approval
- (i) Reviewing, with the management, performance of statutory and internal auditors, adequacy of the internal control systems.
  - (ii) To ensure compliance of internal control systems.
- 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.
- 8. Discussion with internal auditors any significant findings and follow up there on.
- 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.
- Discussion with Statutory Auditors/Internal Auditors periodically about internal control systems.
  - (ii) 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 including observations of the Auditors.
- 11. 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.
- 12. To review the functioning of the Whistle Blower Mechanism, in case the same is existing.
- 13. 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.

14. Carrying out any other function as is mentioned in the terms of reference of the Audit Committee.

Explanation (i): The term "related party transactions" shall have the same meaning as contained in the Accounting Standard 18, Related Party Transactions, issued by The Institute of Chartered Accountants of India.

Explanation (ii): If the company has set up an audit committee pursuant to provision of the Companies Act, the said audit committee shall have such additional functions/ features as is contained in this clause.

## ii. Composition of Committee, name of members and Chairman:

The Audit Committee comprises of a majority of Independent directors as mandated by the Listing Agreement. The member directors comprise of professionals of repute and standing with background in commerce, finance, administration and governance, both national and international.

The Audit Committee was last reconstituted on 25th January, 2008 and presently comprises of the following directors:

Name of the Director S/Shri	Position	No. of Meetings held during his tenure	No. of Meetings attended
Shekhar Datta Part-time Non-official (Independent) Director	Chairman	5	5
N. Gokulram Part-time official Director (upto 29.10.2007)	Member	3	2
Manish Gupta Part-time Non-official (Independent) Director	Member	5	5
R.S. Sirohi Part-time official Director (From 29.10.2007 upto 28.12.2007)	Member	1	1
B.S. Meena Part-time official Director (From 25.01.2008)	Member	NIL	NIL



The Company Secretary acts as the Secretary to the Committee. The Director (Finance), Head of Corporate Internal Audit and a representative of Statutory Auditor, attend the meetings as invitees.

## iii. Meetings & attendance of Audit Committee during 2007-08

The Audit Committee met five times on the 2nd April, 2007, 25th May 2007, 30th July, 2007, 24th December, 2007 and 25th January, 2008 in the previous year 2007-08. The maximum time gap between any two meetings was not more than four months.

#### 4. Remuneration Committee

#### i. Remuneration policy

BHEL being a Public Sector Undertaking, the appointment and fixation of remuneration of CMD / Functional Directors are decided by the Govt. of India; whereas the part-time nonexecutive directors are not paid any remuneration except sitting fees for attending meetings of the Board or Committee thereof. Moreover, the terms of appointment of CMD / Directors, as approved by the President of India, provide for fixation of certain perks and benefits like leased accommodation, payment of HRA, furnished accommodation, productivity linked incentive, etc., as per rules of BHEL. As such, the Board had constituted a Remuneration Committee in its meeting held on 7th December 2005 with the following terms of reference in line with Clause 49 of the Listing Agreement.

#### ii. Terms of reference

- a) Oversight of the company's policy on specific remuneration packages perquisites for Whole-time Directors including pension rights and any compensation payment, which are not fixed by the President of India.
- Approve certain perquisites for whole-time directors which are within the powers of Board. Review of the elements of

- remuneration package of individual directors summarized under major groups, such as incentives / benefits, bonus, stock options, pension etc.
- c) Finalization of policies on perks and benefits and other related matters which are not fixed by the President of India but within the powers of Board.
- d) Approval of fixed component and performance linked incentives based on the performance criteria.
- e) Finalization of the criteria of making payments to Non Executive Directors.
- f) Recommendation of fees / compensation / stock options, if any, to be paid / granted, to non-executive directors, including independent directors, to the Board of Directors / Shareholders.
- g) Carrying out any other function related to the terms of reference of the Remuneration Committee.

## iii. Composition, names of members and Chairman

The details of names of members & Chairman of the Remuneration Committee are as under:

Name of the Director S/ Shri	Position
Ashok K. Aggarwal Part-time Non-official (Independent) Director	Chairman
Director (HR)	Member
Director (Fin.)	Member

The Company Secretary of the Company acts as the Secretary to the Committee.

#### iv Attendance during the year

No meeting of Remuneration Committee took place during the year.



### v. Details of remuneration of functional Directors during the year 2007-08 are given below :

(in Rupees)

SI. No	Name of the Director . S/Shri	Salary	Benefits	Arrears, if any	Performance Linked Incentives	Total	Service Contract/ Notice Period Severance Fee
1.	<b>Ashok K. Puri</b> (Upto 29.02.2008)	1978563	760225	0	98529	2837317	Retired on 29.02.2008 on attaining the age of Superannuation
2.	<b>K. Ravi Kumar</b> (From 01.03.2008)	842849	994045	0	98529	1935423	Liable to retire by Rotation
3.	<b>S.K. Jain</b> (Upto 31.08.2007)	1270736	489931	0	98529	1859196	Retired on 31.08.2007 on attaining the age of Superannuation
4.	<b>A.K. Mathur</b> (Upto 31.08.2007)	1410709	471418	0	98529	1980656	Retired on 31.08.2007 on attaining the age of Superannuation
5.	C.P. Singh	803040	637695	0	98529	1539264	Liable to retire by Rotation
6.	C.S. Verma	730994	698708	0	98529	1528231	-do-
7.	Anil Sachdev (From 01.09.2007)	482321	503664	0	82606	1068591	-do-
8.	<b>B.P. Rao</b> (From 01.09.2007)	474047	531533	0	82606	1088186	-do-

#### vi. Details of payments made to Non- Executive Directors during the year 2007-08 are given below:

(in Rupees)

Name of the Non-Executive Directors	Sitting Board Meeting	G Fees  Committee Meeting	Total
S/Shri			
Sanjay M. Dadlika	80,000/-	90,000/-	1,70,000/-
Ashok K. Aggarwal	70,000/-	_	70,000/-
Manish Gupta	50,000/-	50,000/-	1,00,000/-
Shekhar Datta	60,000/-	60,000/-	1,20,000/-
Madhukar	80,000/-	90,000/-	1,70,000/-
S. Ravi	30,000/-	_	30,000/-

Independent Directors are entitled for sitting fee @ Rs.10,000/- per meeting of Board or Committee thereof.



#### vii. Equity Shares held by Directors

Except as stated hereunder, none of the Directors, hold any Equity Shares in BHEL (as on 31st March 2008):

Name of the Director S/Shri	No. of shares held
Dr. Surajit Mitra (As a Nominee of President of India)	200
C. P. Singh	400
B. P. Rao	400
Sanjay M. Dadlika	20

The Company has not issued any stock options during the year 2007-08.

#### Shareholder's Committees

#### **5.1 Share Transfer Committee**

The Board constituted a Share Transfer Committee long ago, which comprises the Chairman & Managing Director, Director (Power) and Director (Finance) of the Company.

The Share Transfer Committee considers and approves all share-related issues, transfer / transmission of shares, issue of duplicate share certificate etc., in physical mode besides taking note of beneficiary position under Demat mode.

#### Meetings during 2007-08

The Share Transfer Committee met 33 times during the year. The minutes of the Share Transfer Committee meetings are periodically placed before the Board of Directors.

#### 5.2 Shareholders / Investors' Grievance Committee

The SIGC Committee has been set up specifically to look into matters related to redressal of shareholders and investors complaints like transfer of shares, non-receipt of Balance Sheet, dividend and any other relevant grievance that the shareholder may have.

The Committee comprises of the following directors:

Name of the Director S/ Shri	Position	No. of Meetings held during his tenure	No. of Meetings attended
Shri Madhukar Part-time Non-official (Independent) Director	Chairman	4	4
Shri Sanjay M. Dadlika Part-time Non-official (Independent) Director	Member	4	4
Shri Ashok K. Aggarwal Part-time Non-official (Independent) Director	Member	4	_
Director (HR)	Member	4	2
Director (Finance)	Member	4	4

Shri N.K. Sinha, Company Secretary is the Compliance Officer in terms of Clause 47 of the Listing Agreement with the Stock Exchanges.



#### Meetings during 2007-08

The Committee met four times on 5<sup>th</sup> July, 2007, 24th August, 2007,10th October, 2007 and 24th January, 2008 during the year under review. The detail of the attendance of each member is given in the above table.

#### Number of shareholders' complaints received so far

As reported by Karvy Computershare Private Limited (RTA) to SEBI; 577 complaints were received from shareholders during the year under review and all of which were redressed up to March 31, 2008. No complaint was pending at the end of the period under report.

#### 6. HR Committee

The Board constituted 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.

#### Composition, names of Members and Chairman

The details of names of Members & Chairman of the HR Committee are as under:

Name of the Director S/Shri	Position
Shri Shekhar Datta	Chairman
Part-time Non-official	
(Independent) Director	
Dr. Surajit Mitra	
Part-time Official Director	Member
Director (HR)	Member
Director (E,R&D)	Member

The Company Secretary of the Company acts as the Secretary to the Committee.

#### **Meetings and Attendance**

No meeting of HR Committee took place during the year.

#### 7. Committee on Merger & Acquisitions

The Board constituted Committee on Mergers & Acquisitions on 25th January, 2007 specifically to look into the following matters:

- a. To examine the feasibility of the proposals relating to mergers, acquisitions and takeover of entities in terms of powers granted by Government of India to Navratna PSUs and make necessary recommendations to the Board.
- b. To examine the synergy and strategic fit between BHEL and the M&A opportunity and decide on recommendations at various stages of Due Diligence.
- c. To take a view on the valuation of the target, bidding strategies, Term sheets, mode of financing and finalise recommendations on crucial issues pertaining to definitive documents like Share Holders' and Share Purchase Agreements etc.
- d. To provide guidance on post M&A issues of management restructuring, relationship with parent company and other related issues.



#### Composition, names of Members and Chairman

The detail of names of Members & Chairman of the Merger & Acquisitions Committee are as under:

Name of the Director S/ Shri	Position	No. of Meetings held during his tenure	No. of Meetings attended
<b>Dr. Surajit Mitra</b> Additional Secretary/Dept. of Heavy Industry Part-time official Director	Chairman	1	1
Shri Shekhar Datta Part-time Non-official (Independent) Director	Member	1	1
Director (IS & P)	Member	1	1
Director (Finance)	Member	1	1
Director (E,R&D)	Member	1	1

Executive Director (P&D) / Head of P&D are the permanent invitees. The Company Secretary of the Company provides secretarial support to the Committee.

#### **Meetings and Attendance**

The Committee met once during the year under review on 24th May, 2007.

#### 8. Project Review Committee

The Board constituted Project Review Committee on 25th January, 2007 with the following terms of reference:

- a. The Project Review Committee shall have at least four meetings in a year.
- b. The quorum for the meetings shall be three members.
- c. The Project Review Committee shall review the status of projects costing Rs. 100 crore and above, orders won/ lost and major customer complaints in respect of Power & Industry Sectors and International Operations division, on quarterly basis.
- d. The Project Review Committee may invite such of the executives, as it considers appropriate to be present at the meetings of the Committee.
- e. The Project Review Committee shall make necessary recommendations, wherever required, to the Board relating to projects in respect of Power Sector, Industry Sector and International Operations and also on related issues.

#### Composition, names of Members and Chairman

The detail of names of Members & Chairman of the Project Review Committee are as under:

Name of the Director S/ Shri	Position	No. of Meetings held during the year	No. of Meetings attended
Sanjay M. Dadlika Part-time Non-official (Independent) Director	Chairman	5	5
Madhukar Part-time Non-official (Independent) Director	Member	5	5
Director (Power)	Member	5	3
Director (E, R&D)	Member	5	5
Director (IS & P)	Member	5	3



Additional Secretary /Dept. of Heavy Industry on BHEL Board shall be the permanent invitee and Head of International Operations of BHEL shall be invited as and when required. The Company Secretary of the Company shall act as Secretary to the Committee.

#### **Meetings and Attendance**

The Committee met 5 times during the year under review on 5<sup>th</sup> July, 2007, 28<sup>th</sup> September, 2007, 26<sup>th</sup> December, 2007, 15<sup>th</sup> January, 2008 and 6<sup>th</sup> March, 2008. The details of attendance of each member is given in the above table.

#### 9. General Meetings

#### i. Location and time of last three AGMs

Year	Location	Date	Time
FY 2004-05 (41 <sup>st</sup> AGM)	FICCI Auditorium, Barakhamba Road	00th 0	40.00
	(Tansen Marg) New Delhi-110001	29 <sup>th</sup> September, 2005	10.00 a.m.
FY 2005- 06 (42 <sup>nd</sup> AGM)	-do-	15 <sup>th</sup> September, 2006	10.00 a.m.
FY 2006- 07 (43 <sup>rd</sup> AGM)	-do-	17 <sup>th</sup> September, 2007	10.00 a.m.

#### ii. Details of Special resolutions passed in previous three AGMs / EGMs

The Company passed a special resolution in the 42<sup>nd</sup> AGM held on 15.09.2006, for the amendment of Articles of Association of the Company.

The Company passed special resolutions in EGM held on 30.04.2007: one for alteration of Article 4-A relating to "Authorized Share Capital of the Company" and the other for insertion of new Article 86A relating to "Capitalization of Reserves" in the Articles of Association of the Company

#### iii. Postal Ballot

No special resolutions were passed through postal ballot in the previous year. No such resolutions are proposed through postal ballot during the year.

#### 10. Disclosures

## i. Disclosures on materially significant related party transactions that may have potential conflict with the interests of Company at large

The Company has not entered into any materially significant related party transactions that may have potential conflict with the interests of the company at large. Nonetheless, transactions with related parties have been disclosed in Note no. 19 of Schedule 19 to the Accounts in the Annual Report.

## ii. Non-compliances / penalties & strictures imposed on the company with respect to capital markets in the last three years

No such non-compliance has occurred nor any penalty or stricture been imposed on the company in the last three years. The company has set the highest standards with respect to observance and conformity with laws and all compliances are made much before the deadlines stipulated by statute.

#### iii. Whistle Blower policy

BHEL has not yet established a Whistle Blower Policy for the employees. Nonetheless, no personnel have been denied access to the audit committee.



## iv. Details of compliance with mandatory requirements and adoption of the non-mandatory requirements of this clause

All mandatory requirements as indicated in Clause 49 of the listing agreement have been duly complied with by the company. Details of the same have been given in appropriate places in this report.

Clause 49 further states that the non-mandatory requirements may be implemented as per our discretion. The company has already set up a Remuneration Committee to approve specific aspects of the remuneration of Directors. Other non-mandatory requirements would be gradually complied with on need basis by the company.

#### v. Auditor's certificate on Corporate Governance

Auditor's certificate on Corporate Governance is enclosed.

#### 11. Communication of financial and other information

As required under clause 41, company issues a notice of at least 7 days in advance to the stock exchanges of the Board Meetings in which the unaudited / audited financial results are due for consideration. Further, the said results are intimated immediately after they are taken on record / approved to the Stock Exchanges. These financial results are normally published in the Economic Times and Indian Express (English) and Navbharat Times and Jansatta (Hindi) and also displayed on the company's website <a href="https://www.bhel.com">www.bhel.com</a> within 48 hours of the conclusion of the said meeting.

The said information is also posted on the SEBI EDIFAR (Electronic Data Information Filing and Retrieval) website - www.sebiedifar.nic.in where they are freely accessible by any person.

Official news releases including important events like receipt of major orders as well as presentations made to the investors and financial analysts at periodic investors' meets are also displayed on the Company's website.

#### 12. General Shareholder Information

#### i. AGM (Date, Time and Venue)

	<u>Date</u> 17 <sup>th</sup> September, 2008	Time / Venue 10.00 A.M.
		FICCI Auditorium,Barakhamba Road, (Tansen Marg), New Delhi-110 001.
ii. Financial year	_	1st April 2007 to 31st March 2008
iii. Dates of Book Closure	_	3 <sup>rd</sup> September, 2008 to 17 <sup>th</sup> September, 2008 (Both days inclusive)
iv. Dividend payment date	_	On or before 16 <sup>th</sup> October, 2008
v. Dividend History:		



BHEL has been following "Stability cum Growth" policy with regard to dividend payment. The details of dividend paid by BHEL during the last ten years and the amount of unclaimed dividend as on 31.03.2008 are summarized as under:

Year	Rate of Dividend	No. of Shares	Total Amount of Dividend Paid (Rs.)	Date of AGM in which Dividend was declared	Unclaimed Dividend as on 31.03.2008 (Rs.)	Proposed date for transfer to IEPF
1998-1999	25%	244760000	611900000	30.09.1999	Already trans Investor Educ Protection Fu	cation &
1999-2000 (Interim)	15%	244760000	367140000	19.05.2000*	Already trans Investor Educ Protection Fu	cation &
1999-2000 (Final)	15%	244760000	367140000	29.09.2000	Already trans Investor Educ Protection Fu	cation &
2000-2001	30%	244760000	734280000	28.09.2001	524301	26.10.2008
2001-2002	40%	244760000	979040000	30.09.2002	625787	28.10.2009
2002-2003	40%	244760000	979040000	30.09.2003	482612	28.10.2010
2003-2004 (Interim)	30%	244760000	734280000	01.03.2004*	279120	29.03.2011
2003-2004 (Final)	30%	244760000	734280000	28.09.2004	225513	26.10.2011
2004-2005 (Interim)	35%	244760000	856660000	10.12.2004*	275180	07.01.2012
2004-2005 (Final)	45%	244760000	1101420000	29.09.2005	354347	27.10.2012
2005- 2006 (Interim)	40%	244760000	979040000	07.12.2005*	280816	04.01.2013
2005- 2006 (Spl. Interir	85% n)	244760000	2080460000	07.03.2006*	547970	04.04.2013
2005-2006 (Final)	20%	244760000	489520000	15.09.2006	170516	13.10.2013
2006-2007 (Interim)	125%	244760000	3059500000	25.01.2007*	934423	22.02.2014
2006-2007 (Final)	60%	489520000	2937120000	17.09.2007	1140624	15.10.2014
2007-2008 (Interim)	90%	489520000	4405680000	25.01.2008*	3266253	22.02.2015

<sup>\*</sup> Date of meeting of Board of Directors in which interim dividend was declared.



#### vi. Listing on Stock Exchanges and Stock Code

BHEL's shares are listed on the following Stock Exchanges for which listing fees for 2007-08 has been paid:

	Name of the Stock Exchange	Stock Code
1.	Bombay Stock Exchange Limited Phiroze Jeejeebhoy Towers, Dalal Street, Mumbai – 400 001.	500103
2.	National Stock Exchange of India Limited Exchange Plaza, Plot No.C/1, G Block, Bandra-Kurla Complex, Bandra(E), Mumbai – 400051.	BHEL

#### vii. Delisting of Equity shares

BHEL filed necessary application with Calcutta Stock Exchange Association Limited as far back as on 3rd Nov., 2004. Approval for delisting from Calcutta Stock Exchange Association Limited is still awaited. However, as BHEL had obtained "in-principle approval from Calcutta Stock Exchange Association Limited for delisting of Equity Shares of BHEL on 15th June, 2007", BHEL has neither paid listing fee for 2007-08 nor has it been filing any returns / reports / documents etc. required to be sent as per Listing Agreement to the Calcutta Stock Exchange with effect from 01.04.2005.



viii. Market Price Data & performance in comparison to broad-based indices such as BSE Sensex, BSE PSU Index and S&P CNX Nifty Index are as under:

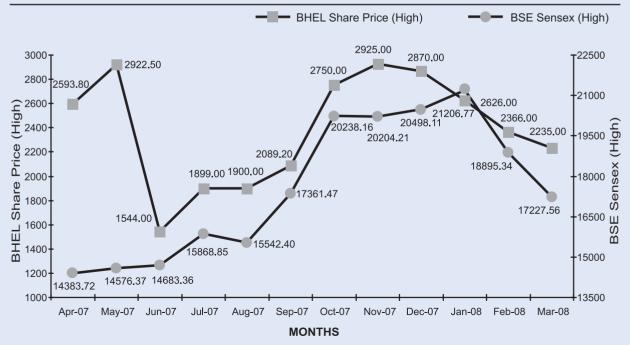
#### **BHEL Vs. BSE Sensex**

High and low of BHEL market share price on the **Bombay Stock Exchange (BSE)** vis-à-vis BSE Sensex, No. of shares traded and Net turnover, during each month in last financial year ended March 31, 2008 are summarized as under:

Month	_	are Prices s.) Low	BSE S	Sensex Low	No. of shares traded	Net turnover (Rs. in Crore)
April 2007	2,593.80	2,145.00	14,383.72	12,425.52	2922746	709.54
May 2007	2,922.50	1,351.00	14,576.37	13,554.34	2527206	642.36
June 2007	1,544.00	1,301.00	14,683.36	13,946.99	2847536	401.54
July 2007	1,899.00	1,520.10	15,868.85	14,638.88	3834352	646.86
August 2007	1,900.00	1,540.00	15,542.40	13,779.88	4716863	802.05
September 2007	2,089.20	1,856.00	17,361.47	15,323.05	2646160	514.59
October 2007	2,750.00	1,970.00	20,238.16	17,144.58	5482424	1265.06
November 2007	2,925.00	2,380.00	20,204.21	18,182.83	3279060	883.05
December 2007	2,870.00	2,348.00	20,498.11	18,886.40	2541927	657.13
January 2008	2,626.00	1,800.00	21,206.77	15,332.42	3223135	718.47
February 2008	2,366.00	1,850.00	18,895.34	16,457.74	2710078	574.96
March 2008	2,235.00	1,765.00	17,227.56	14,677.24	3990925	786.91

<sup>\*</sup>Source:www.bseindia.com

### Performance of BHEL Share Price (High) vs BSE Sensex (High) During 2007-08





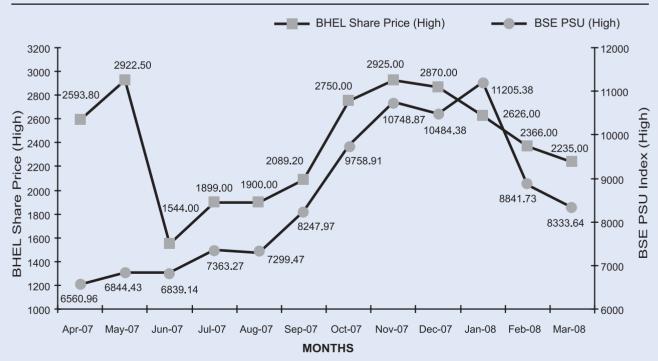
#### **BHEL Vs. BSE PSU Index**

High and low of BHEL market share price on the Bombay Stock Exchange Limited (BSE) vis-à-vis BSE PSU Index, during each month in last financial year ended March 31, 2008 are summarized as under:

Month		BHEL Share Prices (Rs.)		J Index
	High	Low	High	Low
April 2007	2,593.80	2,145.00	6,560.96	5,660.13
May 2007	2,922.50	1,351.00	6,844.43	6,257.14
June 2007	1,544.00	1,301.00	6,839.14	6,359.11
July 2007	1,899.00	1,520.10	7,363.27	6,755.79
August 2007	1,900.00	1,540.00	7,299.47	6,410.97
September 2007	2,089.20	1,856.00	8,247.97	7,101.42
October 2007	2,750.00	1,970.00	9,758.91	7,830.29
November 2007	2,925.00	2,380.00	10,748.87	9,187.18
December 2007	2,870.00	2,348.00	10,484.38	9,359.69
January 2008	2,626.00	1,800.00	11,205.38	7,222.47
February 2008	2,366.00	1,850.00	8,841.73	7,628.33
March 2008	2,235.00	1,765.00	8,333.64	7,085.49

<sup>\*</sup>Source:www.bseindia.com

## Performance of BHEL Share Price (High) vs BSE PSU Index (High) during 2007-08





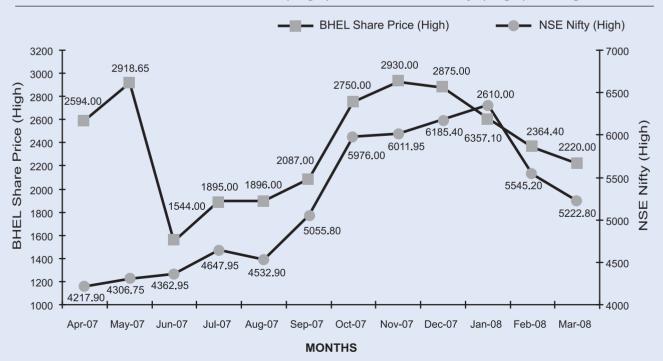
#### **BHEL Vs. S&P CNX Nifty**

High and low of BHEL market share price on the National Stock Exchange of India Limited (NSE) vis-à-vis S&P CNX Nifty, No. of shares traded and Net turnover, during each month in last financial year ended March 31, 2008 are summarized as under:

Month		BHEL Share Prices NSE (Rs.)		NSE Nifty		Net turnover (Rs. in Crore)
	High	Low	High	Low		
April 2007	2,594.00	2,142.05	4217.90	3617.00	11967253	2914.15
May 2007	2,918.65	1,378.25	4306.75	4030.55	11760531	2934.76
June 2007	1,544.00	1,301.00	4362.95	4100.80	15060436	2120.02
July 2007	1,895.00	1,516.60	4647.95	4304.00	21391491	3592.42
August 2007	1,896.00	1,541.00	4532.90	4002.20	24492532	4160.89
September 2007	2,087.00	1,844.00	5055.80	4445.55	14735649	2866.93
October 2007	2,750.00	1,953.00	5976.00	5000.95	32189555	7343.43
November 2007	2,930.00	2,385.00	6011.95	5394.35	19260078	5191.28
December 2007	2,875.00	2,346.30	6185.40	5676.70	15511179	3998.72
January 2008	2,610.00	1,800.00	6357.10	4448.50	21615630	4889.30
February 2008	2,364.40	1,850.00	5545.20	4803.60	16853298	3561.53
March 2008	2,220.00	1,752.00	5222.80	4468.55	18830109	3661.42

<sup>\*</sup>Source:www.nseindia.com

### Performance of BHEL Share Price (High) vs S&P CNX Nifty (High) during 2007-08





#### ix. Policy on Insider Trading

BHEL has adopted the Code of Conduct for prevention of Insider Trading in accordance with the guidelines specified under the SEBI (Prohibition of Insider Trading) Regulations, 1992 and amended from time to time. The objective of the Code is to prevent purchase and / or sale of shares of the Company by an Insider on the basis of unpublished price sensitive information. Under this Code, Insiders (Directors, Designated Employees and other concerned persons) are prevented to deal in the Company's shares beyond specified limits and are required to disclose related information periodically as defined in the code. The Board has appointed Director (Finance) as the Compliance Officer under the Code.

