1st April, 2010

Press Conference address by

Shri B. Prasada Rao

Chairman & Managing Director, BHEL

on the Company's Performance
during 2009 - 10

Powering progress … Brightening lives
Touching every Indian Home

BHEL - the growth momentum continues

Turnover triples and net profit quadruples in 5 years; Capability enhanced to deliver 15,000 MW per annum

	2008 – 09	2009 – 10 (Provisional)		% change
Turnover (Rs. Crore)	28033	34050		21
Profit Before Tax (Rs. Crore)	4849	6353		31
Net Profit (Rs. Crore)	3138	4287		37
Net worth (Rs. Crore)	12939	15721		22
Earnings Per Share (Rs.)	64.11	87.60		37
Value Added per employee (Rs. Lakh)	21.67	27.70		28
Capital Investment (Rs. Crore)	1082	1767		63

Customer Confidence:

- Highest-ever orders from Private Sector customers worth 14,689 MW from Abhijit, ACC, Adhunik, Avantha, Hindalco, Indiabulls, Jaypee Group, Jindal Power, Sterlite, Tatas, Videocon, among others
- Major order for 10 sets of 270 MW each from the Indiabulls Group
- Highest value order of Rs.3,348 Crore received in Industry segment from IOC for Combined Cycle Cogeneration Power Plant for Paradip Refinery project
- Repeat order from HINDALCO for 6x150 MW BTG package for Aditya Aluminium, Orissa
- Highest value order from Indian Railways for 150 Electric Locomotives (25 kV AC, Type WAG 7)

Supercritical technology business:

- First supercritical order from the private sector for 3x660 MW Bara, Prayagraj Power Generation Company Ltd. of the Jaypee Group

Global Forays:

- Physical export orders of Rs.3571 Crore
- Foray into a new market – Belarus
- Order for largest ever Hydro Project – 1,200 MW Punatsangchhu Hydroelectric Project, Bhutan
- 21st consecutive order for transmission equipment from Public Power Corporation (PPC) Greece, an unparalleled achievement
- 734 MW commissioned overseas - a new record

Powering progress … Brightening lives
Touching every Indian Home

Capacity Expansion:

- **Capability to deliver 15,000 MW of power equipment per annum established and further augmentation to 20,000 MW per annum by March 2012**
- **State-of-the-art manufacturing facilities established for supercritical equipment**
- **Contemporary manufacturing facility set up for high-rating transformers**
- **31 new cranes procured to increase erection capability at various sites**

Technology Edge:

- **R&D spend at Rs. 788 Crore – 14% higher than the previous year**
- **27 % growth in BHEL's IPR capital with 1 patent/copyright filed every day, taking the total to 1100 nos.**
- **First ever order in the country for 4.53 lakh indigenously-developed 420 kN Anti-fog Disc Insulators for India's first ± 800 kV HVDC transmission line from PowerGrid**
- **First of its kind in the world indigenously-developed 80 MVAR Controlled Shunt Reactor (CSR) for improving power transfer capability of high-voltage transmission systems, successfully commissioned**
- **Technology Transfer agreement signed with Sheffield Forgemasters International Ltd., UK for manufacture of large size Forgings for Turbines and Generators up to 1000 MW rating**
- **Technology for Control & Instrumentation for Power Plants upgraded through extension of Technical Collaboration Agreement with Metso Automation, Finland. The new C&I platform enables BHEL to offer state-of-the-art controls for Power Plant and related applications**

Synchronization/Commissioned:

- **BHEL synchronized/Commissioned 6,583 MW of power plant equipment comprising domestic utility & captive/ industrial sets and in overseas market.**

Equipment Performance:

- **7 out of 8 thermal power stations awarded with Govt. of India's Meritorious Productivity Awards are equipped with BHEL equipment, reinforcing the reliability and quality of BHEL equipment**
- **BHEL sets contributed 74% of the power generated in the country in FY 2009-10**
- **Operating Availability of BHEL thermal sets (200-500 MW) at more than 90% consistently for the last three years; PLF higher than the national average**