#### x. Registrar & Share Transfer Agent (RTA)

M/s. Karvy Computershare Private Ltd.

Delhi Address
UNIT: BHEL

105-108, Arunachal Building, 19, Barakhamba Road, New Delhi – 110 001

Tel.: 011-23324401 / 09

Fax: 011-23730743

**Hyderabad Address** 

UNIT: BHEL

17-24, Vittal Rao Nagar, Madhapur,

Hyderabad - 500 081

Tel. : 040-23420815-28

Fax : 040-23420814

Email: madhusudhan@karvy.com mailmanager@karvy.com

RTA's performance in servicing shareholders has been satisfactory. All the investor grievances have been promptly attended to.

#### xi. Share Transfer System

Entire Share Transfer activities under physical segment are being carried out by Karvy Computershare Private Limited. The share transfer system consists of activities like receipt of shares along with transfer deed from transferees, its verification, preparation of Memorandum of Transfers, its approval by the Share Transfer Committee and dispatch of transferred certificates to the respective transferees within the prescribed time as per the Listing Agreement.

#### xii. Distribution of Shareholding

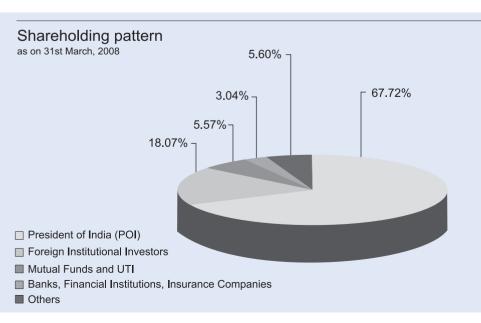
#### (i) Distribution of shares according to size, of holding as on 31st March 2008

No. of equity shares held	No. of Shareholders	% of shareholders	No. of shares	% of shareholding
1 – 5000	206677	98.32	7214311	1.47
5001 - 10000	1553	0.74	1165820	0.24
10001 - 20000	622	0.29	942054	0.19
20001 - 30000	201	0.10	508059	0.10
30001 - 40000	118	0.06	420568	0.09
40001 - 50000	68	0.03	314702	0.06
50001 - 100000	202	0.10	1538645	0.31
100001 & Above	759	0.36	477415841	97.53
Total :	210200	100	489520000	100.00



#### (ii) Shareholding Pattern as on 31st March 2008

	20	08	2007		
Category	Voting strength (%)	No. of shares held	Voting strength (%)	No. of shares held	
Promoters Holding					
Indian Promoters-					
- President of India (POI)	67.72	331510000	67.72	165755000	
- Nominees of POI	0.00	400	0.00	200	
Persons acting in concert					
- Directors & relatives	0.00	800	0.00	1500	
Total Promoter Holding	67.72	331511200	67.72	165756700	
Non-promoters Holding					
Institutional Investors					
Mutual Funds and UTI	5.57	27251932	4.63	11323273	
Banks, Financial Institutions, Insurance Companies	3.04	14841266	3.32	8122488	
Foreign Institutional Investors	18.07	88471103	20.00	48945054	
Others					
Private Corporate Bodies	3.41	16677059	2.58	6309868	
Indian Public	2.04	9982157	1.61	3970453	
Foreign Nationals	0.00	1000	_	_	
NRIs/OCBs	0.12	575976	0.11	267753	
Trust	0.00	18411	0.01	12912	
Shares in Transit (NSDL/CDSL)	0.04	189896	0.02	51499	
Total Non-promoter Holding	32.28	158008800	32.28	79003300	
Grand Total	100.00	489520000	100.00	244760000	



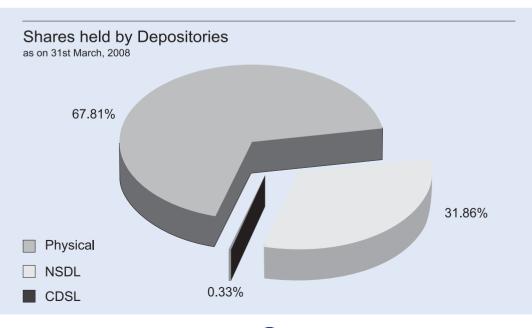


#### (iii) List of shareholders who are holding more than 1% of the shares of the Company as on 31st March 2008

	200	)8	2007		
Category & Shareholder's Name	Voting strength (%)	No. of shares held	Voting strength (%)	No. of shares held	
Promoters					
1. President of India	67.72	331511200	67.72	165755000	
Non-promoters					
1. Life Insurance Corporation of India	1.86	9113762	1.98	4838820	
2. ICICI Prudential Life insurance Co. Ltd	1.45	7122087	1.11	2710711	
FIIs					
1. J.P. Morgan Fleming Asset Management.		_	1.83	4481203	

#### xiii. Dematerialisation of shares and liquidity

In accordance with the directions of the Securities & Exchange Board of India (SEBI) trading in BHEL shares by all categories of investors in demat form has been made compulsory w.e.f. 5<sup>th</sup> April 1999. BHEL has executed agreement with both the depositories of the country i.e. National Securities Depository Limited (NSDL) and Central Depository Services (India) Limited (CDSL) for admission of its securities under demat mode. As on 31<sup>st</sup> March, 2008, 32.19% of the total equity share capital of BHEL has been dematerilised by the shareholders and held in the name of the NSDL / CDSL. International Securities Identification Number (ISIN) allotted to Company is INE 257 A01018.





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

Nil

xv. Plant locations – Heavy Electrical Equipment Plant, Haridwar

Central Foundry Forge Plant, Haridwar

Heavy Power Equipment Plant, Hyderabad

High Pressure Boiler Plant, TrichyHeavy Electricals Plant, Bhopal

Transformer Plant, Jhansi

Electronics Division, Bangalore

Boiler Auxiliaries Plant, Ranipet

Industrial Valves Plant, Goindwal

Electro-Porcelains Division, Bangalore

Insulator Plant, Jagdishpur

Component Fabrication Plant, Rudrapur

Heavy Equipment Repair Plant, Varanasi

Electrical Machine Repair Plant, Mumbai

#### 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:

 Shri N. K. Sinha
 Phone : 91 11 26001046

 Company Secretary
 Fax : 91 11 26001102

 BHEL
 Email : csynks@bhel.in

Regd. Office: BHEL House, Siri Fort,

New Delhi - 110 049

OR

#### KARVY COMPUTERSHARE PVT. LTD.

UNIT: BHEL

**Delhi:** 105-108, Arunachal Building Phone: 011-23324401 / 09

19, Barakhamba Road Fax : 011-23730743

New Delhi - 110 001

Hyderabad: 17-24, Vittal Rao Nagar, Phone: 040-23420815-28

Madhapur, Fax : 040-23420814

Hyderabad - 500 081

Email: mailmanager@karvy.com madhusudhan@karvy.com

Note: Shareholders holding shares in electronic mode should address all correspondence to their respective depository participants.

Declaration: Pursuant to Clause 49(D) of the Listing Agreement with Stock Exchanges, it is hereby declared that all Board members and Senior Management personnel have affirmed compliance with BHEL's Code of "Business Conduct and Ethics" for the financial year 2007-08.

(K. Ravi Kumar)

Uhr WI

Chairman and Managing Director

Place: New Delhi Date: July 21, 2008





### CEO and CFO Certification

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, 2008 and that to the best of our knowledge and belief:
  - (i) These statements do not contain any materially untrue statement or omit any material fact or contain statements that might be misleading;
  - (ii) These statements together present a true and fair view of the company's affairs and are in compliance with existing accounting standards, applicable laws and regulations.
- (b) There are, to the best of our knowledge and belief, no transactions entered into by the Company during the year 2007-08 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 2007-08;
  - (ii) significant changes in accounting policies during the year 2007-08 and that the same have been disclosed in the notes to the financial statements; and
  - (iii) instances of significant fraud of which we have become aware and the involvement therein, if any, of the management or an employee having a significant role in the Company's internal control system over financial reporting.

(C.S. Verma)

Director (Finance)

(K. Ravi Kumar)

Uh wf

Chairman & Managing Director

Place: New Delhi Date: 23.05.2008



### Auditors' Certificate on Corporate Governance

The Members
Bharat Heavy Electricals Ltd.
"BHEL House", Siri Fort,
New Delhi

Sir,

We have examined the compliance of conditions of Corporate Governance by Bharat Heavy Electricals Ltd. for the year ended on March 2008 as stipulated in clause 49 of the Listing Agreement of the said company with the Stock Exchanges.

The compliance of conditions of Corporate Governance is the responsibility of the management. Our examination was limited to procedures and implementation thereof, adopted by the company for ensuring the compliance of the conditions of the Corporate Governance. It is neither an audit nor an expression of the opinion on the financial statements of the company.

In our opinion and to the best of our information and according to the explanations given to us, subject to the following:-

- i. Clause 49.1(A) of the Listing Agreement requires that not less than fifty percent of the Board of Directors of the company should comprise of non-executive directors being independent. Due to casual vacancy in the Board either on account of expiry of term of Independent Directors or resignation from the Board, the company could not meet the conditions. Thus the company did not have an optimum combination of executive and nonexecutive directors being independent on its Board of Directors during the year.
- ii. The company is in the process of laying down procedure to inform Board members about risk assessment and minimization procedures as required by Clause 49.IV(C) of the Listing Agreement.

We certify that the company has complied with the conditions of Corporate Governance as stipulated in the above mentioned Listing Agreement.

We further state that such compliance is neither an assurance as to the future viability of the company nor the efficiency or effectiveness with which the management has conducted the affairs of the company.

For and on behalf of M.L. Puri & Company Chartered Accountants

(Navin Bansal)
Partner
M. No. 91922

Place: New Delhi Dated: 21.07.2008



#### ANNEXURE - 4 TO THE DIRECTORS' REPORT

### Conservation of Energy

The following Energy Saving Systems, utilizing efficient technologies, were undertaken by the units:

- 1. Energy saving transformers-Hyderabad
- 2. Installation of capacitor bank-Jhansi
- 3. Installation of VFD MG System-Bhopal
- 4. Fans retrofitted with installation of VFDs in Kilns-Jagdishpur

Energy conservation is an important thrust area in BHEL. Energy Cost as a percentage of Gross Turnover, net of excise, for the year is 1.38% as against 1.55% in the previous year.

Various thrust areas for conservation of energy are as follows:

- 1. Load planning for reduction in maximum demand of power.
- 2. Maximizing use of daylight.
- 3. Installation of automatic power factor controller for inductive loads.
- 4. Avoiding idle running of equipment/ machine.
- 5. Modification of lighting system using energy efficient lamps.
- 6. Optimum utilization of furnaces.
- 7. Arresting leakage in compressed air, steam piping and electrical system.
- 8. Use of alternate fuel.
- 9. Providing variable speed drives for motors on machines.
- 10. Providing power savers to lighting feeders.
- 11. Installation of Energy Management System.

Energy Conservation (ENCON) awareness week was celebrated all over the company from 14-21 December, 2007. Website on Energy Conservation was created & hosted on Corporate Intranet for awareness generation of employees.

### Technology Absorption and Research & Development

#### Research & Development

1.	Specific areas in which R&D carried out	}	Given in the
	by the Company	}	Directors' Report
2.	Benefits derived as a result	}	under "R&D and
	of the above R&D	}	Technology"

3. Future plan of action

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

- Advanced control and instrumentation platform for thermal power plant and industrial application
- Performance Analysis, Diagnostics and Optimization (PADO) systems for thermal power plant application
- More efficient conventional thermal power plants using supercritical parameters
- Integrated Gasification Combined Cycle (IGCC) power plants
- Atmospheric and Circulating Fluidized Bed Combustion (CFBC) boilers
- · Hydro power plants with higher efficiency and longer life
- HVDC transmission systems
- 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
- 765 kV Transmission systems
- Industrial steam turbines



- Pulverisers
- Compressors
- · High efficiency boiler feed pumps
- · Reduction of emissions
- Efficient, reliable and cost effective transportation systems like three-phase AC drive system for diesel electric locos
- Non-conventional energy systems
- Simulators
- Welding technologies
- Surface coatings
- Vibration and noise reduction
- · Residual life assessment studies
- · Cycle time and cost reduction
- Specialized engineering software applications
- IGBT based applications
- Underground Coal Gasification
- Knowledge Management
- Intelligent machines & robotics
- Nano-technology applications
- Hydrogen energy and fuel cells

#### 4. Expenditure on R&D

	Total	 Rs. 464 crore
a)	Recurring	 Rs. 455 crore
b)	Capital	 Rs. 9 crore
	Expenditure as a percentage of total turnover	 2.17%

### Technology Absorption and Adoption

Details of technology imported during the last 5 years:

Technology	Year of import	Absorption status
Super Civil/ Sub critical once through boilers	2005	Technology absorption in progress.
Pumps for higher rating thermal power plants	2007	Technology absorption in progress.

### Foreign Exchange Earnings and Outgoings

- a) Activities relating to export information are given in the Directors' Report under the heading 'International Business'.
- b) Total foreign exchange used and earned:

(Rs. in crore)

	2007-08	2006-07
(i) Foreign Exchange Used	3604	2604
(ii) Foreign Exchange Earned	2486	3660

### बी एच ई एल मिक्रीहर

#### ANNEXURE - 5 TO THE DIRECTORS' REPORT

### **AUDITORS' REPORT**

#### TO THE MEMBERS OF BHARAT HEAVY ELECTRICALS LIMITED

We have audited the attached Balance Sheet of **Bharat Heavy Electricals Limited** as at 31<sup>st</sup> March, 2008 and also the Profit and Loss Account and the cash flow statement for the year ended on that date annexed thereto. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audit.

We conducted our audit in accordance with the Auditing Standards generally accepted in India. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatements. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in financial statements. An audit also includes assessing the accounting principles used and significant estimates made by the management, as well as evaluating the overall financial statement presentation. We believe that our audit provides a reasonable basis for our opinion.

In accordance with the provisions of section 227 of the Companies Act, 1956, we report that:

I. As required by the Companies (Auditors' Report) Order, 2003, issued by the Central Government of India under sub-section (4A) of section 227 of the Companies Act, 1956 and on the basis of such checks of the books and records of the company as we considered appropriate and according to the information and explanations given to us, we enclose in the Annexure a statement on the matters specified in paragraphs 4 and 5 of the said Order.

#### II. Attention is drawn to:

- i. Note No. 15 of schedule 19 regarding change in accounting policy relating to Exchange difference on Fixed Assets, resulting in decrease in profit for the year by Rs. 3.17 Crores.
- ii. Note No. 16 of schedule 19 regarding change in accounting practice relating to Recognition of duty draw back on export/deemed export contract, resulting in increase in profit for the year by Rs. 24.91 Crores.
- III. Further to our comments in the Annexure referred to in paragraph I above, we report that:
  - (a) We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit.
  - (b) In our opinion, proper books of account as required by law have been kept by the Company so far as appears from our examination of the books and proper returns adequate for the purposes of our audit have been received from the branches not visited by us.
  - (c) The Branch Auditor's Reports have been furnished to us and have been appropriately dealt with while preparing our report.
  - (d) The Balance Sheet and Profit and Loss Account and cash flow statement dealt with by this report are in agreement with the books of account and with the audited returns received from the branches.
  - (e) In our opinion, the Balance Sheet and Profit and Loss Account and cash flow statement dealt with by this report comply with the Accounting Standards referred to in sub Section (3C) of Section 211 of the Companies Act, 1956.



- (f) In terms of Notification No. GSR 829(E) dated 21.10.2003 issued by the Department of Company Affairs, Government of India, the provisions of Section 274(1)(g) of the Companies Act, 1956 are not applicable to the Company.
- (g) In our opinion and to the best of our information and according to the explanations given to us, the said accounts read together with the Accounting Policies and Explanatory Notes in Schedule-19, give the information required by the Companies Act, 1956, in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India:
  - (i) In the case of the Balance Sheet, of the state of affairs of the Company as at March 31, 2008; and
  - (ii) In case of Profit & Loss Account of the profit for the year ended on that date; and
  - (iii) In the case of cash flow statements of the cash flows for the year ended on that date.

For M.L. Puri & Co.
Chartered Accountants

(Navin Bansal)

Partner

M. N. 091922

Date: May 23, 2008 Place: New Delhi



### Annexure to the Auditors' Report

(Referred to in Para I of our report of even date)

- i) (a) The Company has generally maintained proper records showing full particulars including quantitative details and situation of its fixed assets.
  - (b) We are informed that management has generally carried out the physical verification of a portion of the fixed assets in accordance with their phased programme of physical verification, which is considered 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. In respect of 65 locomotives given to Indian Railways on lease instead of physical verification a certificate confirming physical possession of these locomotives has been obtained from Indian Railways as per the lease agreement.
  - (c) The company has not disposed off any substantial part of its fixed assets so as to affect its going concern status.
- ii) (a) 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 a few cases only. In our opinion the frequency of verification is reasonable.
  - (b) In our opinion procedures of physical verification of inventory, followed by the management are generally reasonable and adequate in relation to the size of the Company and the nature of its business.
  - (c) The company has generally maintained proper records of inventory and the discrepancies noticed on physical verification of inventory with regard to the size and nature of operations of the company were not material and have been properly dealt with in the books of account of the Company.

#### **MANAGEMENT'S REPLIES**

- iii) (a) According to the information given to us, the company has not granted any loans, secured or unsecured to companies, firms and other parties covered in the register maintained under section 301 of the Companies Act, 1956. Accordingly, clauses (iii)(b) to (iii)(d) of paragraph 4 of the Companies (Auditor's Report) Order, 2003 are not applicable to the company for the current year.
  - (b) According to the information given to us, the company has not taken any loans, secured or unsecured, from companies, firms or other parties covered in the register maintained under Section 301 of the Companies Act, 1956. Accordingly, clauses (iii) (f) and (iii) (g) of paragraph 4 of the Companies (Auditor's Report) Order, 2003 are not applicable to the company for the current year.
- iv) In our opinion and according to the information and explanation given to us, there are adequate internal control systems commensurate with the size of the company and the nature of its business with regard to purchase of inventory, fixed assets and sale of goods and services. Further on the basis of our examination of the books and records of the company, and according to the information and explanation given to us, we have neither come across nor have been informed of any continuing failure to correct major weaknesses in internal control systems.
- v) According to the information and explanation given to us, we are of the opinion that there are no contracts and arrangements referred to in Section 301 of the Act during the year that need to be entered in the register maintained under that Section. Accordingly, clause (v)(b) of paragraph 4 of the Companies (Auditor's Report) Order, 2003 is not applicable to the company for the current year.
- vi) According to the information and explanation given to us, the company has not accepted any deposits from public during the year within the meaning of sections 58A and 58AA or any other relevant provisions of the Act and the Companies (Acceptance of Deposits) Rules 1975 framed there under.
- vii) In our opinion, the Internal Audit System of the Company is largely commensurate with the size and nature of its business.



- viii) We have broadly reviewed the books of accounts and records maintained by the company pursuant to the rules prescribed by the Central Government for the maintenance of cost records under section 209 (I) (d) of the Companies Act, 1956 in respect of manufacture of Electric Motors, Seamless Steel Tubes, Electric Generator, Power Transformers, Power driven Pumps. Power Generation through wind mills, control instrumentation and automation equipment and are of the opinion that prima facie the prescribed accounts and records have been made and maintained. The contents of these accounts and records have not been examined by us.
- ix) (a) According to the information and explanation given to us, and books and records as produced and examined by us, in our opinion, the company is generally regular in depositing undisputed statutory dues including Provident Fund, Investor Education and Protection Fund, Employees State Insurance, Income Tax, Sales Tax, Wealth Tax, Service Tax, Excise Duty, Customs Duty, Cess and any other material statutory dues as applicable with appropriate authorities. According to the information and explanation given to us, except Ground rent of Rs.3.39 crores, Service Tax of Rs.0.03 crore in PS-NR and Sales Tax of Rs. 2.02 crores in Jhansi, there were no undisputed amounts payable in respect of Provident Fund, Investor Education and Protection Fund, Employees State Insurance, Income Tax, Sales Tax, Wealth Tax, Service Tax, Excise Duty, Customs Duty, Cess and other statutory dues outstanding as at 31st March, 2008 for a period of more than six months from the date they become payable.
  - (b) According to the information and explanation given to us, the particulars of Sales Tax, Income Tax, Excise Duty, Service Tax, Custom Duty and Cess which have not been deposited on account of dispute are as under:

The service tax of PS-NR has since been paid. Provision for ground rent has been already made in the accounts upto 2007-08 though the company has not received any demand from DDA for ground rent. The Company is continuously pursuing the case with DDA for early settlement. The sales tax matter of Jhansi unit is still pending before Appellate Authority.

SI.	Name of	Nature of	Amount	Forum where
No.	the Statute	the Dues	(Rs. in	dispute is
			Crore)	pending
1.	Central Sales Tax Act, Work Contract Tax	Sales Tax Entry Tax & Work	4.50	Assessing Officer
	Act, Lease Tax, Entry Tax Act and Sales Tax Act	Contract Tax	93.55	Commissioner/ Dy. Commissioner
	of various States		25.11	Appellate Tribunal
			89.53	High Court/ Supreme Court
			4.46	Various Appellate Authorities
2.	Income Tax Act, 1961	Income Tax	26.50	Appellate Tribunal
			1.92	High Court
3.	Central Excise Act,	Excise Duty	0.34	Assessing Officer
	1944		0.87	Commissioner (Appeals)
			120.41	Appellate Tribunal
4.	Service Tax under the	Service Tax	5.70	Commissioner (Appeals)
	Finance Act, 1994		0.33	Appellate Tribunal
			0.08	Various Appellate Authorities
		Total	373.30	

- x) The company has no accumulated losses as at March 31, 2008 and it has not incurred any cash losses in the financial year ended on that date or in the immediately preceding financial year.
- xi) 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 dues to financial institutions, banks or debenture holders.
- xii) The company has not granted any loans and advances on the basis of security by way of pledge of shares, debentures and other securities.
- xiii) The provisions of any special statute applicable to Chit fund/ Nidhi / Mutual benefit fund/Societies are not applicable to the company.



- xiv) In our opinion, the company is not dealing in or trading in shares, securities, debentures and other investments. Accordingly, the provisions of clause 4(xiv) of the Companies (Auditor's Report) Order, 2003 are not applicable to the company.
- xv) In our opinion and according to the information and explanations given to us, the company has not given any guarantee for loans taken by others from banks or financial institutions during the year.
- xvi) As per information and explanations given to us, the company has not obtained any term loan during the year.
- xvii) According to the information and explanations given to us and on an overall examination of the balance sheet of the company, we report that no funds raised on short-term basis have been used for long term investment.
- xviii) The company has not made any preferential allotment of shares to parties and companies covered in the register maintained under section 301 of the Companies Act, 1956 during the year.
- xix) In our opinion, the company has not issued any debentures during the year.
- xx) The company has not raised any money by public issue during the year.
- xxi) 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, except a case relating to fraudulent encashment of cheque at a site of PS-SR amounting to Rs. 7.46 lakhs and the region has taken suitable legal action against the bankers for recovery of the same, we have neither come across any instance of fraud on or by the company noticed or reported during the year nor have we been informed of any such case by the management.

For M.L. Puri & Co. Chartered Accountants

(Navin Bansal) Partner

Date: May 23, 2008 Partner
Place: New Delhi M. N. 091922

The company has taken suitable legal action.





#### गोपनीय

स./No स.ले.प.।।।/प्रति/अकाउंट्स/24-1/2007-08/ ЦоЦ

कार्यालय
प्रधान निदेशक, वाणिज्यक लेखा परीक्षा
एवं पदेन सदस्य लेखा परीक्षा बोर्ड-III,
नई दिल्ली
OFFICE OF THE
PRINCIPAL DIRECTOR OF COMMERCIAL AUDIT
& EX-OFFICIO MEMBER, AUDIT BOARD-III,
NEW DELHI

दिनांक/Dated 17 JUL 2008

सेवा में,

अध्यक्ष एवं प्रबंध निदेशक भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली।

विषयः कंपनी अधिनियम की धारा 619(4) के अधीन भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली, के वर्ष 2007-08 के लेखाओं पर भारत के नियंत्रक-महालेखापरीक्षक की टिप्पणियां।

महोदय,

मैं भारत हेवी इलेक्ट्रिकल्स लिमिटेड, नई दिल्ली, के वर्ष 2007-08 की समाप्ति हेतू कंपनी अधिनियम 1956 की धारा 619(4) के अधीन लेखों पर भारत के नियंत्रक-महालेखापरीक्षक की टिप्पणियाँ अग्रेषित करती हूँ।

2. कृपया इस पत्र की संलग्नकों सहित प्राप्ति की पावती भेजी जाए।

भवदीया,

संलग्नः यथोपरि।

गुजाला मीनाई) प्रधान निदेशक



### Comments of the Comptroller and Auditor General of India under Section 619(4) of the Companies Act, 1956 on the Accounts of Bharat Heavy Electricals Limited, New Delhi, for the Year Ended 31 March 2008

The preparation of financial statements of Bharat Heavy Electricals Limited, New Delhi, for the year ended 31 March 2008 in accordance with the financial reporting framework prescribed under the Companies Act, 1956, is the responsibility of the management of the company. The statutory auditors appointed by the Comptroller and Auditor General of India under Section 619(2) of the Companies Act, 1956, are responsible for expressing opinion on these financial statements under Section 227 of the Companies Act, 1956, based on independent audit in accordance with the auditing and assurance standards prescribed by their professional body, the Institute of Chartered Accountants of India. This is stated to have been done by them vide their Audit Report dated 23 May 2008.

I, on behalf of the Comptroller and Auditor General of India, have conducted a supplementary audit under Section 619(3) (b) of the Companies Act, 1956, of the financial statements of Bharat Heavy Electricals Limited, New Delhi, for the year ended 31 March 2008. 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 under Section 619(4) of the Companies Act, 1956.

For and on the behalf of the Comptroller & Auditor General of India

Ghazala Meenai)
Principal Director of Commercial Audit
& Ex-officio Member, Audit Board-III,
New Delhi

Place: New Delhi Dated: 17 July, 2008





### Significant Accounting Policies

#### 1. Basis of preparation of Financial Statements

The financial statements have been prepared as of a going concern on historical cost convention and on accrual method of accounting in accordance with the generally accepted accounting principles and the provisions of the Companies Act, 1956 as adopted consistently by the Company.

#### 2. Fixed Assets

Fixed assets (other than land acquired free from State Government) are carried at the cost of acquisition or construction or book value less accumulated depreciation.

Cost includes value of internal transfers for capital works, taken at actual/ estimated factory cost or market price, whichever is lower. Effect of extraordinary events such as devaluation / revaluation in respect of long term liabilities / loans utilised for acquisition of fixed assets is added to / reduced from the cost.

Land acquired free of cost from the State Government is valued at Re.1/- except for that acquired after 16<sup>th</sup> July 1969, in which case the same is valued at the acquisition price of the State Government concerned, by corresponding credit to capital reserve.

#### 3. Leases

#### **FINANCE LEASE**

#### A) i) Assets Given on Lease Prior to 1st April 2001

Assets manufactured and given on finance lease are capitalised at the normal sale price/fair value/contracted price and treated as sales.

Depreciation on the same is charged at the rate applicable to similar type of fixed assets as per Accounting Policy on 'Depreciation'. Against lease rentals, matching charge is made through Lease Equalisation Account.

Finance income is recognised over the lease period.

# (ii) Assets Given on Lease on or after 1st April 2001

Assets manufactured and given on finance lease are recognised as sales at normal sale price / fair value / NPV.

Finance income is recognised over the lease period.

Initial direct costs are expensed at the commencement of lease.

# B) Assets Taken on Lease on or after 1st April 2001

Assets taken on lease are capitalised at fair value / NPV / contracted price. Depreciation on the same is charged at the rate applicable to similar type of fixed assets as per Accounting Policy on 'Depreciation'. If the lease assets are returnable to the lessor on expiry of lease period, the same is depreciated over its useful life or lease period, whichever is shorter.

Lease payments made are apportioned between finance charges and reduction of outstanding liability in relation to assets taken on lease

#### **OPERATING LEASE**

#### Assets Given on Lease:

Assets manufactured and given on operating lease are capitalised. Lease income arising therefrom is recognised as income over the lease period.

#### Assets Taken on Lease:

Lease payments made for assets taken on operating lease are recognised as expense over the lease period.

#### 4. Intangible Assets

- A. Intangible assets are capitalised at cost if
  - a. it is probable that the future economic benefits that are attributable to the asset will flow to the company, and



- b. the company will have control over the assets, and
- the cost of these assets can be measured reliably and is more than Rs.10,000/-.

Intangible assets are amortised over their estimated useful lives not exceeding three years in case of software and not exceeding ten years in case of others on a straight line pro-rata monthly basis.

- B. a. Expenditure on research including the expenditure during the research phase of Research & Development Projects is charged to profit and loss account in the year of incurrence.
  - b. Expenditure incurred on Development including the expenditure during the development phase of Research & Development Project meeting the criteria as per Accounting Standard on Intangible Assets, is treated as intangible asset.
  - Fixed assets acquired for purposes of research and development are capitalised.

#### 5. Borrowing Costs

Borrowing costs that are attributable to the manufacture, acquisition or construction of qualifying assets, are included as part of the cost of such assets.

A qualifying asset is one that necessarily takes more than twelve months to get ready for intended use or sale.

Other borrowing costs are recognised as expense in the period in which they are incurred.

#### 6. **Depreciation**

(i) Depreciation on fixed assets (other than those used abroad under contract) is charged upto the total cost of the assets on straight-line method as per the rates prescribed in Schedule XIV of the Companies Act, 1956, except where depreciation is charged at rates determined on the basis of the technically assessed estimated useful lives shown hereunder:

	Single Shift	Double Shift	Triple Shift
General Plant & Machinery	8%	12%	16%
Automatic/Semi- Automatic Machines	10%	15%	20%
Erection Equipment, Capital Tools &Tackles	20%		
Township Buildings  - Second Class  - Third Class	2.5% 3.5%		
Railway Sidings	8%		
Locomotives & Wagons	8%		
Electrical Installations	8%		
Office & Other Equipments	8%		
Drainage, Sewerage & Water supply	3.34%		
Electronic Data Processing Equipment	20%		

In respect of additions to/deductions from the fixed assets, depreciation is charged on pro-rata monthly basis.

- (ii) Fixed assets used outside India pursuant to long term contracts are depreciated over the duration of the initial contract.
- (iii) Fixed assets costing Rs.10,000/- or less and those whose written down value as at the beginning of the year is Rs.10,000/- or less, are depreciated fully. In so far as township buildings are concerned, the cost per tenement is the basis for the limit of Rs.10,000/-.
- (iv) 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 purely temporary erections, wooden structures) are so depreciated after retaining 10% as residual value.

- (v) Purely Temporary Erection such as wooden structures are fully depreciated in the year of construction.
- (vi) Leasehold Land and Buildings are amortised over the period of lease. Buildings constructed on land taken on lease are depreciated over their useful life or the lease period, whichever is earlier.

#### 7. Investments

- (i) Long-term investments are carried at cost. Decline, other than temporary, in the value of such investments, is recognised and provided for.
- (ii) Current investments are carried at cost or quoted/fair value whichever is lower.
   Unquoted current investments are carried at cost.
- (iii) The cost of investment includes acquisition charges such as brokerage, fees and duties.

Any reduction in the carrying amount & any reversals of such reductions are charged or credited to the Profit & Loss Account.

#### 8. **Inventory Valuation**

- (i) Inventory is valued at actual/estimated cost or net realisable value, whichever is lower.
- (ii) Finished goods in Plant and work in progress involving Hydro and Thermal sets including gas based power plants, boilers, boiler auxiliaries, compressors and industrial turbo sets are valued at actual/estimated factory cost or at 97.5% of the realisable value, whichever is lower.
- (iii) In respect of valuation of finished goods in plant and work-in-progress, cost means factory cost; actual/estimated factory cost includes excise duty payable on manufactured goods.
- (iv) In respect of raw material, components, loose tools, stores and spares cost means weighted average cost.

- (v) a) For Construction contracts entered into on or after 01.04.2003:
  - Where current estimates of cost and selling price of a contract indicates loss, the anticipated loss in respect of such contract is recognised immediately irrespective of whether or not work has commenced
  - b) For all other contracts:
    - Where current estimates of cost and selling price of an individually identified project forming part of a contract indicates loss, the anticipated loss in respect of such project on which the work had commenced, is recognised.
  - In arriving at the anticipated loss, total income including incentives on exports/ deemed exports is taken into consideration.
- (vi) The components and other materials purchased/manufactured against production orders but declared surplus are charged off to revenue retaining residual value based on technical estimates.

#### 9. Revenue Recognition

Sales are recorded based on significant risks and rewards of ownership being transferred in favour of the customer. Sales include goods dispatched to customers by partial shipment.

- A. For construction contracts entered into on or after 1.4.2003
  - Revenue is recognized on percentage completion method based on the percentage of actual cost incurred upto the reporting date to the total estimated cost of the contract.
- B. For all other contracts
  - (i) Recognition of sales revenue in respect of long production cycle items (Hydro and Thermal sets including gas-based power plants, boilers, boiler auxiliaries,



compressors and industrial turbo sets) is made on technical estimates. When the aggregate value of shipments represents 30% or more of the realizable value, they are considered at 97.5% of the realizable value or in its absence, quoted price. Otherwise, they are considered at actual/estimated factory cost or 97.5% of the realizable value, whichever is lower. The balance 2.5% is recognized as revenue on completion of supplies under the contract.

(ii) Income from erection and project management services is recognized on work done based on:

Percentage of completion; or

The intrinsic value, reckoned at 97.5% of contract value, the balance 2.5% is recognized as income when the contract is completed.

- (iii) Income from engineering services rendered is recognized at realizable value based on percentage of work completed.
- (iv) Income from supply/erection of non-BHEL equipment/systems and civil works is recognized based on dispatches to customer/work done at project site.

#### 10. Accounting for Foreign Currency Transactions

Transactions in foreign currencies are recorded at the exchange rates prevailing on the date of the transaction. Foreign currency monetary assets and liabilities are translated at year end exchange rates. Exchange difference arising on settlement of transactions and translation of monetary items are recognized as income or expense in the year in which they arise.

# 11. Translation of Financial Statements of Integral Foreign Operations

- (i) Items of income and expenditure are translated at average rate except depreciation, which is converted at the rates adopted for the corresponding fixed assets.
- (ii) Monetary items are translated at the closing rate; non-monetary items carried at historical cost are translated at the rates in force on the date of the transaction; non-monetary items carried at fair value are translated at exchange rates that existed when the value were determined.
- (iii) All translation variances are taken to Profit & Loss Account.

#### 12. Employee Benefits

Earned leave, half pay leave, Provident Fund and Employees' Family Pension Scheme contributions are accounted for on accrual basis. Liability for gratuity, travel claims on retirement and post retirement medical benefits are accounted for in accordance with actuarial valuation. The actuarial liability is determined with reference to employees at the beginning of each calendar year. Compensation under Voluntary Retirement Scheme is charged off in the year of incurrence on a pro-rata monthly basis.

#### 13. Claims by/against the Company

- Claims for liquidated damages against the Company are recognised in accounts based on management's assessment of the probable outcome with reference to the available information supplemented by experience of similar transactions.
- (ii) Claims for export incentives/duty drawbacks/ duty refunds and insurance claims etc. are taken into account on accrual.
- (iii) Amounts due in respect of price escalation claims and/or variations in contract work are recognised as revenue only when there are

conditions in the contracts for such claims or variations and/or evidence of the acceptability of the same from customers. However, escalation is restricted to intrinsic value.

#### 14. Provision for Warranties

 For construction contracts entered into on or after 01.04.2003:

Provision for contractual obligations is maintained at 2.5% of the contract value on completion of trial operation.

#### ii) For all 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) Warranty claims/ expenses on rectification work are accounted for against natural heads as and when incurred and charged to provisions in the year end.

#### 15. Government Grants

Government Grants are accounted when there is reasonable certainty of their realisation.

Grants related to fixed depreciable assets are adjusted against the gross cost of the relevant assets while those related to non-depreciable assets are credited to capital reserve. Grants related to revenue, unless received as compensation for expenses/losses, are recognised as revenue over the period to which these are related on the principle of matching costs to revenue.

Grants in the form of non-monetary assets are accounted for at the acquisition cost, or at nominal value if received free.



# Balance Sheet as at March 31, 2008

(Rs. in Crores)

	Schedule	AS A	AT 31.3.2008	AS A	T 31.3.2007
SOURCES OF FUNDS					
Shareholders' Funds					
Share Capital	1	489.52		244.76	
Reserves & Surplus	2	10284.69	10774.21	8543.51	8788.27
Loan Funds					
Secured Loans	3	0.00		0.00	
Unsecured Loans	4	95.18	95.18	89.33	89.33
			10869.39		8877.60
APPLICATION OF FUNDS					
Fixed Assets					
Gross Block	5	4443.47		4135.05	
Less: Depreciation/Amortisation to-date		3403.08		3117.05	
		1040.39		1018.00	
Less : Lease Adjustment Account		59.13		29.26	
Net Block		981.26		988.74	
Capital Work-in-Progress	6	658.03	1639.29	302.54	1291.28
Investments	7		8.29		8.29
Deferred Tax Assets Net (Refer note no.	22 of Schedule 19)		1337.93		935.16
Current Assets, Loans and Advances					
Current Assets	8				
Inventories		5736.40		4217.67	
Sundry Debtors		11974.87		9612.81	
Cash & Bank Balances		8386.02		5808.91	
Other current assets		421.09		199.70	
Loans and advances	9	1186.34		1140.87	
		27704.72		20979.96	
Less:					
Current Liabilities & Provisions					
Current Liabilities	10	16576.45		11732.86	
Provisions	11	3244.39		2604.23	
		19820.84		14337.09	
Net current assets			7883.88		6642.87
			10869.39		8877.60
Notes to Assessmen	40				

Notes to Accounts 19

Schedules 1 to 19 & Significant accounting policies form an integral part of the Accounts.

N. K. Sinha)

For and on behalf of Board of Directors

(C. S. Verma) Director (Finance) (K. Ravi Kumar) Chairman and Managing Director

As per our report of even date attached For M.L. Puri & Company Chartered Accountants

> (Navin Bansal) Partner M. No. 091922

Date: 23.05.2008 Place: New Delhi





# Profit & Loss Account for the year ended 31st March, 2008

(Rs. in Crores)

	For the year ended			For the ye	ear ended
	Schedule		31.03.2008	3	1.03.2007
EARNINGS					
Turnover (Gross)	12	21401.01		18738.95	
Less : Excise duty & Service Tax		2096.37		1501.42	
Turnover (Net)			19304.64		17237.53
Other income	12A		1444.76		823.56
Accretion/Decretion to Work-in-progress	13		827.26		181.19
& Finished Goods			04550.00	_	1001000
OUTGOINGS			21576.66	_	18242.28
Consumption of Material, Erection and					
Engineering Expenses	14		11820.87		10017.90
Employees' remuneration & benefits	15		2607.69		2368.95
Other expenses of Manufacture,	16		1644.23		1660.07
Administration, Selling and distribution					
Provisions	17		778.25		171.86
Interest & other borrowing costs	18		35.42		43.33
Depreciation and amortisation	5		297.21		272.97
Less: Cost of jobs done for internal use			38.32	_	28.36
			17145.35		14506.72
Profit before prior period items			4431.31		3735.56
Add/(Less): Prior period items (Net)	18A		- 0.92		0.51
Profit before tax			4430.39	_	3736.07
Less: Provision for taxation					
For Current Year					
- Current Tax		1934.95		1421.00	
(Incl. wealth tax Rs. 0.07 crore (Previous year					
Rs. 0.06 crore)					
- Fringe Benefit Tax		27.10		49.00	
- Deferred Tax		- 402.77		162.93	
For earlier years		1559.28		1307.07	
- Tax		11.77		14.30	
			1571.05		1321.37
Profit after tax			2859.34		2414.70
Add: Balance of profit brought forward from last year	r		442.72		219.06
Foreign project Reserves written back			1.02		1.45
Profit available for appropriation			3303.08		2635.21
Less: Appropriation-		0055		4=00.00	
- General Reserve		2000.00		1500.00	
- Dividend (incl. Interim Dividend of Rs.440.57 crore	€,	740.50		500.00	
previous year Rs.305.95 crore)		746.52		599.66	
<ul> <li>Corporate Dividend tax (incl. Rs.74.87 crore, previous year Rs. 42.91 crore)</li> </ul>		126.87		00.00	
previous year KS. 42.91 Clore)		120.07	2873.39	92.83	2192.49
Deleves serviced to Deleves Of set					
Balance carried to Balance Sheet			429.69	_	442.72
Basic and Diluted Earning per share (in Rs.) (Refer no. 21 of Schedule 19)	note		58.41		98.66

no. 21 of Schedule 19)

**Notes to Accounts** 

19

Schedules 1 to 19 & Significant accounting policies form an integral part of the Accounts.

(N. K. Sinha) Secretary

Date: 23.05.2008

Place : New Delhi

CSVermin. (C. S. Verma) Director (Finance)

For and on behalf of Board of Directors

(the v

(K. Ravi Kumar)

Chairman and Managing Director

As per our report of even date attached For M.L. Puri & Company Chartered Accountants

(Navin Bansal) Partner M. No. 091922





# Cash Flow Statement for the year ended March 31, 2008

(Rs. in Crores)

	2007-08	2006-07
A. CASH FLOW FROM OPERATING ACTIVITIES		
Net Profit Before Tax as per Profit and Loss Account	4430.39	3736.07
Adjustment for		
Depreciation/Amortisation	297.24	273.16
Lease Equalisation	29.87	42.24
Profit on sale of Fixed assets	-1.72	-1.15
Interest paid	35.44	43.33
Interest/Dividend Income	-903.81	-335.86
Operating Profit before Working Capital changes	3887.41	3757.79
Adjustment for		
Trade & Other Receivables	-2385.98	-2474.12
Inventories	-1518.73	-473.30
Trade Payable & Advances	5768.50	3545.00
Cash generated from operations	5751.20	4355.37
Direct Taxes Paid	-2273.30	-1534.00
NET CASH INFLOW FROM OPERATING ACTIVITIES	3477.90	2821.37
B. CASH FROM INVESTING ACTIVITIES		
Purchase of Fixed Assets	-702.97	-442.36
Sale and Disposal of Fixed Assets	5.34	6.34
Interest & Dividend Receipts	685.09	223.36
NET CASH USED IN INVESTING ACTIVITIES	12.54	212.66
C. CASH FLOW FROM FINANCING ACTIVITIES		
Long Term Borrowings	5.10	-469.36
Dividend Paid (including tax on dividend)	-858.89	-405.14
Interest paid	-34.46	-59.27
NET CASH USED IN FINANCING ACTIVITIES	888.25	933.77
D. NET INCREASE IN CASH AND CASH EQUIVALENTS	2577.11	1674.94
Opening Balance of Cash and Cash Equivalents	5808.91	4133.97
Closing Balance of Cash and Cash Equivalents	8386.02	5808.91

For and on behalf of Board of Directors

(N. K. Sinha) Secretary

(C. S. Verma) Director (Finance)

CSVermer

(K. Ravi Kumar) Chairman and Managing Director

As per our report of even date attached For M.L. Puri & Company Chartered Accountants

(Navin Bansal) Partner M. No. 091922

Date: 23.05.2008 Place: New Delhi





# Schedule-1 Share Capital

(Rs. in Crores)

	AS AT 31.3.2008	AS AT 31.3.2007
Authorised		
200,00,00,000 (Previous Year 32,50,00,000) equity		
shares of Rs. 10/- each	2000.00	325.00
Issued, Subscribed & Paid up		
48,95,20,000 fully paid (Previous Year 24,47,60,000) Equity shares		
of Rs. 10/- each of which 7,41,11,200 Shares	489.52	244.76
(Previous Year 7,41,11,200) alloted for consideration other		
than cash and 24,47,60,000 (prev year nil) alloted as bonus shares		
	489.52	244.76

# Schedule-2 Reserves & Surplus

	AS AT	31.3.2008	AS AT	31.3.2007
Capital Reserve				
Opening Balance	2.75		2.75	
Less: Deductions/Adj	0.01	2.74	0.00	2.75
Foreign Project Reserve				
Opening Balance	3.57		5.02	
Less: Deductions/Adj	1.02	2.55	1.45	3.57
Bonds Redemption Reserve				
Opening Balance	0.00		500.00	
Less: Deductions/Adj	0.00	0.00	500.00	0.00
General Reserve				
Opening Balance	8094.47		6329.80	
Add: Transferred from Bonds Redemption Reserve Account	0.00		500.00	
Less : Adjustment of Transitional Provision AS-15 ®	0.00		235.33	
Less : Adjustment of bonus shares	244.76		0.00	
Add : Transferred from Profit & Loss Account	2000.00	9849.71	1500.00	8094.47
Profit & Loss Account		429.69		442.72
		10284.69		8543.51



### Schedule-3 Secured Loans

(Rs. in Crores)

	AS AT 31.3.2008	AS AT 31.3.2007
Debentures/Bonds	0.00	0.00
From Financial Institutions	0.00	0.00
Packing credit & others	0.00	0.00
	0.00	0.00

# Schedule-4 Unsecured Loans

	AS AT 31.3.2008	AS AT 31.3.2007
-Credits for Assets taken on lease	91.06	85.96
(due within one year Rs. 34.46 Crores (Previous		
year Rs. 30.52 Crores)		
Interest accrued and due on :		
- State Government Loans	2.33	2.33
- Credits for Assets taken on lease	1.79	1.04
	95.18	89.33



### Schedule-5 Fixed Assets

(Rs. in Crores)

		Gross Block			Depr	eciation	Net	Block	
Particulars	Cost as at 31.03.2007	adjustments during the	Deductions/ adjustments during the	Cost As at 31.03.2008	Lease adjustment Account	Depreciation/ Amortisation upto	As at 31.03.2008	As at 31.03.2007	Depreciation/ Amortisation for the year
		year	year			31.03.2008			
Factory/Office Complex									
Freehold land (incl. development exp.)	4.23		0.01	4.22			4.22	4.23	
Leasehold land (incl. development exp.)	6.15			6.15		0.43	5.72	5.73	0.01
Roads, bridges and culverts	7.18		0.13	7.05		2.91	4.14	4.28	0.12
Buildings	308.66	34.39	-4.62	347.67		217.65	130.02	112.17	23.07
Lease-hold buildings	3.04			3.04		1.10	1.94	1.99	0.05
Drainage, sewerage and water supply	12.27	0.21		12.48		9.56	2.92	3.00	0.29
Railway siding	7.67	0.24		7.91		7.58	0.33	0.14	0.03
Locomotives and wagons	16.01			16.01		15.02	0.99	1.31	0.34
Plant & Machinery	2306.81	181.09	5.35	2482.55		2039.66	442.89	405.37	142.91
Electronic data processing equipments	94.99	6.40	2.96	98.43		86.67	11.76	12.30	5.29
Electrical installations	87.83	7.57	0.21	95.19		68.56	26.63	22.28	3.09
Construction Equipment	223.24	27.18	0.06	250.36		177.49	72.87	68.21	22.47
Vehicles	18.27	0.78	0.28	18.77		15.58	3.19	3.16	0.76
Furniture & Fixtures	10.82	3.93	0.12	14.63		5.68	8.95	5.69	0.65
Office & other equipments	65.19	4.75	-4.06	74.00		53.48	20.52	16.56	3.00
Fixed assets costing upto Rs. 10000/-	49.93	6.12	0.11	55.94		55.94			5.97
Capital expenditure	0.44			0.44		0.44			
Assets Given on Lease	497.15			497.15	-59.13	406.48	31.54	101.18	39.77
EDP Equipment taken on lease	132.68	19.58	6.10	146.16		74.29	71.87	79.79	26.52
Office & other equipment taken on lease	5.23	0.58	4.29	1.52		0.45	1.07	2.97	0.40
Intangible Assets									
- Internally developed									
- Software	4.06	0.38	-2.36	6.80		6.26	0.54	0.01	0.93
- Others	1.37	1.09		2.46		0.57	1.89	0.65	0.29
Others									
- Software	50.64	11.48	0.04	62.08		39.24	22.84	26.39	14.11
- Technical Know-how	10.88	11.98		22.86		6.57	16.29	5.54	1.23
- Others	8.76		-0.04	8.80		7.14	1.66	3.75	1.50
	3933.50	317.75	8.58	4242.67	-59.13	3298.75	884.79	886.70	292.80
Township/Residential									
Freehold land (incl. development exp.)	2.24			2.24			2.24	2.24	
Leasehold land (incl. development exp.)	2.04			2.04		0.50	1.54	1.56	0.02
Roads, bridges and culverts	4.83	0.10	-0.13	5.06		2.67	2.39	2.36	0.09
Buildings	130.39	2.94	6.16	127.17		54.33	72.84	78.55	1.99
Leasehold buildings	0.41	2.01	0.10	0.41		0.25	0.16	0.18	0.01
Drainage, sewerage and water supply	16.67	0.05		16.72		12.51	4.21	4.54	0.39
Plant and Machinery	10.07	0.54	0.06	10.72		8.14	2.51	2.43	0.45
Electrical installations	16.17	0.28	0.00	16.43		12.91	3.52	3.59	0.43
Vehicles	1.21	0.20	0.14	1.07		0.96	0.11	0.15	0.04
Furniture & Fixtures	0.20	0.23		0.43		0.30	0.11	0.13	0.04
Office & other equipments	15.35	1.20		16.53		9.90	6.63	6.33	0.89
Fixed assets costing upto Rs. 10000/-	1.89	0.18		2.05		2.05		0.00	0.09
3 11 12 13 13 13	201.55	5.52		200.80		104.33	96.47	102.04	4.41
Total of Factory & Township	4135.05	323.27		4443.47	-59.13	3403.08	981.26	988.74	297.21
Previous year	3822.06	327.07		4135.05	-29.26	3117.05	988.74		272.97
	3022.30	021.01	1 1.50	. 100.00	20.20	0111.00	500.74	302.20	212.01

Gross Block as at 31.03.2008 includes assets condemned and retired from active use Rs. 30.71Crores (Previous year Rs. 25.01 Crores).

Net Block as at 31.03.2008 includes assets condemned and retired from active use Rs. 0.30 Crores (Previous year Rs.0.06 Crores).

Gross Block excludes cost of assets purchased out of grant received from Government of India Rs.30.81 Crores (Previous Year Rs.30.81Crores) for research and assets as executing agency since the property does not vest with the Company.

The Company's contribution or expenditure towards construction, development of assets not owned by the Company is capitalised under the general head Capital Expenditure' and written off to revenue in five years.

There is no impairment loss in Intangible assets during the year.





# Schedule-6 Capital work-in-progress (at cost)

(Rs. in Crores)

	AS AT 31.3.2008	AS AT 31.3.2007
Construction work-in-progress-Civil	243.03	85.57
Construction Stores (including in transit)	5.63	4.12
Plant & Machinery and other equipments		
-Under Erection/Fabrication/awaiting erection	283.50	151.69
-In transit	124.07	60.08
Intangible Assets under development	1.80	1.08
	658.03	302.54

# Schedule-7 Investments

			(,,	o. III O10100)
	AS A	AT 31.3.2008	AS AT	31.3.2007
LONG TERM				
Shares: UNQUOTED (Fully Paid up)				
<b>TRADE:</b> 360 (previous year 360) Equity shares of Rs. 38.95 each of Engineering Projects (India) Ltd.	*		*	
728960 (previous year 728960) Equity shares of Rs. 10/-each of AP Gas Power Corporation Ltd.	0.91		0.91	
<ul> <li>5000000 (Previous year 5000000) Equity shares of Rs. 10/-</li> <li>each of Neelachal Ispat Nigam Ltd. (Refer Note No.7 of Schedule-19)</li> </ul>	5.00	5.91	5.00	5.91
Shares in Joint Ventures Companies		-		
<ul> <li>1999999 (previous year 1999999) Equity Shares of Rs. 10/-each of Powerplant Performance Improvement Ltd.</li> </ul>	2.00		2.00	
Less : Provision for dimunition in value	2.00	_	2.00	
	0.00		0.00	
<ul> <li>2379999 (previous year 2379999) Equity Shares of Rs. 10/-each of BHEL-GE Gas Turbine Services Pvt. Ltd</li> </ul>	2.38	2.38	2.38	2.38
OTHER THAN TRADE: 3 (Previous year 3) shares of Rs. 100/- each of BHEL House Building Co-operative Society Ltd., Hyderabad		*		*
		8.29	_	8.29
* Value of less than Rs. 1 lakh/-			_	
Aggregate value of Unquoted Investments		8.29		8.29



## Schedule-8 Current Assets

	AS A	T 31.3.2008	AS A	T 31.3.2007
Inventories @				
(As certified by the management)				
Stores & Spare parts				
- Production	124.70		108.64	
- Fuel stores	7.71		13.61	
- Miscellaneous	15.02	147.43	10.00	132.25
Raw Material & Components		1693.66		1296.93
Material-in-transit		643.25		370.43
Materials with Fabricators/Contractors		145.56		134.26
Loose Tools		19.21		12.66
Scrap (at estimated realisable value)		27.49		29.88
Finished Goods	472.98		302.56	
Inter division transfers in transit	84.25		98.99	
Includes:				
- Rs. 91.83 Crores (previous year Rs. 3.67 Crores)				
Finished Goods in transit.		557.23		401.55
Work-in-progress (including items with sub-contractors)		2548.53		1875.63
		5782.36		4253.59
Less : Provision for non-moving stock		45.96		35.92
@ Valued as per Significant Accounting Policy No. 8		5736.40		4217.67
Sundry Debtors*				
- Debts outstanding for a period exceeding six months		6243.99		4531.03
- Other debts		6808.54		6146.32
		13052.53		10677.35
Less : Provision for Doubtful debts		995.50		981.53
Less : Automatic Price Reduction Adjustment a/c		82.16		83.01
		11974.87		9612.81
*Includes deferred debts- Rs. 3930.78 crores				
- (Previous year Rs. 3594.99 crores)				
Particulars of Sundry debtors :				
Debts considered good for which the Company holds		11974.87		9612.81
no security other than the debtors' personal security				
Debts considered doubtful and provided for		1077.66		1064.54
		13052.53		10677.35



## Schedule-8 (Contd.) Current Assets

			AS AT 31.3.2008	AS AT 31.3.2007
Cash and Bank Balances				
Cash & stamps in hand			0.95	1.24
Cheques, Demand Drafts in hand			265.94	286.86
Remittances in transit			56.42	37.78
Balances with Scheduled Banks				
Current Account			1172.57	1738.53
Deposit Account			6875.00	3740.00
Balance with non-scheduled Banks				
	Max	imum		
	Bal	lance		
	(Rs. in	crores)		
	•	the year		
Current Accounts	2007-08	2006-07		
- Standard Chartered Bank, Libya	0.09	0.35	0.05	0.17
- Bank Muscat, Oman	125.20	70.28	4.22	0.47
- Barclays Bank Ltd., Zambia	0.01	0.01	0.01	0.01
- Bank of Commerce, Malaysia	0.31	0.31	0.31	0.31
- CIMB Berhad	0.02	0.02	0.02	0.02
- Indo Jambia Bank, Lusaka	0.92	2.90	0.79	1.00
- Commercial Bank of Ethopia	3.04	2.63	3.04	1.44
- Bank of Bhutan, Bhutan	0.08	0.11	0.02	0.01
- Jamahouria Bank, Libya	4.75	3.79	3.61	0.65
- National Bank of Egypt	0.43	0.44	0.10	0.42
- Standard Chartered Bank, Bangladesh	3.24	0.00	0.32	0.00
- Bank of Khartoum, Sudan	6.33	0.00	2.65	0.00
			8386.02	5808.91
Other Current Assets				
Interest Accrued on Banks Deposits and investme	ents		421.09	199.70
			421.09	199.70
Summary of Current Assets				
Inventories			5736.40	4217.67
Sundry Debtors			11974.87	9612.81
Cash & Bank Balances			8386.02	5808.91
Other Current Assets			421.09	199.70
			26518.38	19839.09



## Schedule-9 Loans and Advances

			AS AT 31.3.2008		AS AT	Г 31.3.2007
Loans						
Loans to Employees			0.33		0.74	
Loans to others			0.13		0.17	
Interest accrued and or due on loans			8.00	8.46	10.66	11.57
Advances						
(Recoverable in cash or in kind or for va	alue to be receive	ed)				
To employees			21.94		20.53	
For purchases			230.54		99.33	
To others			690.23		551.82	
For capital expenditure			27.81	970.52	3.60	675.28
Deposits						
Balance with customs, Port Trust and other	er Govt. Authoritie	S	195.34		176.07	
[includes Rs.0.03 crores (Previous Year R	s. 0.03 crores)					
by pledge of Post Office pass book with						
Central Excise Authorities]						
Others			39.63	234.97	304.83	480.90
				1213.95		1167.75
Less: Provision for doubtful loans & advar	nces			27.61		26.88
				1186.34	_	1140.87
Particulars of Loans & Advances :					_	
Loans & Advances considered good in res	spect of which			1.20		2.51
the Company is fully secured						
Loans & Advances considered good for w	hich the Company	/		1185.14		1138.36
holds no security other than the Debtors' p	personal security					
Loans & Advances considered doubtful &	provided for			27.61		26.88
				1213.95	_	1167.75
	(Rs. in	m Balance crores) the year 2006-07			-	
Due from Directors of the Company	*	*		*		*
Due from Officers of the Company	0.20	0.25		0.14		0.14
*Amount less than Rs. 1 lakh						



### Schedule-10 Current Liabilities

(Rs. in Crores)

	AS AT	31.3.2008	AS A	T 31.3.2007
Acceptances		59.83		55.42
Sundry Creditors				
<ul> <li>Total outstanding dues of Micro &amp; Small Enterprises (incl. interest)</li> </ul>	38.87		4.96	
- Other Sundry Creditors	4385.13	4424.00	3451.99	3456.95
Advances received from customers & others		11394.62		7692.53
Deposits from Contractors & others		233.81		170.51
Unclaimed dividend *		0.91		0.73
Other liabilities		462.56		356.23
Interest accrued but not due	_	0.72		0.49
		16576.45		11732.86

<sup>\*</sup>There is no amount due & outstanding as at Balance Sheet date to be transferred to Investor Education & Protection Fund.

# Schedule-11 Provisions

(Rs. in Crores)

	AS AT 31.3.2008	AS AT 31.3.2007
Provision for Taxation (Net of Income Tax payments Rs. 4634.29 crores)		
(Previous year Rs. 3186.01 crores)	-201.46	98.02
Dividend	305.95	293.71
Corporate Dividend Tax	52.00	49.92
Contractual Obligation	696.57	537.35
Retirement benefits	1492.02	1310.78
Others	899.31	314.45
	3244.39	2604.23

# Schedule-12 Turnover (Gross)

	For the year ended 31.3.2008	For the year ended 31.3.2007
Sales less returns (incl. despatches made to customers Rs.11162.57 crores		
(Previous year Rs. 8519.25 crores)	19029.27	16598.99
Income from external erection & other services	2000.15	1966.13
Revenue from Works Contract	371.59	173.83
	21401.01	18738.95



# Schedule-12A a. Other Operational Income

(Rs. in Crores)

	For the year ended		For the year ended	
		31.3.2008		31.3.2007
Export Incentives		96.70		99.57
Rental income on leased assets	77.77		99.83	
Less: Lease equalisation account	29.87	47.90	42.24	57.59
Scrap		142.47		127.42
Receipt from sale/transfer of surplus stock		0.07		0.18
Others		135.12	_	92.04
		422.26		376.80

### b. Other Income

(Rs. in Crores)

	For the year ended	For the year ended
	31.3.2008	31.3.2007
Profit from sale of fixed assets (net Cr)	1.72	1.15
Dividend on Investment (Long term-Trade)	8.09	17.49
Others (including grants of Rs. 0.30 crores (previous year		
Rs. 0.35 crores) from Government of India for		
Research & Development Projects)	117.25	109.95
	127.06	128.59

### c. Interest Income

	For the year ended	For the year ended
	31.3.2008	31.3.2007
From customers	0.89	*
From employees	0.11	0.18
From banks	621.68	311.97
Others	272.76	6.02
	895.44	318.17
* Amount less than Rs. 1 lakh		
Tax deducted at source Rs.129.59 crores (previous year Rs. 70.27 crores)		
TOTAL OTHER INCOME (a + b + c)	1444.76	823.56
,		



## Schedule-13 Accretion/(Decretion) to Work-in-progress & Finished goods

(Rs. in Crores)

	For the y	For the year ended		For the year ended	
		31.3.2008		31.3.2007	
Work -in -progress					
Closing Balance	2548.53		1875.63		
Opening Balance	1875.63	672.90	1720.86	154.77	
Finished Goods					
Closing Balance	472.98		302.56		
Opening Balance	302.56	170.42	329.58	-27.02	
Inter-division transfer in transit		-16.06		53.44	
		827.26		181.19	
NOTE:					
Element of Excise duty in Finished Goods					
Closing Balance		53.21		34.17	
Opening Balance		34.17		35.67	

# Schedule-14 Consumption of Material, Erection & Engineering Expenses

(Rs. in Crores)

	For the year ended 31.3.2008	For the year ended 31.3.2007
Consumption of Raw material & components	10069.31	8211.95
Consumption of stores & spares	331.38	349.46
Erection and Engineering expenses - payment to subcontractors	1420.18	1456.49
pay	11820.87	10017.90

## Schedule-15 Employees Remuneration & Benefits

(Rs. in Crores)

	For the year ended 31.3.2008	For the year ended 31.3.2007
	31.3.2000	31.3.2007
Salaries, Wages, Bonus, Allowances & other benefits	2019.89	1576.11
Contribution to gratuity fund	115.54	97.00
Contribution to Provident and other funds	133.91	127.27
Group Insurance	5.39	2.02
Staff Welfare Expenses	332.96	566.55
	2607.69	2368.95
Directors (including Chairman & Managing Director)		
- Salaries & Allowances	0.87	0.46
- Contribution to PF	0.06	0.05
- Contribution to gratuity Fund	0.04	0.03
- Others	0.41	0.27

**Note:** The Chairman & Managing Director and Functional Directors have been allowed the use of staff car for both duty and non-duty journeys. The ceiling of the non-duty journey is 1000 Kms per month against recovery of prescribed amount in accordance with their terms & conditions of appointment. The monetary value of the above perquisite for the use of car if calculated in accordance with the provisions of Income Tax Rules, 1962 would amount to Rs. 0.01 Crores (Previous year Rs. 0.01 Crores)





# Schedule-16 Other Expenses of Manufacture, Administration, Selling & Distribution

	(RS. In Cro			
	For the year		For the ye	
	3	31.3.2008	;	31.3.2007
Resident Consultant's Charges		0.36		0.59
Royalty, technical documentation & other consultancy charges		27.39		96.37
Rent (includes Rs. 23.24 crores for rent-residential		30.43		28.54
Previous year Rs. 21.78 crores)				
Excise Duty		138.15		194.02
Power & Fuel		273.07		259.08
Rates & Taxes		35.39		25.51
Service Tax		5.78		4.02
Exchange Variation (Net)		41.59		19.66
Insurance		72.51		54.40
Repairs:				
Buildings		48.64		33.36
Plant & Machinery		17.01		16.77
Others		79.08		58.89
Other expenses in connection with exports		17.39		34.76
Bad debts and amount written off		6.34		21.94
Carriage outward		190.60		175.34
Travelling & conveyance		153.50		142.39
Miscellaneous Expenses		463.73		447.04
Cash discount		0.04		0.02
Liquidated damages charged off		36.11		46.78
Donations		0.80		0.22
Corporate social Expenses		6.32		0.37
	_	1644.23		1660.07
Notes:	_			
Repairs do not include expenditure on departmental				
maintenance which are as under:				
Plant & Machinery	108.70		95.26	
Buildings	32,28		27.28	
Others	19.91	160.89	14.19	136.73
Agency Commission on exports included in expenses in connection with exports		11.40		12.06
Expenditure on Research & Development		220.29		127.28
Payment to Auditors (Net of service tax credit claimed)				127.20
- Fees (includes Rs. 0.04 crores		0.31		0.26
(previous year Rs. 0.03 crores) to auditors abroad)				
- Expenses		0.06		0.08
Income tax matters (includes Rs.  Nil (Provious year, Rs. 0.01 eroses) to guiditare abroad.)		0.06		0.05
Nil (Previous year Rs. 0.01 crores) to auditors abroad )				





# Schedule-16 (Contd.) Other Expenses of Manufacture, Administration, Selling & Distribution

(Rs. in Crores)

	For the ye	ar ended	For the ye	ar ended
	3	31.3.2008	3	31.3.2007
<ul> <li>Certification work (includes Rs. Nil</li> </ul>		0.16		0.16
(Previous year Rs. 0.02 crores) to auditors abroad)				
<ul> <li>Other Professional services (includes Rs. 0.03 crores</li> </ul>				
(Previous year Rs. 0.02 Crores) to auditors abroad)		0.04		0.02
Payment to Cost Auditors		0.01		0.01
Expenditure on entertainment		6.70		5.73
Expenditure on foreign travel				
(for 681 tours (previous year 711 tours))		8.50		10.13
Expenditure on Publicity and Public relations				
<ul> <li>Salaries allowances &amp; other benefits</li> </ul>	4.70		4.58	
<ul> <li>other expenses</li> </ul>	14.42	19.12	12.18	16.76
Director's Fees		0.06		0.07

# Schedule-17 Provisions

(Rs. in Crores)

	For the y	ear ended	For the year	ar ended
		31.3.2008	3	1.3.2007
Doubtful debts, Liquidated Damages and Loans & advances				
Created during the year	211.91		272.88	
Less written back during the year	172.99	38.92	186.41	86.47
Contracutal Obligations				
Created during the year	312.72		236.75	
Less written back during the year	153.46	159.26	205.66	31.09
Others				
Created during the year	840.00		143.57	
Less written back during the year	259.93	580.07	89.27	54.30
		778.25		171.86

# Schedule-18 Interest and Other Borrowing Costs

	For the year ended 31.3.2008	For the year ended 31.3.2007
Interest on:	0.10.200	011012001
Bonds	0.00	27.64
Banks/Financial Institutions borrowings	0.08	2.05
Others	35.34	13.63
Other Borrowing Costs	0.00	0.01
	35.42	43.33



# Schedule-18A Prior Period Items

	For the year	r ended	For the yea	r ended
	3′	31.3.2008		.3.2007
INCOME				
Sales less returns	-0.12		0.78	
Operational income (others)	-0.89		0.03	
Other Income (others)	0.01		-0.06	
Interest Income (others)	0.29	-0.71	0.20	0.95
EXPENDITURE				
Consumption of Raw material & components	1.37		0.14	
Depreciation	0.03		0.19	
Payment to Sub-contractors	-0.02		0.17	
Interest	0.02		0.00	
Misc. Expenses	-1.19	0.21	-0.06	0.44
Prior period adjustments (Net)		-0.92		0.51



# Schedule-19 NOTES TO ACCOUNTS

- Estimated amount of contracts, net of advances, remaining to be executed on capital account and not provided for is Rs. 1062.14 crores (previous year Rs. 371.92 crores) including Rs. 23.70 crores (previous year Rs. 19.38 crores) for acquisition of intangible assets.
- 2. Land and buildings include:
  - a) 13016.258 acres of land (previous year 13031.723 acres), 36 flats (previous year 52 flats) and one building (previous year one building) for which formal transfer/lease deeds have not been executed including for 51.520 acres of land (previous year 51.520 acres) for which the cost paid is provisional; registration charges and stamp duty net of provision already made thereon, would be accounted for on payment. During the year 15.465 Acres of land have been acquired by Ministry of Road Transport & National Highway, Govt. of India.
  - b) 79.076 acres of land (previous year 79.076 acres) leased to Ministry of Defence, Government Departments and others.
  - c) 180 acres of land (previous year 180 acres) being used by the Ministry of Defence and for which further approval of the competent authority for continuance of licensing of the land is awaited.
  - d) 106.858 acres (previous year 106.858 acres) of land is under adverse possession.
- 3. The impact on the profit of providing 100 percent depreciation on fixed assets upto Rs.10000/- each, without considering such impact of earlier years, is as under:

	2007-08	2006-07
100% depreciation		
on assets		
upto Rs.10,000/-		
charged off in		
the accounting year	7.16	6.70
Normal depreciation		
on above	2.05	2.00
Excess amount		
charged off	5.11	4.70

- 4. Sales and despatches to customers:
  - (a) Includes Rs. 151.01 crores (previous year Rs. 438.21 crores) based on provisional prices.
  - (b) Includes Rs. 574.48 crores (previous year Rs. 630.77 crores) for escalation claims raised in accordance with the sales contracts, inclusive of escalation claims on accrual basis to the extent latest indices were available;
  - (c) Includes despatches of equipment valued at Rs. 15.18 crores (previous year Rs. 27.04 crores) held on behalf of customers at their request for which payment has been received by the Company; and
  - (d) Excludes Rs. Nil (previous year Rs.8.51 crores) for price reduction due to delay in delivery as per terms of the contract.
- 5. Contingent Liabilities:
  - (a) Claims against the company not acknowledged as debt:
    - (i) Income Tax pending appeals (net of provisions) Rs. 28.41 crores (previous year Rs. 48.72 crores) against which Rs. 0.01 crore (previous year Rs. 0.01 crore) has been paid under protest and included under the head deposits- others.
    - (ii) Sales Tax demands Rs. 295.18 crores (previous year Rs. 328.60 crores) against which Rs. 78.03 crores (previous year Rs. 88.90 crores) has been paid under protest/court orders and included under the head advances recoverable.
    - (iii) Excise Duty demands Rs.140.23 crores (previous year Rs. 149.18 crores), against which Rs.12.49 crores (previous year Rs. 6.52 crores) has been paid under protest/court orders and included under the head advances recoverable.
    - (iv) Custom Duty demands Rs. Nil (previous year Rs. 0.76 crore).
    - (v) Court / Arbitration cases Rs. 76.17 crores (previous year Rs. 82.47 crores)
    - (v) Liquidated Damages Rs. 809.53 crores (previous year Rs. 257.22 crores).

- (vi) Counter claim by contractors Rs. 40.99 crores (previous year Rs. 40.40 crores).
- (vii) Others Rs. 56.31 crores (previous year Rs. 47.65 crores).

In view of the various court cases / litigations and claims disputed by the company financial impact as to outflow of resources is not ascertainable at this stage.

- (b) Bills discounted under IDBI scheme outstanding at the close of the year amount to Rs. 0.40 crore (previous year Rs. 1.78 crores).
- 6. During the year, the income tax department determined a refund of Rs.532.95 crores (including interest of Rs.270.16 crores) arising due to order of the Income Tax Appellate Tribunal in respect of AY 1992-93 allowing the company's claim of normal and extra-ordinary exchange variation loss. Consequently the amount allowed by Income Tax Department in respect of AY 1993-94 to 1999-2000 on account of normal and exchange variation loss was withdrawn resulting in demand of Rs.188.80 crores (including interest of Rs.17.43 crores), which was adjusted against the refund of Rs.532.94 crores. Accordingly, a net refund of Rs.344.14 crores (including net interest of Rs.252.72 crores) was given to the company.
- 7. The company invested a sum of Rs. 5 crores towards equity shares of Rs. 10/- each (at par) in erstwhile Konark Met Coke Ltd. (KMCL) Bhubneshwar, to secure orders for equipment being supplied by the company to erstwhile KMCL and Neelachal Ispat Nigam Ltd (NINL). Pursuant to Order passed by Hon'ble Orissa High Court, KMCL was amalgamated with NINL u/s 391 read with section 394 of the Companies Act, 1956 & in terms of the scheme of amalgamation sanctioned by the Hon'ble High Court, Orissa, NINL had allotted equity shares aggregating to Rs. 5 crores (previous year Rs. 5 crores) to the company. The equity participation in NINL is restricted to 7.5% of the value of the orders received with a maximum of Rs. 17.32 crores (previous year Rs. 17.32 crores). Government approval for investment in equity shares is under process.
- 8. The Board of Directors in January, 2007 recommended the issue of Bonus Shares in the ratio of 1:1 to the Shareholders of the Company.

Subsequently, an Extraordinary General Meeting of the Shareholders of the Company was convened on 30th April,2007. The Shareholders approved increase in the Authorised Share Capital from Rs. 325 crores divided into 32.50 crore Equity Shares of Rs.10/- each to Rs. 2,000 crores divided into 200 crore Equity Shares of Rs. 10/- each and approved issue of Bonus Shares in the ratio of 1:1 i.e. one Bonus Share of Rs. 10/- each for every one fully paid up Equity Share of Rs.10/- each held by them on the 'Record Date'. The Committee of Board of Directors of the Company allotted the Bonus Shares on 6th June, 2007.

- 9. Cash credit limit (including bills discounting limit in respect of IDBI Scheme) from banks aggregating to Rs. 100 crores (previous year Rs. 100 crores) and Company's counter guarantee / indemnity obligations in regard to bank guarantee / letters of credit limit aggregating to Rs. 20000 crores (previous year Rs. 14000 crores) sanctioned by the consortium banks are secured by first charge by way of hypothecation of raw materials, components, work in progress, finished goods, stores, book debts and other current assets both present and future. The outstanding bank guarantee as at 31.03.2008 is Rs. 19314 crores.
- 10. Other liabilities include a sum of Rs. 100.51 crores (previous year Rs. 100.51 crores) 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.
- 11. Amorphous Silicon Solar Cell Plant (ASSCP), Gurgaon was taken from Ministry of Nonconventional Energy Sources on lease for a period of 30 years. The lease agreement with the Government is yet to be finalised.
- 12. Responses to confirmation of outstanding balances of Sundry debtors, creditors, contractor's advances, deposits and stocks/materials lying with subcontractors/fabricators were received in few cases, some of them seeking details. The reconciliations with the parties are carried out as an ongoing process.



13. The disclosure relating to Micro and Small Enterprises

(Rs. in Crores)

		·	11 010163)
S. No.		2007-08	2006-07
1.	The principal amount remaining unpaid to supplier as at the end of accounting year.	36.67	4.39
2.	The interest due thereon remaining unpaid to supplier as at the end of accounting year.	2.20	0.57
3.	The amount of interest paid, along with the amounts of the payment made to the supplier beyond the appointed day during the year.	10.74	0.99
4.	The amount of interest paid in terms of section 18, along with the amounts of the payment made to the supplier beyond the appointed day during the year.	-	_
5.	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 the interest specified under this Act.	0.17	-
6.	The amount of interest accrued during the year and remaining unpaid at the end of the accounting year.	0.72	0.32
7.	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 enterprise, for the purpose of disallowance as a deductible expenditure.	0.03	0.01

14. (a) The disclosures relating to Construction Contracts entered on or after 01.04.2003 as per the requirement of Accounting Standard AS-7(Revised) are as follows:

	(17.5	. In Ciores)
	2007-08	2006-07
Contract revenue	15378.47	14320.19
recognized during the year		
In respect of Contract in		
progress as on 31.03.2008		
<ul> <li>Cost incurred and</li> </ul>	40253.90	26391.12
recognised profits		
(less recognized		
losses)		
<ul> <li>Amount of advance</li> </ul>	4919.05	3746.36
received		
<ul> <li>Amount of retentions</li> </ul>	2831.08	2707.18
(deferred debts)		
In respect of dues from		
customers after		
appropriate netting off		
<ul> <li>Gross amount due</li> </ul>	1253.60	1575.12
from customers for		
the contract work as		
an asset		
<ul> <li>Gross amount due to</li> </ul>	2011.34	1120.23
customers for the		
contract work as		
a liability		
<ul> <li>Contingencies</li> </ul>	_	_

- (b) The estimates of total costs and total revenue in respect of construction contracts entered on or after 1<sup>st</sup> April 2003 in accordance with Accounting Standard (AS) -7 (R) Construction Contracts are reviewed and up dated periodically during the year by the management and necessary adjustments are made in the current year's account.
- 15. The Company has revised its accounting policy of Exchange differences relating to Fixed Assets, by charging to Profit & Loss Account as against adjustment to the carrying amount of fixed assets in earlier years, in line with announcement made by ICAI. The impact on Profit before Tax due to this change is decrease of Rs. 3.17 crores.
- 16. The Company has revised its accounting practice of Recognition of duty drawback on export/deemed export contracts on accrual basis and matching concept as against on receipt of rate letter from



Drawback Directorate. The impact on Profit before Tax due to this change is increase of Rs. 24.91 crores. During this year a public notice No.102 (RE-2007) 2004-09 dated 16.01.2008 has been issued by DGFT on release of payment of duty drawback after 100% completion of supplies and at least 90% receipt of payment. The company as a 'going concern' has recognized the duty drawback (including terminal excise duty refund) on accrual and matching concept in line with AS-12.

# 17. The disclosure relating to derivative instruments:

- The derivative instruments that are hedged and outstanding as on 31.03.2008 is Nil [previous year Euro 0.44 crores (Indian Rs. 25.14 crores)].
- b) The foreign currency exposures that are not hedged by derivative instruments or otherwise are as under:

(Figures in Crores)

	2007-08		200	6-07
	In foreign currency	In Indian Rs.	In foreign currency	In Indian Rs.
a) Assets / Receivables (i.e. Debtors)				
In US \$	19.89	790.29	12.93	568.59
In Euro	5.40	334.23	4.33	247.99
In LYD	0.67	21.87	3.25	109.73
In RO	0.23	23.16	5.60	627.59
In Others		14.56		7.40
b) Liabilities (i.e. Advance from customers/creditors)				
In US \$	17.75	714.79	14.04	598.77
In Euro	10.89	684.83	1.59	93.38
In LYD	0.57	19.09	0.35	11.91
In Others		43.72		39.79

### 18. The disclosure relating to AS-15 (R) – Employee Benefits

a) Effective April 1, 2006 the company adopted the revised Accounting Standard 15 (R) on Employee Benefits. The following disclosure set out the status as required under AS 15 (R).

## b) Gratuity Plan

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.

Reconciliation of opening and closing balances of the present value of the defined benefit obligation as at the year ended 31.03.2008 are as follows:

1.	Change in present value of obligation	2007-08	2006-07
	a) Present value of obligation as at the beginning	856.36	752.39
	b) Acquisition adjustment	-	-
	c) Interest Cost	64.23	56.43
	d) Past service cost	-	-
	e) Current service cost	55.94	32.15
	f) Curtailment cost / (Credit)	+	-
	g) Settlement cost / (Credit)	-	-
	h) Benefits paid	(75.58)	(53.56)



(Rs. in Crores) Actuarial (gain) / Loss 77.28 68.96 Present value of obligation at the end of the period 978.23 856.36 2. Change in the fair value of plan assets a) Fair value of plan assets at the beginning 856.36 752.39 b) Acquisition Adjustments Expected return on plan assets 78.79 69.22 d) Contributions e) Benefits paid (75.58)(53.56)Actuarial gain / (Loss) on plan assets 3.12 (8.69)862.69 g) Fair value of plan assets as at the end of the year 759.36 Fair value of plan assets a) Fair value of plan assets at the beginning 856.36 752.39 b) Acquisition Adjustments c) Actual return on plan assets 60.53 81.91 d) Contributions e) Benefits paid (75.58)(53.56)Fair value of plan assets at the year end 862.69 759.36 g) Funded status (115.54)(97.00)h) Excess of actual over estimated return of plan assets 3.12 (8.69)Actuarial gain / loss recognized a) Actuarial gain / (loss) for the period - obligation (77.28)(68.96)b) Actuarial (Gain) / loss for the period – plan assets 8.69 (3.12)77.64 c) Total (gain) / loss for the period 74.16 74.16 d) Actuarial (gain)/ loss recognized in the period 77.64 e) Unrecognized actuarial (gains)/ losses at the end of the period The amount recognized in balance sheet and statement of profit and loss 5. Present value of obligation as at end of the period 978.23 856.36 862.69 b) Fair value of plan assets as at the end of period 759.36 Funded status (115.54)(97.00)c) d) Excess of actual over estimated 3.12 (8.69)Unrecognised actuarial (gains)/ losses Net asset/ (liability) recognized in balance sheet (115.54)(97.00)Expense recognized in the statement of profit and loss a/c 6. a) Current service cost 55.94 32.15 Past service cost 64.23 Interest cost 56.43 d) Expected return on plan assets (78.79)(69.22)e) Curtailment cost / (Credit) f) Settlement cost / (credit) g) Net actuarial (gain) / loss recognized in the period 74.16 77.64 h) Expenses recognized in the statement of profit & loss 115.54 97.00

Assumptions- Discounting rate - 7.50%, Future salary increase - 5.00%., Expected rate of return on plan assets - 9.20%.



# c) Post Retirement Medical Benefits plan

(Rs. in Crores)

			(RS. In Crores)
1.	Change in present value of obligation	2007-08	2006-07
	a) Present value of obligation as at the beginning	570.51	260.67
	b) Acquisition adjustment	-	-
	c) Interest Cost	42.79	10.06
	d) Past service cost	-	-
	e) Current service cost	11.61	19.55
	f) Curtailment cost / (Credit)	-	-
	g) Settlement cost / (Credit)	-	-
	h) Benefits paid	(22.75)	(19.61)
	i) Actuarial (gain) / Loss	63.93	299.84
	j) Present value of obligation as at the end of year	666.08	570.51
2.	Change in the fair value of plan assets	-	-
3.	Fair value of plan assets	-	-
	Funded Status	(666.08)	(570.51)
4.	Actuarial gain / loss recognized		
	a) Actuarial gain / (loss) for the period - obligation	(63.93)	(299.84)
	b) Actuarial (Gain) / loss for the period – plan assets	-	-
	c) Total (gain) / loss for the year	63.93	299.84
	d) Actuarial (gain)/ loss recognized in the period	63.93	299.84
	e) Unrecognized actuarial (gains)/ losses at the end of the period	-	-
5.	The amount recognized in balance sheet and statement of profit and loss		
	a) Present value of obligation as at the end of the year	666.08	570.51
	b) Fair value of plan assets as at the end of the year	-	-
	c) funded status	(666.08)	(570.51)
	d) Net assets / (liability) recognized in balance sheet	(666.08)	(570.51)
6.	Expenses recognized in the statement of profit and loss		
	a) Current service cost	11.61	10.06
	b) Interest cost	42.79	19.55
	c) Net actuarial (gain) / loss recognized in the year	63.93	299.84
	d) Expenses recognized in the statement of profit & loss	118.32	329.45

# d) Provident Fund

In line with the guidance note on AS-15 (R) issued by ICAI, the company has got the actuarial valuation of provident fund in respect of PF trusts of the company. As per the actuarial valuation certificate given by company's actuary a liability of Rs. 13.78 crores for likely interest shortfall for the future period, to be compensated by the company to the PF trusts, has been provided in the accounts.



# 19. Related Party Transactions:

i) Related Parties where control exists (Joint Ventures):

Powerplant Performance Improvement Ltd.

BHEL-GE Gas Turbine Services Pvt Ltd.

- ii) Other related parties (Key Management Personnel- Functional Directors: existing & retired): S/Shri K. Ravi Kumar, C.S. Verma, C.P. Singh, Anil Sachdev, B.P. Rao, S.K. Jain, A.K. Mathur and Ashok K. Puri
- iii) Details of transactions:

(Rs. in Crores)

Particulars	Joint '	Ventures	Key Management Relatives of KM			of KMP	
		Personnel (KMP)					
	2007-08	2006-07	2007-08	2006-07	2007-08	2006-07	
Purchase of Goods and Services	48.85	2.66	0.49				
Sales of Goods and services	59.41	69.70					
Rendering of Services							
Receiving of Services							
Dividend income	8.09	17.49					
Royalty income	0.88	0.44					
Amounts due to BHEL at end of the year	24.33	22.31					
Amounts due from BHEL at end of the year	0.89	0.26	0.04				
Provision for Doubtful debts	0.05	0.23					
Amount written back	-	_					
Guarantees given on behalf of	_	_					
Payment of Salaries			1.38	0.81			
Rent			0.01	0.01			

# 20. Lease:

# a. Details of assets taken on finance lease on or after 1st April, 2001 are as under:

		As on 31.3.2008	As on 31.3.2007
a.	Outstanding balance of Minimum Lease payments		
	- not later than one year	37.86	35.99
	later than one year and not later than five years	68.19	67.15
	<ul><li>later than five years</li></ul>	-	-
	Total minimum lease payments at the balance sheet date	106.05	103.14
b.	Present Value of (a) above		
	not later than one year	30.83	28.64
	later than one year and not later than five years	59.36	57.32
	<ul><li>later than five years</li></ul>	-	-
	Total minimum lease payments at the balance sheet date	90.19	85.96
C.	Finance charges	15.86	17.18
	Present value of Residual value, if any	0.01	0.01



- b. 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.
- c. The future minimum lease payments under non-cancellable operating lease are as under

(Rs. in Crores)

	As on 31.3.2008	As on 31.3.2007
<ul> <li>not later than one year</li> </ul>	4.88	13.43
<ul> <li>later than one year and not later than five years</li> </ul>	7.89	10.96
<ul> <li>later than five years</li> </ul>	0.01	0.81

d. Details regarding rentals in respect of assets taken on lease prior to 1.4.2001 is as given below:

(Rs. in Crores)

				(IXS. III CIOIES
Assets	Cost o	f Assets	over unexp	payable pired period pase
	2007-2008	2006-2007	2007-2008	2006-2007
Computers & Peripherals	5.79	22.99	0.01	0.01
Land & Buildings	0.06	0.06	0.03	0.03
Office equipments	-	-		-
Others	-	-		-
TOTAL	5.85	23.05	0.04	0.04
21. Earnings per Share :				
			2007-08	2006-07
Weighted average number of Equity Shares outstanding during the year	(A)	Nos. in Crores	48.952	24.476
Nominal Value of Equity Share		(Rs.)	10.00	10.00
Net Profit for the year	(B)	(Rs. in Crores)	2859.34	2414.70
Basic and Diluted Earnings Per Share	(B)/(A)	(Rs.)	58.41	98.66
Basic and Diluted Earning Per Share comparative based on enhanced share capital			58.41	49.33

22. The break up of net deferred tax asset on account of timing differences are as under:

	As on 31.3.2008	As on 31.3.2007
Deferred Tax Assets		
Provisions	890.20	604.42
Deferred Revenue Expenditure of Voluntary Retirement Schemes	0.01	10.36
Statutory dues	411.71	220.01
Modvat Adjustments	74.13	42.25
Adjustment under transitional provision of AS-15 (R)	-	98.51
Others	18.40	19.06
	1394.45	994.61
Deferred Tax Liabilities		
Depreciation	56.52	59.45
Net Deferred Tax Assets	1337.93	935.16



#### 23. Joint ventures / Subsidiaries:

- (i) During the year 2007-08, an MoU has been signed between TNEB and BHEL to set up a joint venture company to build, own and operate a 1600 MW (2x800 MW) Super Critical Thermal Power Plant at Udangudi, Tamil Nadu. A sum of Rs. 5 crores was deposited with TNEB towards preliminary expenses for the development of the project. The contribution towards preliminary expenses will be adjusted against the equity contribution of BHEL in the proposed Joint Venture Company.
- (ii) An MoU has been signed between BHEL and Nuclear Power Corporation of India Ltd. on 4th April, 2008 to form a joint venture to carry out EPC activities for power plants (conventional island only) based on atomic energy both within the country and outside.
- (iii) An MoU has been signed between BHEL and NTPC on 7th September, 2007 to form a joint venture company (50:50 equity participation) for carrying out EPC activities in the power sector. The joint venture company NTPC BHEL power projects Pvt. Ltd. was incorporated on 28<sup>th</sup> April, 2008.
- (iv) The Company is in the process of taking over Bharat Heavy Plates and Vessels as a 100% subsidiary in line with Govt. of India letter dated 7th May, 2008.

Pursuant to compliance of Accounting Standard-27 issued by the Institute of Chartered Accountants of India, relevant disclosures relating to Joint ventures are as follows:

a)	Names of joint ventures	Country of	Proportion of
		Incorporation	Ownership
	Power plant Performance Improvement Ltd	India	One share less than 50%
	BHEL-GE Gas Turbine Services Pvt Ltd	India	- do -

- b) The provision in respect of investment in PPIL has been made as PPIL is under liquidation.
- c) (i) Company's share of the contingent liabilities of the BGGTS is Rs. 15.89 crores (previous year Rs. 6.57 crores)
  - (ii) Company's share of the capital commitments of the BGGTS is Rs. Nil (previous year Rs. 0.05 crore)
  - (iii) Guarantees given on behalf of Joint Venture outstanding at the close of the year amounting to Rs. Nil (Previous year Rs. Nil)
  - (iv) Aggregate amount of company's interest in BGGTS as per accounts is as under:

(Rs. in crores)

	2007-2008	2006-2007
Fixed Assets	4.07	4.81
Net Current Assets	27.93	12.23
Secured loans	0.39	0.32
Deferred Tax Liability	0.00	0.00
Deferred Tax Assets	0.57	0.07
Shareholders Funds	32.18	16.79
Income	164.68	149.25
Expenses	129.59	121.15

(v) Information relating to 2007-08 is based on unaudited accounts.



### 24 The disclosure relating to Accounting Standard -29

Particulars	Opening	Additions	Usage / write	Withdrawal /	Closing
	Balance		off / payment Adjus		Balance
Liquidated Damages					
Current year 2007-08	586.45	116.76	36.11	22.66	644.14
(Prev. year 2006-07)	(490.75)	(158.18)	(46.78)	(15.70)	(586.45)
Contractual Obligation					
Current year 2007-08	537.35	312.72	59.95	93.55	696.57
(Prev. year 2006-07)	(506.50)	(236.75)	(61.48)	(144.42)	(537.35)
Provision for wage revision					
Current year 2007-08	82.00	736.97	198.74	-	620.23
(Prev. year 2006-07)	0.00	82.00	0.00	0.00	82.00

- a) 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 Note No. 5 of Schedule-19.
- b) The provision for contractual obligation is made at the rate of 2.5% of the contract value in line with significant Accounting Policy No.14 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. The policy on contractual obligation was also reviewed during the year and the Board has recommended its continuation.
- B) Wage settlement with employees having expired on 31st December 2006, pending finalization of another agreement for revised wage /salary structure, provision of Rs. 736.97 crores has been made making a cumulative provision of Rs. 818.97 crores (previous year Rs. 82 crores) w.e.f. 01.01.2007 to 31.03.2008 based on estimates. Out of this an adhoc payment of Rs. 198.74 crores against wage revision were made during the year and charged to Profit & Loss account and consequent withdrawal from provision.



#### 25. SEGMENT INFORMATION

(Rs. in crores)

		For the year ended 31.3.2008			For the year ended 31.3.200			
Α	PRIMARY SEGMENT-BUSINESS SEGMENTS							
		Power	Industry	Total	Power	Industry	Total	
I.	SEGMENT REVENUE							
a.	Segment Revenue	15918.75	6010.68	21929.43	13857.54	5376.31	19233.85	
b.	Inter-Segment Revenue	0.00	431.72	431.72	0.00	395.34	395.34	
c.	Operating Revenue-External (a) - (b)	15918.75	5578.96	21497.71	13857.54	4980.97	18838.51	
II.	SEGMENT RESULTS							
a.	Segment Results	3931.04	1086.28	5017.32	3581.31	877.15	4458.46	
b.	Unallocated expenses (Net of income)			551.51			679.06	
c.	Profit before Interest, DRE & Income tax(a)-(b)			4465.81			3779.40	
d.	Interest			35.42			43.33	
e.	Net Profit before Income Tax ( c) - (d)			4430.39			3736.07	
f.	Income Tax			1571.05			1321.37	
g.	Net Profit after Income Tax			2859.34			2414.70	
III.	ASSETS & LIABILITIES							
a.	Segment Assets	14896.01	5394.02	20290.03	10813.09	5233.62	16046.71	
b.	Unallocated Assets			10400.20			7250.99	
c.	Total Assets			30690.23			23297.70	
d.	Segment Liabilities	14521.41	4146.40	18667.81	10646.06	2951.45	13597.51	
e.	Unallocated Liabilities			1248.21			911.93	
f.	Total Liabilities			19916.02			14509.44	
IV.	OTHER INFORMATION							
a.	Cost incurred during the period to acquire fixed assets (Incl. CWIP)	517.82	128.09		276.40	126.91		
b.	Depreciation	164.75	59.47		145.20	56.41		
c.	Non Cash Expenses (other than depreciation)	183.17	99.11		95.62	75.48		
В.	SECONDARY SEGMENT- GEOGRAPHICAL SEGMENTS							
		Within India	Outside India	Total	Within India	Outside India	Total	
1.	Net Sales / Income from Operations	20477.64	1020.07	21497.71	17767.48	1071.03	18838.51	
2.	Total Assets	30494.06	196.17	30690.23	22397.01	900.69	23297.70	
3.	Cost incurred during the period to acquire Fixed Assets	653.08	35.03	688.11	427.96	0.34	428.30	

#### **NOTES:**

- 1. The products and services of the company have been grouped under 'Power' and 'Industry' segments depending upon the sector to which they are predominantly identified in the market.
- 2. Power sector includes products and services relating to various power generating sets and its auxilaries.
- 3. Industry sector includes products and services relating to transportation and transmission, electric machines, industrial sets and DG sets and telecommunications and other industrial products and systems.
- 4. Inter segment transfers have been carried out at mutually agreed prices.
- **26.** Previous year's figures have been regrouped/reclassified wherever practicable to conform to current year's presentation.



Pro land	11. 11		L	0 0:		(Rs. in crores)	
Product	Unit	١	during the /ear 07-08	Go	ck of Fin. ods 2007	Cl. Stock of Fin. Goods 31.3.2008	
		Qty.	Value	Qty.	Value	Qty.	Value
BHOPAL SWITCHGEAR, CONTROLGEAR, RECTIF	ER, CAPACITORS						
Switchgear-11 kv to 220 kv high speed air blast circuit breakers	Nos	4505 (3217)	124.50 (107.02)	799 (466)	8.57 (10.32)	55 (799)	0.79 (8.57)
Control Panels	Nos	14 (324)	55.29 (57.49)	0 (0)	0.00 (0.00)	0 (0.00)	0.00 (0.00)
Industrial controlgear	Nos	0 (0)	10.72 (11.43)	0 (0)	0.01 (0.65)	0 (0)	0.00 (0.01)
Traction controlgear for AC, DC & diesel system	Set	231 (228)	107.72 (127.47)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Rectifiers with Electronics	Nos	539 (383)	134.91 (89.83)	1 (0)	0.06 (0.20)	0 (1)	0.00 (0.06)
Capacitors	MVAR	1839 (2336)	12.51 (19.71)	0 (0)	0.62 (0.31)	14 (0)	1.24 (0.62)
Bushings		0 (0)	15.73 (14.39)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
TRANSFORMERS							
Power transformers (upto 400 kv)	MVA Nos.	11986 87	394.64 0.00	0 11	8.47 0.00	0 8	31.27 0.00
	MVA Nos.	(12672) (84)	(325.66) (0.00)	(0) (11)	(5.40) (0.00)	(0) (11)	(8.47) (0.00)
Instrument, welding, transformers and reactors	MVA Nos.	723	20.22	0 0	0.00 0.00	0 0	0.00 0.00
	MVA Nos.	(0) (949)	(22.02) (0.00)	(0) (0)	(0.00) (0.00)	(0) (0)	(0.00) (0.00)
INDUSTRIAL AND TRACTION MACHINES							
Traction Motors for AC,DC & diesel system, main/auxiliary generators	Nos	2763 (2404)	631.52 (502.54)	78 (49)	4.33 (1.27)	107 (78)	8.63 (4.33)
Industrial machines, AC motors upto 1000 HP, DC motors & generators of all types	Nos	911 (857)	200.65 (174.34)	22 (47)	3.07 (6.24)	49 (22)	6.51 (3.07)
HEAVY ROTATING PLANT & TURBINES							
Large electrical machines above 1000 HP	Nos	331 (277)	222.40 (178.92)	16 (14)	8.24 (7.89)	15 (16)	7.38 (8.24)
Water wheel alternators & water turbines & Mini	Nos/ MW	17/T 1284	218.39		4.70		3.51
micro turbines & generators	Nos/ MW	12/G 869	184.55		1.51		0.89
	Nos/ MW Nos/	(12/T) (649) (9/G)	(163.13) (125.57)		(7.82) (11.60)		(4.70) (1.51)
	MW	(497)	(120.01)		(11.00)		(1.51)
Turbo Alternators & Steam turbines &	Nos Nos	1	117.77 (110.31)	(0)	0.00 (0.00)	0	0.00
Heat Exchangers	Nos Nos	18 (26)	98.35 (79.70)	(0) (0)	0.00 (4.82)	3 0	5.48 (0)
Others			140.28 (42.03)		0.00 (0.02)		0.00 (0.00)
		TOTAL	2690.15		39.58		65.70





Product	Unit	<b>`</b>	during the	Go	ck of Fin.	Goods	
		20 Qty.	07-08 Value	1.4.: Qty.	2007 Value	31.3. Qty.	.2008 Value
JHANSI							
Power transformers and special transformers	Nos.	99 (71)	309.18 (152.92)	17 (0)	45.13 (0.00)	4 (17)	11.54 (45.13)
ESP Transformer	Nos.	719 (710)	65.64 (63.53)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
ACEMU Transformer	Nos.	0 (0)	0.61 (0.00)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Freight Loco transformers	Nos.	59 (67)	52.51 (47.86)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Instrument transformers	Nos.	797 (796)	19.43 (21.86)	105 (13)	1.39 (0.29)	69 (105)	1.31 (1.39)
Bus Duct	Nos./Set		77.25 (77.66)	0 (0)	2.28 (0.00)	0 (0)	0.01 (2.28)
Dry Type Transformer	Nos.	84 (139)	18.63 (24.20)	2 (2)	0.08 (0.07)	7 (2)	0.52 (0.08)
Diesel Shunters	Nos.	14 (15)	34.51 (45.68)	0 (0)	0.00 (0.00)	1 (0)	2.66 (0.00)
New Product Loco	Nos.	0 (0)	0.70 (0.68)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Others/Misc.	Nos.		12.00 (19.66)	0 (0)	0.00 (0.00)	0 (0)	0.10 (0.00)
		TOTAL	590.46		48.88		16.14
HEEP, HARDWAR							
Electrical Machines	MW/Nos.	(23/104)	0.00 (19.95)	3/3 (8/5)	0.26 (1.19)	3/3 (3/3)	0.27 (0.26)
Industrial controls panels	Nos.	(-)	0.00 (0.00)	3 (3)	0.19 (0.19)	3 (3)	0.19 (0.19)
Turbo Sets	MW/Nos	10/2530 (15/4830)	1968.15 (1576.75)	(0)	16.38 (9.71)	(-)	10.08 (16.38)
Hydro sets	MW/Nos	4/304 (-)	36.73 (61.91)	(0)	2.02 (0.18)	(-)	0.38 (2.02)
Super Rapid Gun Mount	Nos.	2 (2)	84.25 (42.48)	0 (0)	0.00 (0.00)	(-)	0.00 (0.00)
Gas Turbine	MW/Nos	(-)	9.48 (0.00)	0 (0)	0.00 (0.00)	(-)	0.00 (0.00)
Others		(-)	233.09 (278.14)	0 (0)	5.69 (6.43)	(-)	7.27 (5.69)
		TOTAL	2331.70		24.54		18.19
CFFP, HARDWAR							
Steel Castings	MT	59.40 (51.40)	1.33 (1.14)	5.79 (0)	0.27 (0.00)	0.00 (5.79)	0.00 (0.27)
Steel forgings	MT	47.19 (0)	1.70 (0.00)	2.63 (0)	0.07 (0.00)	0.00 (2.63)	0.00 (0.07)
		TOTAL	3.03		0.34		0.00





Product Unit		Sales during the Year 2007-08		Op. Stock of Fin. Goods 1,4,2007		Cl. Stock of Fin. Goods 31.3.2008	
		Qty.	Value	Qty.	Value	Qty.	Value
BOILER PLANT & SSTP TRICHY							
Boilers	MT	298000+ (251990)	5169.29 (4280.71)	5092 (5264) @	84.47 (75.45)	9655 (5092) @	148.16 (84.47)
Valves	Nos**	89747 (48165)	246.25 (208.50)	3733 (3072)	6.57 (7.14)	5625 (3733)	7.68 (6.57)
Income from testing & other services	Rs.	0 (0)	9.09 (9.26)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Seamless steel tubes	MT	119 (133)	1.96 (1.59)	***	*** @@	***	***
		TOTAL	5426.59		91.04		155.84

- 1. Figures in brackets represent previous year's figures
- 2. + This includes 5764 MTs of BAP, Ranipet, composite turnover for Fossil Boiler (Previous Year 46354 MTs)
- 3. \*\* Correct Weight particulars in terms of tonnage could not be ascertained.
- 4. \*\*\* This excludes opening stock of 28 MT (Rs. 1632 thousands) and Closing stock of 38 MT of Rs.1969 thousands meant for Boiler Plant treated as WIP
- 5. @ This excludes closing stock meant for Boiler treated as WIP = Nos. 3193/ Value Rs. 43964 thousand
- 6. Valves drawn for Boilers Qty. 45211 Nos., Value Rs. 509300 thousands. (Pre Year 51511 Nos. and Value Rs. 580268 thousands)
- 7. 28134 MTs of SS tubes transferred to Boiler Plant for captive consumption.
- 8. @ @ included Raw Mat. (491) & Stores & Spares (492) as per SCH 14A

Product Unit		Y	luring the ear 07-08	Op. Stock of Fin. Goods 1.4.2007		Cl. Stock of Fin. Goods 31.3.2008	
		Qty.	Value	Qty.	Value	Qty.	Value
BAP, RANIPET							
Boiler auxiliaries	MT	140066 (80967)	1279.21 (565.56)	6038 (3881)	44.02 (26.02)	1.22 (6038)	79.42 (44.02)
Wind Mill	MT	0 (0)	0.25 (1.09)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Income from testing & other services		0 (0)	1.69 (1.61)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Income from external erection & other services		0 (0)	2.04 (1.25)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
		TOTAL	1283.19		44.02		79.42



Product	Unit	Y	luring the 'ear 07-08 Value	G	ock of Fin. oods .2007 Value	Go	ck of Fin. ods .2008 Value
HYDERABAD							
60 MW Sets	MW	2+P (1+P)	44.39 (36.18)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
110/120 MW Sets	MW	P (P)	501.73 (156.88)	0 (P)	0.00 (1.50)	P (0)	0.30 (0.00)
Small & Medium Sets	MW	12+P (16+P)	662.24 (339.29)	0 (P)	0.00 (10.79)	2P (0)	75.63 (0.00)
Pumps and heaters	Nos	6+P (1+P)	286.10 (340.19)	1P (12+P)	1.70 (9.06)	(1P)	(1.70)
Compressors	Nos	3+P (4+P)	55.83 (59.28)	1 (7+P)	7.11 (41.41)	(1)	(7.11)
Gas Turbine	Nos	5+P (7+P)	563.47 (461.50)	2 (1+P)	32.19 (64.29)	1P (2)	6.48 (32.19)
Aux. Prodn. Breakers	Nos	(69)	(20.15)	0 (6)	0.00 (0.29)	0 (0)	0.00 (0.00)
Bowl Mills		7+P (1+P)	357.67 (367.97)	0 (P)	0.00 (2.46)	0 (0)	0.00 (0.00)
Heat Exchangers			0.00 (0.00)		(0.00)	Р	0.00 (0.00)
Erection Income			17.83 (5.56)		0.00 (0.00)		0.00 (0.00)
Castings			0.63 (9.79)		0.90 (0.37)		2.61 (0.90)
Breakers Others (serv.)		55	21.21 125.68 (73.22)		0.00 (0.00)	8	2.79 0.00 (0.00)
Breakers Spares			6.64 (6.72)		0.00 (0.00)		0.00 (0.00)
Spares Other than breakers			452.26 (406.25)		0.00 (0.00)		0.00 (0.00)
		TOTAL	3095.68		41.90		87.81
INDUSTRIAL SYSTEMS GROUP							
Control panels	Nos	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Motors & spares	Nos	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Other Equipments		0 (0)	470.55 (423.39)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
		TOTAL	470.55		0.00		0.00





ELECTRONICS DIVISION Energy meters a/Single Phase b/Poly Phase	Nos Nos	Qty. 0 (79500)	<b>Value</b> 0.01	Qty.	Value	Qty.	Value
Energy meters a/Single Phase	Nos	(79500)	0.01				
b/Poly Phase			(5.21)	0 (607)	0.00 (0.04)	0 (0)	0.00 (0.00)
	Nos	0 (0)	0.00 (0.00)	0 (197)	0.00 (0.03)	0 (0)	0.00 (0.00)
Capacitors-Electrolytic	1103			7674 (7674)	0.00 (0.00)	(0) (7674)	0.00 (0.00)
Power devices*	Nos	3699 (3868)	0.42 (1.74)	36 (490)	0.01 (0.30)	0 (36)	0.00 (0.01)
Photovoltaics	KWs	950 (1095)	20.06 (24.42)	4 (10)	0.20 (0.18)	13 (4)	1.82 (0.20)
Simulators (Defence Electronics)	Sets	0 (0)	6.78 (1.28)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
Control Equipments	Cubicles	2885 (2569)	1009.90 (852.16)	0 (14)	1.17 (1.35)	0 (0)	0.00 (1.17)
* Internal Devices included Nos. 2948		TOTAL	1037.17		1.38		1.82
ELECTRO PORCELAINS DIVISION							
Insulators & bushings	MT	9249 (7437)	101.65 (82.66)	637 (598)	5.37 (4.07)	543 (637)	6.52 (5.37)
Ceralin	MT	2184 (1428)	12.57 (18.21)	41 (154)	0.34 (2.51)	165 (41)	1.25 (0.34)
Income from testing & other services		0 (0)	0.73 (0.57)	0 (0)	0.00 (0.00)	0 (0)	0.00 (0.00)
POWER GROUP		TOTAL	114.95		5.71		7.77
Income from erection & Other services & spares			3937.31 (3796.96)		0.00 (1.40)		33.19 (0.00)
JAGDISHPUR		TOTAL	3937.31		0.00		33.19
Insulators	CMT	6589.28 (6458.83)	73.24 (63.46)	506.60 (645.90)	6.47 (7.53)	434.91 (506.60)	5.27 (6.47)
Ceralin	MT	1433.89 (1340.13)	19.78 (16.67)	158.95 (116.58)	1.83	105.50 (158.95)	2.90 (1.83)
		TOTAL	93.02		8.30		8.17
IVP GOINDWAL Industrial Valves	Nos	0 (0)	0.00 (0.00)	72 (134)	0.18 (0.32)	140 (72)	0.66 (0.18)
		TOTAL	0.00		0.18		0.66
CENTRE OF TECHNOLOGY TRANSFER, HYDERABAD			0.74		0.00		0.00
Income from testing & services			0.74 (1.26)		0.00 (0.00)		0.00 (0.00)
ASRS for Modernisation of Cod Kanpur	Lot	LOT (LOT)	8.07 (39.23)		0.00 (0.00)		0.00 (0.00)
Solar Gyesers	Nos	0 (18)	0.00 (0.08)		0.00 (0.00)		0.00 (0.00)
Others	Nos	0 (4)	0.00 (0.08)		0.00 (0.00)		0.00 (0.00)
Cooling Systems	Nos	0 (15)	0.00 (1.48)		0.00 (0.00)		0.00 (0.00)
		TOTAL	8.81		0.00		0.00





Product	Unit	Y	during the Op. Stock of Goods 07-08 1.4.2007		ods	Go	k of Fin. ods .2008
		Qty.	Value	Qty.	Value	Qty.	Value
CFP RUDRAPUR							
SWHS	Nos.	2145 (1770)	2.62 (2.04)	13 (144)	0.01 (0.09)	109 (13)	0.09 (0.01)
Solar Lantern	Nos.	1439 (4590)	3.86 (4.56)	4 (5)	0.00 (0.00)	96 (4)	0.02 (0.00)
ARS Bins Busduct Project	Nos. Sets	5	14.67			150	0.06
		TOTAL	21.15		0.01		0.17
HERP/VARANASI Spares & Repairs for Boiler/ Turbine & Auxiliaries			86.88 (70.26)		0.34 (0.26)		0.28 (0.34)
		TOTAL	86.88		0.34		0.28
TPG BHOPAL Spares(Including Services)			247.20 (343.63)		0.00 (0.00)		0.00 (0.00)
		TOTAL	247.20		0.00		0.00
OSBG & EMRP Repair & Project work			23.19 (8.41)		0.00 (0.00)		0.00 (0.00)
		TOTAL	23.19		0.00		0.00
International Operations Income from Sales (Revenue Recognition Adjustment)			-14.58 (-10.37)		0.00 (0.00)		0.00 (0.00)
		TOTAL	-14.58		0.00		0.00
Industry Sector Income from Sales (Revenue Recognition Adjustment)			-45.44 (-25.76)		0.00 (0.00)		0.00 (0.00)
		TOTAL	-45.44		0.00		0.00
Adjustment for profit element on inv	ventory				-3.66 (-2.88)		-2.18 (-3.66)
	GRAND TOTAL		21401.01		302.56		472.98



# Other information required by Schedule VI of the Companies Act, 1956

# B. Licensed Capacity, Installed Capacity and Actual Production

SL NO	PRODUCT	UNIT	INSTALLED 2007-08	2006-07	ACTUAL I 2007-08	PRODUCTION 2006-07
вно	PAL					
1	Turbo Sets					
	- Steam Turbine/Nuclear Turbine	Set MW	1/1 210 or 250/236	1/1 210 or 250/236	1 250	0
2	Hydro Sets					
	- Hydro Turbine	Nos. MW	25 2500	12 720	17 1284	12 649
	- Hydro Generator	Nos MW	25 2500	12 720	12 869	9 497
3	Large Electrical Machine	Nos	100	100	332	280
4	Traction Machines (Incl.TG/AG,Blower Motors, BPRV etc.)	Nos	3200	3200	2920	2556
5	Power Transformers	Nos MVA	65 15000	65 12000	84 11986	84 12672
6	Instrument Transformer	Nos	200	200	723	949
7	Electrical Machines	Nos	550	550	970	856
8	Switchgear	Nos	3000	3000	4000	3721
9	Capacitor	MVAR	3200	3200	1853	2336
10	Industrial Controlgear	Nos	250	250	0	0
11	Traction Controlgear	Set	220	220	231	228
12	Control Equipment	Nos	600	600	1184	1006
13	Heat Exchangers	Nos MT	52 1100	52 1100	21 0	26 0
14	Control Panels	Nos	600	600	405	601
15	Cathodic Protection System	Tonne	2700	2700	0	0
JHA	NSI					
1	Power Transformers 33kv/ 132kv	Nos./MVA	105/5500	105/5500	88/5974	96/6111
2	Other Transformer -Special Purpose Transformer (Dry Type Trfr. etc.)	Nos	140	140	116	161
	-Traction Transformer (Frt. Loco & ACEMU)	Nos	140	140	157	138
	-Instrument Transformer	Nos	1000	1000	774	937
	-ESP Transformer	Nos	500	500	719	710
3	Bus Duct	Set	@	@		
4	Diesel Shunters	Nos	10	10	15	15
5	AC Locomotives (Upto 6500 HP)	Nos	30	30	0	0

Installed capacity is as reassessed and certified by the management

<sup>@</sup> Bus duct manufacturing is being done within the existing capacity of Transformers. Actual production for 2007-2008 includes job done for internal use for the following Products: For Sister Units: 2 Nos Power Trfr, 4 Nos. Instrument Trfr, 6 Nos. Dry Type Trfr. For Own Unit: 9 Nos. Instrument Trfr.



<sup>\*</sup> Installed capacity of ESP Trfr has been generated out of Instrument Trfrs



# Other information required by Schedule VI of the Companies Act, 1956 (Contd.)

# B. Licensed Capacity, Installed Capacity and Actual Production

SL NO	PRODUCT	UNIT	INSTALLED 2007-08	INSTALLED CAPACITY 2007-08 2006-07		TUAL PRODUCTION 7-08 2006-07	
HEE	EP - HARDWAR						
1	Turbo Sets	MW	5750	3500	2530	4830	
2	Hydro Sets	MW		625	304	-	
3	Electrical Machines	MW		450	-	102	
4	Gas Turbine @@	MW	0	0	-	-	
5	Super Rapid Gun Mounts	Nos	3	3	2	2	

<sup>@ @</sup> Capacity installed for manufacture of gas turbines components like rotor equivalent to 600 MW Gas Turbines. Balance Components for Gas Turbines from existing thermal sets facilities.

Note: Installed Capacity are as certified by management.

Figures of actual production during the year are for respective products, based on trial operations as advised by business sectors. This does not include capacity used for production of other products, spares & services, and Work in Progress.

#### **CFFP HARDWAR**

1	Steel Castings	MT	6000	6000	4416	4035
2	Steel Forging					
	(a) Steel Forgings (Heavy)	MT	2410	2410	646	717
	(b) Medium Forgings (Medium)	MT	3000	3000	2161	2114
3	Billets and Blooms	MT	4000	4000	521	601
4	N F Casting	MT	250	250	46	67

Note: 1. Licensed capacity not shown as the same is not required in terms of new Industrial Policy

2. Installed Capacity is as certified by the management

### **HYDERABAD**

1	Steam Turbines	MW	695	695	1156	840
2	Generators	MW	1360	1360	1630	1348
3	Gas Turbine	MW	480	480	396	499
4	Compressors	Nos	0	0	6	4
5	Pulverisers @@	Nos	63	63	96	95
6	Pumps @	Nos	126	126	200	172
7	Breakers ###	Nos	1035	1035	309	305
8	Heat Exchangers #	Nos	137	137	155	135
9	Oil Rigs ##	Nos	0	0	10	6

Note: Above figures are inclusive of Refurbishment orders

@ BFP, BP, CEP and CWP

@@ Bowl Mills and Tube mills

# HP & LP Heaters, Deaerators, Condensors, Gas Coolers, LO System and Spl HE

## Mud Pumps, H & R Equipment and draw works

### Capacity being re-assessed & figures are 132 KV Breaker equivalents.

## **EDN - BANGALORE**

1	Energy Meters	Nos.	Nil	Nil	0	78696
2	Control Equipments	CUBICLE	2500	2500	3058	2688
3	Power Devices	Nos.	12000	12000	14994	15016
4	Photovoltaics	KWS	2000	2000	1155	2104
5	Simulators (Defence Ele	lectronics) SETS	0	0	0	0



# Other information required by Schedule VI of the Companies Act, 1956 (Contd.)

# B. Licensed Capacity, Installed Capacity and Actual Production

SL NO	PRODUCT	UNIT	INSTALLEI 2007-08	2006-07	ACTUAL I 2007-08	PRODUCTION 2006-07
	10111/		2007-00	2006-07	2007-00	2006-07
HRU	JCHY		+*	+*	+*	+*
1	Boilers	MT	108000	108000	305423	255156
			*A	*A		
2	Valves	MT	2712	2712	91639	6705
		Nos.	**	**	115028	76081
_	Nuclear Otages Consenting Facilities	B 43 A /			VVV	VV
3	Nuclear Steam Generating Equipments	MW	382/500	382/500	XXX	XX
4	Seamless Steel Tubes	MT	40000	40000	30043	25084
5	Armoured Recovery Vehicles	Nos.	25	25		

- + Including 5000 MT for manufacture of equipments for Process Industries.
- \* Includes Sub-Contracting and Sub-Delivery.
- A Excludes 788 MT of IVP/Goindwal
- \*\* Corresponding to 6.5 Steam Generators and 6.5 Reactor Headers for 235 MW (or) 4 Steam Generators and 4 Reactor Headers for 500 MW. Corresponding to the licensed capacity of 50 Nos.
- XX The capacity was utilised for manufacturing components for Nuclear Projects and other Heat Exchangers, Pressure Vessels, 2 Nos. Return Coolers, Inner Vessel and Thermal Baffle were manufactured during 2006-07. Tubesheet drilling job was carried out during 2006-07.
- XXX The capacity was utilised for manufacturing components for nuclear Projects & other Heat Exchangers, Pressure Vessels and components of fossil boilers. 1 No. Reheater Tube Bank, Thermal baffle were manufactured during 2007-08.

### **BAP - RANIPET**

1 2	Boiler Auxiliaries Wind Mill *	MT MT NO	118000	118000	152028	129903
* No	Separate installed capacity added.					
١٧	P GOINDWAL					
1	Industrial Valves &	MT	788	788	1300	947.42
	Valves Spares	Nos			8005	6426
EPD	- BANGALORE					
1	Insulators & Bushings	CMT	6250	6250	6876	6876
2	Assembled Production	MT			10861	9960
3	Ceralin	CMT	745	745	1040	1040
4	Ceralin (Assembled)	MT			2734	2272
IP -	JAGDISHPUR					
1	Insulators	CMT	6000	6000	6798.31	6589.7
2	Ceralin	MT	330	330	705.00	655
3	Ceralin(Assembled)	MT			1752.55	1628.37
CFF	- RUDRAPUR					
1	SWHS	Nos	4000	4000	2241	1639
2	Solar Lanterns	Nos	10000	10000	1531	4589
3	Bus Duct	MT	100	100		



# 27. Other information required by Schedule VI of the Companies Act,1956 (Contd.)

			(NS. III CIUIES)
		For the year ended 31.03.2008	For the year ended 31.03.2007
C.	Value of imports		
	CIF basis		
	Raw materials	2264.65	1419.88
	Components and spare parts	941.97	864.74
	Capital goods	188.52	159.55
D.	Expenditure in foreign currency		
	Royalty	24.78	19.06
	Know-how	0.90	1.40
	Professional & Consultation fees	0.03	65.14
	Interest and others (incl. on foreign sites)	183.33	74.07
	Dividend :@		
	a) number of non-resident shareholders	2976	1563
	b) number of shares held	96127366	52808378
	c) gross amount of dividend	57.68	10.56
	d) year to which dividend relates	2006-07	2005-06
	Interim Dividend : @	(Final Dividend)	(Final Dividend)
	a) number of non-resident shareholders	4502	1904
	b) number of shares held	90667774	51280332
	c) gross amount of dividend	81.60	64.10
	d) year to which dividend relates	2007-08	2006-07
		(Interim Dividend)	(Interim Dividend)

<sup>@</sup> The company has not made any remittance of dividend in foreign currency. The payments have been made to the Bankers/ Power of Attroney holders of non-resident shareholders and as such the exact amount of dividend remitted by them in foreign currency cannot be ascertained.

E.	Value of consumption of raw materials,		
	components, stores & spare parts.		
	#Imported (including custom duty)	2884.22	2649.71
	Indigenous	7516.47	5911.71
	Percentage of total consumption		
	Imported	28	31
	Indigenous	72	69
F.	Earnings in foreign exchange		
	Export of goods (FOB basis) **	817.53	860.65
	Interest	0.02	0.36
	Erection & other services **	119.7	220.74
	Miscellaneous	1.84	14.16

<sup>\*\*</sup> This does not include Rs. 1547.15 Crores (previous year Rs. 2564.23 Crores) on account of deemed exports.

<sup>#</sup> Includes canalised items wherever ascertained.



# 27. Other information required by Schedule VI of the Companies Act,1956 (Contd.)

# G. Statement for raw materials and components consumed

			year ended 03.2008	For the year ended 31.03.2007		
Group of materials	Units	Quantity	Value	Quantity	Value	
Ferrous materials						
	MT	427776		347876		
	Meters	10080453		9393927		
	Nos	2560943		2263172		
	Sq.M	954		230		
	Kg.	54714008		51228947		
	Others	6		2633		
			2750.26		2259.25	
Ion-ferrous materials						
	MT	8015		6579		
	Meters	187237		180301		
	Nos	176089		190647		
	Sq.M.	0		9099		
	Kg.	6360530		4722159		
	RL	21318		18787		
	Others	0		186		
			409.04		334.58	
nsulating materials						
	Meters	51230918		43838617		
	MT	15981		19783		
	Nos	738212		623297		
	Sq.M.	1080986		1972840		
	Kg	1245067		1059204		
	LT	7672039		4551637		
	RL	186962		195449		
	M2	121685		99638		
	KL	136		647		
	ST	15		1158		
	Others	1594	404.04	1448	405.40	
wasslated calcles and Manne	4		181.01		165.13	
nsulated cables and Magne	t wires Meters	1065222		4740050		
	Nos	1965332		1712856		
	Nos Kg	11902 10219		5 4232		
	Ng Others	10219		4232		
	Others	U	27.98	'	23.80	
Components			5591.03		4830.04	
Others			1109.99		599.15	
Total			10069.31		8211.95	



# Balance Sheet Abstract and Company's General Business Profile

i)	Registration details :				
	Registration No.	0 0	4 2 8 1	State Code	5 5
	Balance Sheet				3 1 0 3 0 8
					Date Month Year
ii)	Capital raised during	the year (Amount in Rs.	Crores)		
,	Public Issue	Right I	ssue		
	NIL	NII			
	Bouns Issue 244.76	Private Pl NII			
iii)	Position of mobilisation	on and deployment of fun	ds (Amount in Rs. Cr	rores)	
		Total Liabilities		Tota	l Assets
		3 0 6 9 0 . 2	3	3 0 6 9	9 0 . 2 3
	Sources of Funds	Paid Up Capital		Reserve	s & Surplus
		4 8 9 . 5	2	1 0 2	2 8 4 . 6 9
		Secured Loans	_	U	nsecured Loans
		N I L			9   5   .   1   8
	Application of Funds	Net Fixed Assests*			Investments
		1 6 3 9 . 2			
	* It includes Capital \	WIP Rs. 658.03 Crores	9	L	8   .   2   9
	it illolados capital	Net Current Assest	S	Misc. Expenditure	(Deferred Revenue Exp.)
		7 8 8 3 . 8 8	3		N I L
		Accumulated Losses	3		d Tax Assests
i. /\	Darfarmanas of Com	Nil	·oo)	1   3	3 3 7 . 9 3
iv)	Penormance of Comp	pany (Amount in Rs. Cro Turnover*	es)	Total E	xpenditure
		2 1 4 0 1 . 0	1		4 6 . 2 7
		Duty & Service Tax Rs.			
		ng accretion/decretion in er for the year is Rs. 21			
		Profit Before Tax	_	-	ofit After Tax
		4 4 3 0 . 3	9	2 8 8	5 9 . 3 4
	Ea	arning Per Share in Rs.	. 1) Interior divid		ividend rate
		5 8 . 4	<u>.                                      </u>		up capital of Rs. 489.52 Crores 6 of paid up capital of Rs. 489.52
			Crores.		
v)		ree principal products/serv	rices of Company (as	per monetary terms	5)
	1. Item Code No. : (ITC Code)	8 4 0 2 1 0			
	,	Boiler other than parts			
	2. Item Code No.:	8 5 0 2 3 9 0	2		
	(ITC Code)				
	•	Complete generating set	_ ` `	ines	
	3. Item Code No.: (ITC Code)	8 4 1 1 1 8 2 0	0		
	Product Description:	Gas turbine of thrust exc			
	W 1			behalf of Board of D	8
	(N.K. Sinha)		(C.S. Verma)	V°	. Ravi Kumar)
	Secretary		rector (Finance)		& Managing Director

Date: 23.05.2008 Place: New Delhi

# Additional Information for Shareholders



# Ten Years Summary

(Rs. in C									n Crores)	
	2007-08	2006-07	2005-06	2004-05	2003-04	2002-03	2001-02	2000-01	1999-2000	1998-99
I EARNINGS										
Turnover (Gross)	21401	18739	14525	10336	8662	7482	7287	6348	6634	6795
Other Income	1445	824	547	656	513	838	770	1295	769	827
Changes in stock	827	181	386	540	-31	-45	-37	251	-24	82
Total Earnings	23673	19744	15458	11532	9144	8275	8020	7894	7379	7704
Materials, Erection & Engineering Expenses	11821	10018	8147	5871	4229	3607	3724	3486	3335	3452
Personnel Payments	2608	2369	1879	1650	1640	1505	1445	2170	1133	1242
Other mfg., admn. & selling expenses	4482	3305	2564	2128	2003	2121	1921	1741	1871	1903
Outgoings before interest & depr.	18911	15692	12589	9650	7872	7233	7090	7397	6339	6597
Profit before depreciation, interest & tax	4762	4052	2869	1882	1272	1042	930	497	1040	1106
Depreciation	297	273	246	219	198	185	169	158	154	143
Gross Profit	4465	3779	2623	1663	1074	857	761	339	886	963
Interest	35	43	59	81	60	55	97	44	22	32
Profit before tax	4430	3736	2564	1582	1014	802	664	295	864	931
Provision for tax	1571	1321	885	628	357	358	195	-19	266	388
Profit after tax	2859	2415	1679	953	657	444	469	314	598	544
Dividend	746	600	355	196	147	98	98	73	73	61
Corporate Dividend Tax	127	93	50	27	19	13	0	7	12	7
Retained Profit	1986	1722	1275	731	491	333	371	234	513	476
II WHAT THE COMPANY OWNED										
Gross Block	4443	4135	3822	3629	3460	3349	3182	3004	2811	2657
Less: Accumulated Depreciation & Lease Adj.	3462	3146	2840	2585	2365	2179	2005	1861	1723	1595
Net Block	981	989	982	1044	1095	1170	1177	1143	1088	1062
Capital WIP	658	303	185	95	109	59	57	61	72	73
Investments	8	8	8	9	29	10	10	10	10	15
Current Assets, Loans & Advances	27705	20980	16331	13343	10425	8348	8054	7576	7002	6538
Total assets	29352	22280	17506	14491	11658	9587	9298	8790	8172	7688
III WHAT THE COMPANY OWED										
Borrowings (incl. Credits for assets taken on lease)	95	89	558	537	540	531	666	1026	241	170
Current liabilities & provisions	19821	14337	10320	8446	6337	4756	4714	4163	4574	4437
Total liabilities	19916	14426	10878	8983	6877	5287	5380	5189	4815	4607



# Ten Years Summary (Contd.)

									(	,
	2007-08	2006-07	2005-06	2004-05	2003-04	2002-03	2001-02	2000-01	1999-2000	1998-99
IV NET WORTH OF THE COMPANY										
Share Capital	490	245	245	245	245	245	245	245	245	245
Reserves & Surplus	10285	8544	7057	5782	5051	4559	4225	3586	3354	2840
Less : Deferred Revenue Expenditure	0	0	0	0	18	96	249	229	241	2
Net Worth	10775	8789	7302	6027	5278	4708	4221	3602	3358	3083
V CAPITAL EMPLOYED	7362	5571	5517	4557	3706	3652	4048	4233	3165	2642
VI VALUE ADDED	8323	7182	5683	4254	3680	3248	3074	2660	2832	2983
VII RATIOS										
PBDIT to total assets #	18.4%	20.4%	17.9%	14.4%	12.0%	11.0%	10.3%	5.9%	13.1%	15.0%
Gross profit to capital employed #	69.0%	68.2%	52.1%	40.2%	29.2%	22.3%	18.3%	9.1%	30.5%	37.4%
Turnover/ gross block	4.8	4.5	3.8	2.8	2.5	2.2	2.3	2.1	2.4	2.6
Earnings per share (Rs.)	58.4##	98.7	68.6	39.0	26.9	18.2	19.1	12.8	24.5	22.3
Net worth per share (Rs.)	220.1##	359.1	298.3	246.2	215.6	192.4	172.4	147.2	137.2	125.9
Current Ratio	1.4	1.5	1.6	1.6	1.7	1.8	1.7	1.8	1.5	1.5
Total Debt / Equity	0.01	0.01	0.08	0.09	0.10	0.11	0.16	0.28	0.07	0.05
Return on Net Worth	26.5%	27.5%	23.0%	15.8%	12.5%	9.4%	11.1%	8.7%	17.8%	17.6%
Gross profit margin	20.9%	20.2%	18.1%	16.1%	12.4%	11.5%	10.4%	5.3%	13.4%	14.2%
Net profit margin	13.4%	12.9%	11.6%	9.2%	7.6%	5.9%	6.4%	4.9%	9.0%	8.0%

<sup>#</sup> On the basis of average net assets and capital employed

<sup>##</sup> In 2007-08 paid up share capital increased from Rs. 244.76 crore in earlier years to Rs. 489.52 crore on account of issue of bonus shares. Hence 2007-08 is not comparable with earlier years.



# Reconciliation of Profit determined under Indian GAAP with Net Income in accordance with US GAAP for the year 2007-08

		Rs.	US \$
	Notes	Crores	(Million)
Profit after tax determined under Indian GAAP		2,859.34	715.37
Adjustments to conform with US GAAP:			
Rental Income (lease)	1	(39.77)	(9.95)
Income from investment in Joint Ventures	2	14.95	3.74
Research & Development Expenses	3	(12.47)	(3.12)
Depreciation	4	52.24	13.07
Prior period items (incl. provision for taxation	5	12.69	3.18
earlier years Rs.11.77 crores)			
Net income in accordance with US GAAP		2,886.98	722.29

1US \$ = Rs. 39.97 (Exchange rate as on 31.03.2008)

The above US GAAP reconciliation is subject to the following adjustments:-

(a). Revenue Recognition - In respect of long term construction contracts entered before 1.4.2003

Recognition of revenue in respect of long production cycle items is made on technical estimates. When the aggregate value of shipment represents 30% or more of the realizable value, they are considered at 97.5% of the realizable value or in its absence, quoted price. Otherwise, they are considered at actual/estimated factory cost or 97.5% of the realizable value, whichever is lower. The balance 2.5% is recognized as revenue on completion of supplies under contract. Income from erection and project management services is recognised on work done based on: Percentage of completion; or the intrinsic value, reckoned at 97.5% of contract value, the balance 2.5% is recognised as income when the contract is completed. Income from engineering services rendered is recognised at realisable value based on the percentage of work completed. Income from Supply/erection of non-BHEL equipment/systems and civil works is recognised based on dispatches to customer/work done at project site.

As per US GAAP, Revenue is recognised on percentage-of-completion method for Construction Contracts. Impact on reconciliation of US GAAP is not ascertained.

There is no difference in Revenue Recognition in respect of long term construction contracts entered on or after 1.4.2003.

# Notes to Reconciliation of Net Profit determined under Indian GAAP with Net Income in accordance with US GAAP

The following notes show the difference between Indian GAAP and US GAAP and necessary adjustment to arrive at net Income under the US GAAP.

### 1. Rental Income (Lease)

As per Indian GAAP assets given on lease classified as finance lease prior to 1.4.2001 are capitalised at the normal sale price/fair value/contracted price and depreciation on the same has been charged. Lease rental income is recognised after adjusting lease equalisation. Under US GAAP assets given on finance lease, finance income is only recognised over the lease period.

#### 2. Income from Investment in Joint Ventures

As per Indian GAAP Dividend income from joint ventures is recognised and provision for dimunition in value, if any, is made for the investment in joint ventures. Under US GAAP share of income/ loss generated by joint ventures is recognised in the income statement in proportion to holding.



# 3. Research & Development Expenses

As per Indian GAAP R&D expenses in the nature of development are capitalised and amortised over the estimated useful life and shown under depreciation / amortisation. Under US GAAP amortisation of R&D assets is charged as R&D expenses.

### 4. Depreciation

As per Indian GAAP depreication is charged to Income statement on assets given on finance lease prior to 1.4.2001. Under US GAAP assets given on finance lease, finance income is recognised. As per Indian GAAP amortisation of R&D assets is shown under depreciation / amortisation. Under US GAAP amortisation of R&D assets is charged as R&D expenses to income statement.

## 5. Prior period items

As per Indian GAAP prior period items are reported separately in the income statement for the year. Under US GAAP prior period items are accounted by adjustment to prior years under retained profits.

As per our report of even date

For **M. L. Puri & Co**. Chartered Accountants

(Navin Bansal)
Partner

Date: July 23, 2008 Place: New Delhi (C. S. Verma)
Director (Finance)

CSVeller

# Auditor's Report on US GAAP Reconciliation

We have audited the Reconciliation of Net Profit of Bharat Heavy Electricals Limited for the year ended 31st March, 2008 under Indian GAAP to Net Income in accordance with US GAAP ("the Reconciliation") subject to:

i) Revenue recognition in respect of long term construction contracts entered before 01.04.2003 [Refer Note No. (a)];

Consequential impact, if any, of the above on the income as per US GAAP remains unascertained.

The Reconciliation is the responsibility of the Company's management. Our responsibility is to express an opinion based on our audit. In our opinion, such Reconciliation, when considered in relation to the basic financial statements taken as a whole, presents fairly in all material respects, the information set forth therein.

For M. L. Puri & Co. Chartered Accountants

(Navin Bansal)

Partner

Membership No. 091922

Place: New Delhi Date: July 23, 2008

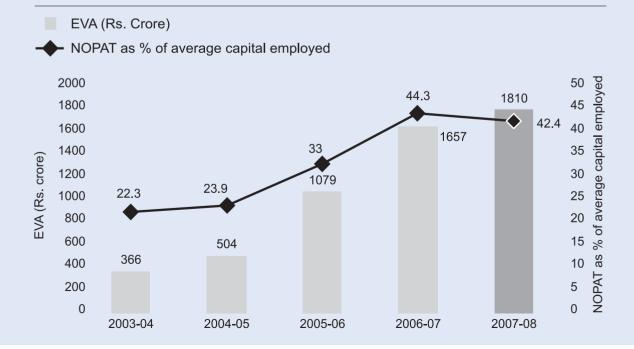


# Economic Value Added (EVA)

EVA is the relevant yardstick for measuring "economic profits". EVA is the company's net operating profit after tax, after deducting the cost of capital. Companies, which earn returns higher than the cost of capital, create wealth for the shareholders and on the other hand companies earning returns lower than the cost of capital, destroy shareholders wealth.

Rs. Crs. except as otherwise stated

		2007-08	2006-07	2005-06	2004-05	2003-04
Cost of capital						
Cost of equity	(%)	14.4	14.6	11.9	11.8	12.9
Weighted average cost of capital (WACC)	(%)	14.4	14.4	11.5	11.6	12.3
Average capital employed		6467	5544	5037	4132	3679
Economic Value added						
NOPAT		2739	2454	1660	986	819
Less: Cost of capital		929	797	581	482	453
Economic value added		1810	1657	1079	504	366
Enterprise Value						
Market Value of equity		100907	55349	54874	18758	14792
Add: Debt		95	89	558	537	540
Less: Cash and cash equivalents		8386	5809	4134	3178	2660
Enterprise value		92616	49629	51298	16117	12672
Return ratios						
NOPAT / Average capital employed	(%)	42.4	44.3	33.0	23.9	22.3
EVA/ Average capital employed	(%)	28.0	29.9	21.4	12.2	10.0
Enterprise value / Average capital employed	(X)	14.3	9.0	10.2	3.9	3.4





# Value Addition Statement

Description	2007-08	2006-07	2005-06	2004-05	2003-04
A. Generation of Value Addition					
Value of Production	20090	17324	13675	10031	7884
(less excise duty)					
Less- Direct Material,					
Power & Fuel and					
Payments to Contractors	11767	10142	7992	5777	4204
Value Added	8323	7182	5683	4254	3680
Less - Other Operating Exp	415	679	935	704	541
(Net of income)					
Net Value Addition	7908	6503	4748	3550	3139
% to value of production	39.36%	37.54%	34.72%	35.39%	39.82%
B. Application of Value Addition					
Employees payments	3146	2451	1879	1651	1640
% to net value addition	39.78%	37.69%	39.57%	46.49%	52.22%
Depreciation	297	273	246	219	198
% to net value addition	3.76%	4.20%	5.18%	6.16%	6.31%
Financing charges :					
- Interest on borrowings	35	43	59	81	57
% to net value addition	0.44%	0.67%	1.24%	2.29%	1.83%
DRE of VRS charged off	0	0	0	18	230
% to net value addition	0.00%	0.00%	0.00%	0.51%	7.32%
Tax Provision (Income Tax., Def. tax, FBT & Prior Period)	1571	1321	885	628	357
% to net value addition	19.87%	20.32%	18.64%	17.69%	11.36%
Dividend (incl. dividend tax)	873	692	405	222	166
% to net value addition	11.04%	10.65%	8.52%	6.27%	5.28%
Retained Profit	1986	1722	1274	731	492
% to net value addition	25.11%	26.48%	26.84%	20.59%	15.68%



# Performance vis-a-vis Annual Plan 2007-08

(Rs. in Crores)

Category of Investment	Target	Actual
Schemes	609.50	546.50
Modernisation & Rationalization and Others	65.00	59.00
Science & Technology	6.00	8.00
Tools & Plants and Enabling Services for power plant Sites	156.50	112.50
TOTAL	837.00	726.00

# Contribution to Exchequer

	2007-08	2006-07
Excise Duty and Service Tax	1149	849
Customs Duty	582	316
Sales Tax	415	443
Income Tax	1888	1369
Dividend	497	240
Dividend Tax	125	50
 Total	4656	3267



# **Product Profile**

#### THERMAL POWER PLANTS

- Steam turbines, boilers and generators of up to 800 MW capacity for utility and combined-cycle applications;
  - capability to manufacture boilers and steam turbines with supercritical steam cycle parameters and matching generators of up to 1000 MW unit size.
- Steam turbines, boilers and generators for CPP applications; capability to manufacture condensing, extraction, back pressure, injection or any combination of these types of steam turbines.

#### **NUCLEAR POWER PLANTS**

 Steam generator & Turbine generator up to 700 MW capacity.

#### **GAS-BASED POWER PLANTS**

- Gas turbines of up to 280 MW (ISO) advance class rating.
- Gas turbine-based co-generation and combinedcycle 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.
- Mini/micro hydro sets.
- Spherical, butterfly and rotary valves and auxiliaries for hydro stations.

### **DG POWER PLANTS**

 HSD, LDO, FO, LSHS, natural gas/biogas-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.

### **INDUSTRIAL SETS**

- Industrial turbo-sets of rating from 1.5 to 120 MW.
- Gas turbines and matching generators ranging from 3 to 280 MW (ISO) rating.
- Industrial steam turbines and gas turbines for drive applications and co-generation applications.

### **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.

- Steam generators for industrial applications, ranging from 40 to 450 t/hour capacity, using coal, natural gas, industrial gases, biomass, lignite, oil, bagasse or a combination of these fuels.
  - Pulverised fuel fired boilers.
  - Stoker boilers
  - Atmospheric fluidised bed combustion boilers.
  - Circulating fluidised bed combustion boilers.
- Heat-recovery steam generators.
- Chemical recovery boilers for paper industry, ranging from capacity of 100 to 1000 t/day of dry solids.
- Pressure vessels.

#### **BOILER AUXILIARIES**

- Fans
  - Axial reaction fans of single stage and double stage for clean air application, with capacity ranging from 25 to 800m<sup>3</sup>/s and pressure ranging from 120 to 1,480 m of gas column.
  - Axial impulse fans for both clean air and flue gas applications, with capacity ranging from 7 to 600m³/s and pressure up to 700 m of gas column.
  - Single and double-suction radial fans for clean air and dust-laden hot gases applications up to 400°C, with capacity ranging from 4 to 600m³/s and pressure ranging from 150 to 1,800 m of gas column.

#### Air-Preheaters

- Ljungstrom rotary regenerative air-Preheaters for boilers and process furnaces.
- Large regenerative air-Preheaters for utilities of capacity up to 1000 MW
- Gravimetric Feeders.
- Pulverisers
  - Bowl mills of slow and medium speed of capacity up to 100 t/hour.
  - Tube mills for pulverising low-grade coal with high-ash content.
- Pulse Jet and Reverse Air Type Fabric Filters (Bag Filters).
- Electrostatic Precipitators
  - Electrostatic precipitators of any capacity with efficiency up to 99.9% for utility and industrial applications.



- Mechanical Separators.
- Soot Blowers
  - Long retractable soot blowers (travel up to 12.2m), wall deslaggers, rotary blowers and temperature probes and related control panels operating on pneumatic, electric or manual mode.
  - Swivel arm type soot blowers for regenerative air-Preheaters.

#### Valves

- High-pressure and low-pressure bypass valves for utilities.
- 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 600 mm diameter, 250 kg/cm² pressure and 540°C temperature.
- High-capacity safety valves and automatic electrically operated pressure relief valves for set pressure up to 200 kg/cm² and temperature up to 550°C.
- Safety relief valves for applications in power, process and other industries for set pressure up to 175 kg/cm² and temperature up to 565°C.
- Ceramic wear-resistant lining material for application in pulverised and coal piping components of thermal power stations as well as in cement, coal and steel industries.

## **PIPING SYSTEMS**

 Constant load hangers, clamp and hanger components, variable spring hangers for power stations up to 1000 MW capacities, combined cycle plants, industrial boilers and process industries.

## **HEAT EXCHANGERS AND PRESSURE VESSELS**

- CS/AS/SS/Non-ferrous shell and tube heat exchangers and pressure vessels.
- Air-cooled heat exchangers.
- Surface condensers.
- Steam jet air ejectors.
- Columns.
- Reactors, drums.
- LPG/propane storage bullets.
- LPG/propane mounded storage vessels.
- Feed water heaters.

#### PUMPS

• Pumps for various applications to suit utilities up to a capacity of 1000 MW.

- Boiler feed pumps (motor or steam turbine driven).
- Boiler feed booster pumps.
- Condensate pumps.
- Circulating water pumps.
- Emergency oil pumps.
- Lubricating oil pumps.
- Standby oil pumps.

## POWER STATION CONTROL EQUIPMENT

- Microprocessor-based distributed digital control systems.
- Data acquisition systems.
- Man-machine interface.
- Sub-station controls with SCADA.
- Static excitation equipment/automatic voltage regulator.
- Electro-hydraulic governor control.
- Turbine supervisory system and control.
- Burner Management system.
- Controls for electrostatic precipitators.
- Controls for HP/LP bypass valves.
- Soot blower control.
- Auxiliary pressure reduction and de-superheating system.
- Balance of Plant station controls.
- · Gas turbine control system.

## **SWITCHGEAR**

- Switchgear of various types for indoor and outdoor applications and voltage ratings up to 400 kV.
- Minimum oil circuit breakers (66kV 132kV).
- SF6 circuit breakers (132 kV 400 kV).
- Vacuum circuit breakers (3.3 kV 33 kV).
- Gas insulated switchgears (145 kV).

## **BUS DUCTS**

 Bus-ducts with associated equipment to suit generator power output of utilities of up to 800 MW capacity.

## **TRANSFORMERS**

- Power transformers for voltage up to 765 kV.
- HVDC transformers and reactors up to ± 500 kV rating.
- Series and shunt reactors of up to 400 kV rating and 765 kV is under development.
- Instrument transformers :
  - Current transformers up to 400 kV.



- Electro-magnetic voltage transformers up to 220 kV.
- Capacitor voltage transformers up to 400 kV.
- Cast resin dry type transformers up to 10 MVA 33 kV.
- Special transformers for: earthing; furnace; rectifier; electrostatic precipitator; freight loco, AC EMU and traction.

#### **INSULATORS**

- High-tension ceramic insulators.
  - Disc/suspension insulators for AC/DC applications, ranging from 45 to 400 kN electromechanical strength, for clean and polluted atmospheres.
  - Pin insulators up to 33 kV including radio free design.
  - Post insulators suitable for applications up to 220 kV stacks.
  - Hollow porcelains up to 400 kV for Transformers, SF6 circuit breakers.
  - Solid core porcelain insulators for 25 kV Railway Traction.
  - Solid core insulators up to 400 kV for Bus Post
     & Isolators for substation applications.
  - Composite Insulators for 25 kV Railway Traction and up to 400 kV transmission lines.
  - Disc insulators for 800 kV AC and ± 500 kV HVDC transmission lines (BHEL is the first Indian manufacturer to supply such insulators).

## **INDUSTRIAL AND SPECIAL CERAMICS**

- High-performance ceramics for special applications like: alumina, substrates, crucibles, pebbles, metal ceramic jointing components, etc.
- Cordierite Honeycomb 80 to 400 cpsi in different contours and lengths for various applications including petrol and diesel vehicles.

## **CAPACITORS**

- Power capacitors for industrial and power systems of up to 250 kVA rating for application up to 400 kV.
- Coupling/CVT capacitors for voltages up to 400 kV.
- CAPSWITCH solid state switch for on/off control of capacitor banks – for LT applications.

## **ELECTRICAL MACHINES**

AC squirrel cage, slipring, synchronous motors, industrial alternators and DC machines are

manufactured as per range summarised below. Specialpurpose machines are manufactured on request.

- AC Machines for Safe Area Application
  - Induction Motors
    Squirrel cage

150 to 35000 kW

Slipring

150 to 15000 kW

- Synchronous motors 1000 to 17500 kW
- Variable-Speed drives Synchronous motors 1000 to 17500 kW Induction motors 200 to 35000 kW
- AC Machines for Hazardous Area Application
  - Flame-proof motors (Ex.'D') 150 to 1600 kW
  - Pressurised (Ex. 'P')
     150 kW and above
  - Non-sparking (Ex. 'N')
     Variable speed
  - Increased safety (Ex. 'E')
     Synchronous and

Squirrel Cage

- DC Machines
  - Mill Duty
     3.5 to 186 kW
  - Medium/Large
    - 75 to 12000 kW
  - Industrial Alternators

steam turbine, gas turbine and diesel engine driven

- 2000 kVA to 60,000 kVA
- Voltage & Enclosure
  - Voltage

AC-415 V to 13800 V

DC - up to 1200  $\ensuremath{\text{V}}$ 

Enclosure
 SPDP, CACW, CACA, TETV.

## **COMPRESSORS**

 Centrifugal compressors of varying sizes, driven by steam turbine/gas turbine/motor, for industrial applications handling almost all types of gases; range covers pressure up to 800 kg/cm² and capacity upto 350,000 Nm³/hour.



## **CONTROL GEAR**

- Industrial Control gear
  - Control panels and cubicles for applications in steel, aluminium, cement, paper, rubber, mining, sugar and petrochemical industries.
  - Liquid rotor starters for slipring induction motors of up to 2500 hp rating.
  - Liquid regulators for variable-speed motors

## Contractors

- 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.
- Traction Control gear
  - Control gear equipment for railways and other traction applications.
- Control and Relay Panels
  - Control Panels for voltages up to 400 kV and control desks for generating stations and EHV substations.
  - Control and relay boards.
  - Turbine gauge boards for thermal, gas, hydro and nuclear sets.
  - Turbine electrical control cubicles.
  - Outdoor-type control panels and marshalling kiosks, swinging type synchronising panel and mobile synchronising trolley.
  - Transformer tap-changer panels.

## **SILICON RECTIFIERS**

 Silicon power rectifiers with matching transformers for industrial applications like aluminium/copper/ zinc smelting, for electrolysis in chemical industry and AC/DC traction application.

#### THYRISTOR GTO/IGBT EQUIPMENT

- Thyristor converter/inverter equipment for DC drives and synchronous motors.
- Thyristor high current/high voltage power supplies.
- Static AC variable-speed drive systems using GTO/ IGBT
- Thyristor valves and controls for HVDC transmission.
- · High frequency induction heating equipment.
- Thyristor valves and controls for reactive power management.

## **POWER DEVICES**

High-power capacity silicon diodes, thyristor devices and solar photovoltaic cells.

#### TRANSPORTATION EQUIPMENT

- AC electric locomotives.
- AC-DC dual voltage electric locomotives.
- Diesel-electric locomotives.
- Diesel hydraulic locomotives.
- OHE recording-cum-test car.
- Electric traction equipment (for conventional DC drive well as 3-phase AC drives, diesel/electric locos, electric multiple units, diesel multiple units and urban transportation systems).
- Traction motors.
- Transformers smoothing reactors.
- Traction generators/alternators.
- Rectifiers.
- Bogies.
- · Vacuum circuit breakers.
- Auxiliary machines.
- Microprocessor-based electronic control equipment.
- Power converter/inverter.
- Static inverter for auxiliary supply.
- Locomotive control resistances i.e. field diverters, dynamic braking resistors and inductive shunts.
- Dynamic track stabilizers.
- Ballast cleaning machines.
- Traction control gear.
- Vessel Traffic Management system.
- Ceramic catalytic converter for pollution control.

#### **OIL FIELD EQUIPMENT**

Oil Rigs –

A variety of on-shore rigs, work-over rigs, mobile rigs, helirigs, desert rigs for drilling up to depths of 9,000 m, complete with matching draw-works and hoisting equipment including:

- Mast and substructure.
- Rotating equipment.
- Mud System including pumps.
- Power packs and rig electrics
- Rig instrumentation.
- Rig utilities and accessories





- Well Heads and Christmas Trees/sub-sea equipment:
  - Well Heads and X-Mas Trees for working pressures up to 10,000 psi.
  - Choke and kill manifolds.
  - Mud valves.
  - Full bore valves
  - Block valves.
  - Mudline suspension system.
  - Casing support system.
  - Sub-sea Well Heads.

## **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.

## **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 12.5 mm, in carbon steel and low-alloy steels to suit ASTM/API and other international specifications.
- Studded tubes
  - Extended surface tubes for high-performance heat transfer applications.
- Spiral finned tubes
  - High-frequency resistance welded finned tubes for heat recovery steam generators, economisers and heat furnaces.

## DISTRIBUTED POWER GENERATION AND SMALL HYDRO PLANTS

- Wind electric generator of up to 250 kW rating.
- Solar PV systems and power plants.

- Solar pumps.
- Solar water heating system.
- Solar lanterns, home lighting and street lighting.
- Small hydro power plants up to 25 MW station capacity.

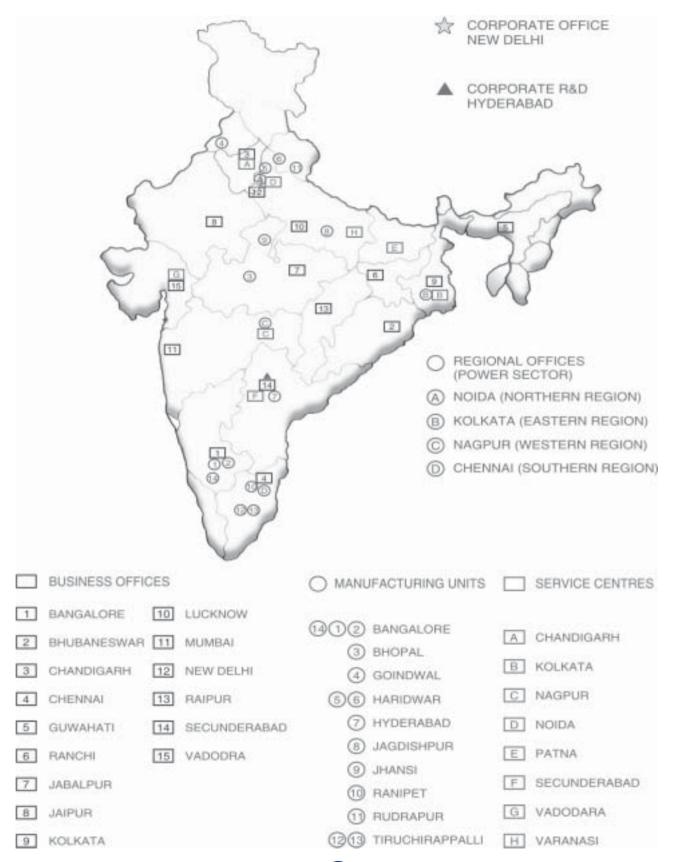
## SYSTEMS AND SERVICES

- Power Generation Systems.
  - Turnkey power stations.
  - Combined-cycle power plants.
  - Cogeneration systems.
  - Modernization and Rehabilitation of power stations.
- Transmission systems
  - Sub-stations/switchyards.
  - HVDC transmission systems.
  - Shunt and Series compensation systems.
  - Power system analysis and controls.
  - FACTS & CSR.
- Distribution systems
  - Substations
  - Automation
  - Remote metering
- Transportation system
  - Traction systems.
  - Urban transportation systems.
- Industrial systems
  - Industrial drives and control systems.

Erection, commissioning, operation and maintenance services, spares management and consultancy services for all the above systems.



## **BHEL** in India









## **Bharat Heavy Electricals Limited**

Regd. Office: BHEL House, Siri Fort, New Delhi-110049

## **NOTICE**

Notice is hereby given that the 44<sup>th</sup> Annual General Meeting of the Members of BHARAT HEAVY ELECTRICALS LIMITED will be held on Wednesday, the 17th September, 2008 at 10.00 A.M. at FICCI Auditorium, Barakhamba Road (Tansen Marg), New Delhi-110001, to transact the following business:

#### **ORDINARY BUSINESS**

- To receive, consider and adopt the audited Balance Sheet of the Company as at 31<sup>st</sup> March, 2008 and the Profit & Loss Account for the financial year ended on that date together with the Reports of the Director's and Auditors thereon.
- To declare dividend.
- To appoint a Director in place of Shri Ashok K Aggarwal, who retires by rotation and being eligible, offers himself for re-appointment.
- To appoint a Director in place of Shri Manish Gupta, who retires by rotation and being eligible, offers himself for re-appointment.
- To appoint a Director in place of Shri Shekhar Datta, who retires by rotation and being eligible, offers himself for re-appointment.
- 6. To fix the remuneration of the Auditors.

## **SPECIAL BUSINESS**

 To consider and, if thought fit, to pass with or without modification, the following resolution as an Ordinary Resolution:

"RESOLVED THAT Shri S. Ravi, who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 w.e.f. 29th November, 2007 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 257 of the Companies Act, 1956, 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 Shri B.S. Meena, who was appointed as an Additional Director pursuant to Article 67(iv) of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 w.e.f. 25th January, 2008 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 257 of the Companies Act, 1956, be and is hereby appointed as a Director of the company."

By Order of the Board of Directors

(N.K. SINHA)

COMPANY SECRETARY

New Delhi

Dated: August 11, 2008

Registered Office:

"BHEL HOUSE", Siri Fort, New Delhi-110049

## **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 AND THE PROXY NEED NOT BE A MEMBER OF THE COMPANY. 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.
- Relevant Explanatory Statement pursuant to Section 173(2) of the Companies Act, 1956, in respect of Special Business, as set out above is annexed hereto.
- Brief resume of each of the Directors proposed for appointment and re-appointment is given at Annexure-2 to the Directors' Report.
- 4. Shri Ashok K. Aggarwal, Shri Manish Gupta and Shri Shekhar Datta, Directors, retire by rotation and being eligible, offer themselves for re-appointment. However, as per their terms of appointment, the tenure of S/Shri Ashok K. Aggarwal, Manish Gupta and Shekhar Datta, as Directors of the company, will expire on 15.11.2008.
- The Register of Members and Share Transfer books of the Company shall remain closed from 3rd September, 2008 to 17th September, 2008 (both days inclusive) for the purpose of payment of dividend, if any, approved by the Members.
- Members are advised to submit their Electronic Clearing Service (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 ECS.
- 7. The Board of Directors has recommended a final dividend of 62.5% on the Paid-up Share Capital of the Company besides an interim dividend of 90% already paid during the year 2007-08.
- 8. The final dividend on the Equity Shares as recommended by the Board of Directors for the year

- ended 31<sup>st</sup> March, 2008, when sanctioned at the Annual General Meeting of the Company will be payable within 30 days from the date of declaration of dividend by the members i.e. on or before 16th October, 2008, to those shareholders whose name appears on the Company's Register of Members or as the beneficial owner of shares in the records of the Depositories as on 3rd September, 2008.
- 9. Pursuant to section 205A read with Section 205C of the Companies Act, 1956, as amended, the dividend amounts which remain unpaid / unclaimed for a period of 7 years, are required to be transferred to the Investors Education & Protection Fund of the Central Government. After that there remains no claim of the members whatsoever on the said amount. Accordingly, the final dividend for the Financial year 2000-2001 which remains unclaimed is due to be transferred to the said account on 26th October, 2008 and for the further years commencing from 2001-02 onwards on their respective due dates.
  - Members who have not claimed / encashed their Dividend so far for the financial year ended 31<sup>st</sup> March, 2001 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 109A of the Companies Act,1956, by nominating in Form-2B (given elsewhere in the Annual report) any person to whom their shares in the Company shall vest in the event of their death.
- 11. Pursuant to Section 619(2) read with Section 224 (8) (aa) of the Companies Act, 1956, the Auditors of a Government Company are appointed or re-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 General Meeting may, authorise the Board to fix up an appropriate remuneration of Auditors for the year 2008-09 after taking into consideration the increase in volume of work and prevailing inflation.



- 12. A corporate member shall be deemed to be personally present only if it is represented in accordance with Section 187 of the Companies Act, 1956 i.e. only if the corporate member sends certified true copy of the board resolution / power of attorney authorizing the representative to attend and vote at the Annual General Meeting.
- 13. Members are requested to notify immediately any change of address:
  - to their Depository Participants (DPs) in respect of their electronic share accounts, and
  - ii. to the Company at its Registered office 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.
- 14. Members who hold shares in dematerialised 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 the entry slip available at the counters at the venue and to be exchanged with attendance slip.

- 15. Members are requested :-
  - (i) to bring their copies of Annual Report, Notice and Attendance Slip at the time of the meeting.
  - (ii) to quote their Folio Nos./ ID Nos. in all correspondence.
  - (iii) to note that no briefcase or bag will be allowed to be taken inside the auditorium for security reasons.
  - (iv) to note that no gifts will be distributed in the AGM.

By order of the Board of Directors

(N.K. SINHA)
COMPANY SECRETARY

New Delhi.

Dated: August 11, 2008

Registered Office:

"BHEL House", Siri Fort, New Delhi-1100 049



## ANNEXURE TO THE NOTICE

## EXPLANATORY STATEMENT PURSUANT TO SECTION 173 (2) OF THE COMPANIES ACT, 1956

The following explanatory statement sets out the material facts relating to the business mentioned in Item Nos. 7 and 8 of the accompanying Notice dated August 11, 2008.

#### ITEM NO. 7

Shri S. Ravi, aged 49 years is a Fellow Member of the Institute of Chartered Accountants of India and holds a Masters Degree in Commerce. As per the direction of the Govt. of India , Shri S. Ravi was appointed as an Additional Director of the Company w.e.f. 29.11.2007 to hold the Office for a period of three years i.e. upto 28.11.2010 or until further orders, whichever is earlier. Having been so appointed, Shri S. Ravi holds office till the date of ensuing Annual General Meeting by virtue of Section 260 of the Companies Act, 1956 read with Article 67(iv) of the Articles of Association of the Company and is eligible for re-appointment.

In terms of Section 257 of the Companies Act, 1956, the Company has received a Notice in writing along with a deposit of Rs. 500/- from the Director himself, proposing his candidature for the Office of Director of the Company.

None of the Directors of the Company except Shri S. Ravi is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the Shareholders.

#### ITEM NO. 8

Shri B.S.Meena, aged 57 years, is Additional Secretary & Financial Advisor to Government of India,

Ministry of Steel. As per the direction of Govt. of India, Shri B.S.Meena was appointed as a Part-time official Director of the Company w.e.f. 25.01.2008. Having been so appointed, Shri B.S.Meena holds office till the date of ensuing Annual General Meeting by virtue of Section 260 of the Companies Act, 1956 read with Article 67(iv) of the Articles of Association of the Company, and is eligible for re-appointment.

In terms of Section 257 of the Companies Act, 1956, the Company has received a Notice in writing along with a deposit of Rs. 500/- from the Director himself, proposing his candidature for the Office of Director of the Company.

None of the Directors of the Company except Shri B.S.Meena is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the Shareholders.

By order of the Board of Directors

(N.K. SINHA)
COMPANY SECRETARY

New Delhi.

Dated: August 11, 2008

Registered Office:

"BHEL House", Siri Fort, New Delhi-1100 049

## **Bharat Heavy Electricals Limited**

Regd. Office: BHEL House, Siri Fort, New Delhi - 110 049

	1	D	N	1	<b>n</b>	F	D	D	<u> </u>	V	V	1
Γ(	U	п	١V	I١	U	Г		п	U	Λ	( I	

FOLIO/ID NO.	
NO. OF SHARES	

I/We		O
the District of		
being a member/members of the above named Company, hereby ap	point	
ofin the District of		or failing
him/her		
of		in the Distric
of		as my/our proxy
to vote for me/us on my/our behalf at the $44^{\text{TH}}$ Annual General	Meeting of the Comp	any to be held or
17 <sup>th</sup> September 2008 and at any adjournment thereof.		
Signed this	day of	2008.
	•	

Affix 30 Paise revanue stamp

Notes: a) The form should be signed across the stamp as per specimen signature registered with the Company.

b) The form should be deposited at the Registered Office of the Company <u>forty-eight hours before</u> the time for holding the Meeting.

## **Bharat Heavy Electricals Limited**

Regd. Office: BHEL House, Siri Fort, New Delhi - 110 049

## ATTENDANCE SLIP

44<sup>th</sup> ANNUAL GENERAL MEETING to be held on Wednesday, the 17<sup>th</sup> day of September, 2008 at 10.00 AM at FICCI Auditorium, Barakhamba Road, New Delhi-110 001.

NAME OF THE ATTENDING MEMBER
(IN BLOCK LETTERS)

Folio. / 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 44th Annual General Meeting on 17th September 2008.

•		,

Signature of Member/Proxy

## **Bharat Heavy Electricals Limited**

Regd. Office: BHEL House, Siri Fort, New Delhi - 110 049

Dear Shareholder(s),

## Re: Payment of dividend through Electronic Clearing Services (ECS)

In case you have not already sent the ECS/Bank Account particulars to our Registrars, viz, M/s Karvy Computershare Pvt. Ltd. or to your Depository Participant (in case of demat holding), we would request you to provide the said particulars in the format given below to facilitate prompt, safe and correct payment of dividend to be declared in the 44th Annual General Meeting of the company to be held on 17th September 2008.

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.

Payment of dividend through ECS and / or to the designated Bank Account, which will appear on the dividend warrant, will help to prevent fraudulent encashment of dividend warrants.

Kindly help us in our endeavour to serve you better.

Yours faithfully

Sd/-

(N.K. Sinha)

Company Secretary

P.S. In case you are holding shares in demat form, kindly advise your Depository Participant to take note of your Bank account particulars / ECS mandate.

I/we shall not hold the company responsible if the ECS could not be implemented or the Bank discontinue the ECS, for any reason.



STD code & Telephone No. of Shareholder

**M/s Karvy Computershare Pvt. Ltd.** 17-24, Vittal Rao Nagar, Madhapur, Hyderabad-500 081

Signature of the Shareholder(s)

Please attach the 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.

## Form 2B

[See rules 4CCC and 5Dof Companies (Central Govt.'s) General Rules & Forms, 1956]

## NOMINATION FORM

(To be filled in by individual (s) applying singly or jointly)

the holders of Shares bearing number (s)			
Limited wish to make a nomination and do hereby nomina			•
and/or amount payable in respect of shares shall vest in the		• .	• •
Name (s) and Address (es) of Nominee (s)			
Name :			
Address :			
Date of Birth*:			
(*to be furnished in case t			
** The Nominee is a minor whose guardian is			•
Name and Address			
(** to be deleted if	not applicat	ble)	
	Signature	:	
	Name	:	
	Address	:	
	Date	:	
	Signature	:	
	Name	:	
	Address	:	
	Date	:	
	Signature		
	Name		
	Address	:	
	Date	:	
Address, Name and Signature of two witnesses :			
Name and Address		Sign	ature with date
1.		Olgii	ature with date
2.			
In admirable on a second			

## Instructions:

- 1. The Nomination can be made by individuals only applying/holding shares on their own behalf singly or jointly, Non-individuals including society, trust, body corporate, partnership firm, Karta of Hindu Undivided Family, holder of power of attorney cannot nominate. If the shares are held jointly, all joint holders will sign the nomination form. Space is provided as a specimen, if there are more joint holders, more sheets can be added for signatures of holders of shares and witness.
- 2. A minor can be nominated by a holder of shares and in that event the name and address of the Guardian shall be given by the holder.
- 3. The nominee shall not be a Trust, Society, Body corporate, Partnership firm, Karta of Hindu Undivided Family or a Power of Attorney holder. A non-resident Indian can be a nominee on repatriable basis.
- 4. Nomination stands rescinded upon transfer of share.
- 5. Transfer of share in favour of a nominee shall be valid discharge by a Company against the legal heir.
- 6. The intimation regarding Nomination/Nomination Form shall be filed in duplicate with Company/Registrar and Share Transfer Agent of the Company who will return one copy thereof to the shareholder.

## Bankers

State Bank of India

Canara Bank

Punjab National Bank

Bank of Baroda

Corporation Bank

Syndicate Bank

Oriental Bank of Commerce

Indian Bank

State Bank of Travancore

State Bank of Hyderabad

**IDBI Limited** 

ICICI Bank Limited

HDFC Bank Ltd

Kotak Mahindra Bank

The Hongkong and Shanghai

Banking Corporation Ltd.

Standard Chartered Bank

Citi Bank N.A.

Deutsche Bank

ABN Amro Bank

# Auditors for 2007-08

M.L. Puri & Co., New Delhi

Arora & Choudhary Associates, New Delhi

B.K. Ramadhyani & Co., Bangalore

Chandran & Raman, Chennai

C. Venkat Krishna & Co., Hyderabad

Demble Ramani & Co., Nagpur

Ghosh Khanna & Co., New Delhi

GKRao & Co., Secunderabad

Kalyanasundram & Co., Ranipet

MAKS & Associates, Varanasi

P. L. Tandon & Co., Kanpur

R.L. Mehra & Co., Amritsar

R.K. Kumar & Co., Chennai

RSPM & Co., Kolkata

Sharma Goel & Co., New Delhi

SKG & Co., Mumbai

Tasky Associates, Bhopal

# **Share Transfer Agent**

M/s. Karvy Computershare Private Ltd.

UNIT: BHEL

Delhi Address: 105-108, Arunachal Building,

19, Barakhamba Road,
 New Delhi – 110 001
 Tel.: 011-23324401 / 09
 Fax: 011-23730743

## Hyderabad Address

UNIT: BHEL

: 17-24, Vittal Rao Nagar, Madhapur, <u>Hyderabad – 500 081</u>

Tel. : 040-23420815-28 Fax : 040-23420814

Email : madhusudhan@karvy.com

mailmanager@karvy.com

# Registered Office

BHEL House, Siri Fort, New Delhi-110 049 (India) Phone: 26001010 (15 Lines)

Fax: 011-26493021 http://www.bhel.com



Powering progress Brightening lives
Touching Every Indian Home



## **Bharat Heavy Electricals Limited**

Regd. Office: BHEL House, Siri Fort, New Delhi-110 049, India

Visit our website: http://www.bhel.com