Strategic Alliances:

- **Partnerships forged with Toshiba, Alstom & GE for business enhancement in transmission and transportation sectors**

Green Power Initiatives:

- **High voltage (70V) space-grade Solar Panels for high power applications jointly developed with ISRO for deployment in GSAT-4 satellites**
- **Two eco-friendly Grid-Interactive Solar Photovoltaic (SPV) Power Plants of 2 MW & 1 MW, being set up on turnkey basis in Karnataka, for KPCL**
- **SPV Modules manufacturing capacity enhanced from 3 MW to 8 MW per annum**

Accolades:

- **For the second time, Business Standard newspaper recognised BHEL as the Star Public Sector Company of the year**

Powering progress … Brightening lives
Touching every Indian Home

- **For the fourth year running, only PSU in Forbes Asia 'Fabulous 50' list of the best of Asia-Pacific's publicly-traded companies with revenues or market capitalisation of at least US$ 5 billion**
- **Six CII-Exim Commendations – the highest among public and private sector companies**
- **EEPC's Top Export Award for Project Exports for the nineteenth year in succession.**

Fiscal 2009-10 was another successful year for BHEL in its growth story. Detailed achievements of the year are:

FINANCIAL PERFORMANCE

- BHEL notched up its highest-ever turnover of **Rs. 34050 Crore**, registering a growth of **21** % over the previous year. Profit Before Tax (PBT) surged **31 %** at **Rs. 6353 Crore**, during the year, moving past the Rs.5,000 Crore mark for the first time.

- Net Profit (PAT) is **Rs. 4287 Crore**, as against Rs. 3138 crore of last year - **a growth of 37%.** An interim equity dividend of 110% on the enhanced equity capital was paid for fiscal 2009-10, maintaining the track record of paying dividends uninterruptedly since 1976-77.

- Earnings Per Share (EPS) was **Rs. 87.60** an increase of **37 %** over that of 2008-09.

- Net Asset Value (NAV) per share stood at **Rs. 321.20**, post-bonus, reflecting the intrinsic strength of the company.

- Economic Value Added (EVA) witnessed a jump of **35 %** at **Rs. 2700 Crore** over that of Rs.2,008 Crore in 2008-09 - commendable performance for an engineering company.

- Value Added per employee increased to **Rs. 27.70 lakh** from Rs.21.67 lakh in 2008-09.

- Total export turnover (Physical + Deemed) touched **Rs. 14436 Crore**.

ORDERS INFLOW

BHEL secured orders worth **Rs.59,031 Crore** while operating in competitive domestic and overseas markets. At the end of the year, total orders in hand for execution in 2010-11 and beyond, stand at about **Rs. 143800 Crore** - the highest-ever.

- In the **Power Sector business** segment, BHEL secured **orders** worth **Rs.41,976 Crore** during the year. In terms of power plant equipment, the orders amounted to **16,489 MW**. Major highlights of the year include highest-ever orders from the private sector and all-time high order booking in a year for hydro equipment.

Significant orders received in the Power sector include:

- First Supercritical order from Private sector for Bara (3x660 MW) of Prayagraj Power Generation Company Ltd. (Jaypee Group)
- 8 sets of 600 MW from Korba West Power Co. Ltd., Jindal India Thermal Power Ltd., Pipavav Energy Pvt. Ltd. (Videocon Group) and Jhabua Power Ltd.
- 10 sets of 270 MW from single customer (India Bulls Group) - Nasik (5X270 MW) & Amravati (5X270 MW) of Elena Power and Infrastructure Ltd.
- 6 sets of 270 MW from Ideal Energy Projects Ltd., Adhunik Power and Natural Resources Ltd. and Abhijit Infra Ltd.
- 5 sets of 500/525 MW from Monnet Power Co. Ltd. and NTPC Tamil Nadu Energy Co. Ltd.
- 5 sets of 195/250 MW from Bhavnagar Energy Company Ltd., Kanti Bijli Utpadan Ltd. (JV of NTPC-BSEB) and Durgapur Projects Ltd.
- Repeat order from NPCIL for RAPP (1x700 MW) – Steam Generator
- Ramgarh III CCPP (160 MW) of Rajasthan Rajya Vidyut Utpadan Nigam Limited (RRVUNL)
- Kishanganga HEP (3x110 MW) from Hindustan Construction Company Ltd.
- 14 hydro sets of various ratings for Pranhita Lift Irrigation Scheme in Andhra Pradesh
- Order for Coal Handling Plant from NTECL, Vallur (3x500MW), a joint venture of NTPC and TNEB

- In **Industry Sector business** segment, BHEL secured record **orders** worth **Rs.14,366 Crore, a growth of 40% over the previous year,** for a wide range of products and systems for application in Captive Power, Transportation, Transmission, Oil & Gas, Renewable Energy and other industrial sectors.

Significant orders received in the Industry Sector include:

- Highest-value order received from IOCL for a Combined Cycle Cogeneration Power Plant on Lump Sum Turn Key (LSTK) Basis.
- Major repeat orders from HINDALCO for 6x150 MW BTG package for its Orissa project and CPCL for 20 MW Cogeneration plant at its Chennai Refinery
- Largest size BFBC boiler (2x180 TPH) from JSPL for its Angul, Orissa project
- 2x80 MW BTG package from Sterlite Industries for its Tuticorin, Tamilnadu project
- STG sets from Monnet Ispat & Energy Ltd. (80 MW), FACOR Power (2x50 MW), Jai Prakash Associates (2x60 MW), Action Ispat and Power Ltd. (2x43 MW), and Shri Shyam Ispat (India) Pvt. Ltd. (1x24 MW)
- Highest value order from Indian Railways for 150 nos. Electric Locomotives (25 kV AC, Type WAG 7)
- Electrics and Traction motors from Indian Railways and Diesel Shunting Locomotives (1400 HP) from UPRUVNL for Parichha TPS
- 8 nos. of India's highest rating 3-phase 500 MVA, 400 kV Auto Transformers from PowerGrid
- First order for 4.53 lakh indigenously-developed 420 kN Anti-fog Disc Insulators for India's first ± 800 kV HVDC transmission line from PowerGrid
- Highest ever orders for HT Motors from various Pumps and Compressors manufacturers in addition to those for power plant applications
- Range of Gas compressors from various refineries viz. MRPL, HPCL, BCPL & IOCL
- 2 nos. 400/220 kV switchyards for Chandrapur and Koradi from MSETCL
- First order for Phase Shifting transformer with in-house technology from APGenco for KPTS Stage VI - success in new indigenous technologies in the Transmission sector
- 13 Transformers totaling to 2355 MVA from NTPC for Bongaigaon project

- In **International Business**, bucking the global recessionary trend, BHEL achieved a physical export order inflow of **Rs.3571 Crore** during the year, an increase of 9.4% over that of the previous year.

Significant orders received in International business include:

- Largest ever order for a Hydro power plant – 1200 MW (6x200 MW) Puntasangchhu-I Hydro Power plant from Punatsangchhu Hydroelectric Project Authority, Bhutan. This is the largest hydro power project order for the company.
- Two orders under six-year Price Agreement (Rate Contract) for 126 MW Gas Turbines - Amal (2x126 MW) and Qarn Alam - III (1x126 MW) power plants from Petroleum Development Authority, Oman. With this, BHEL will have the unique distinction of having installed 16 Gas Turbines in Oman alone.
- Entry into new country - Belarus: Order for 126 MW Gas Turbine-based Grodno-II cogeneration project. This is also the first-ever overseas order for supply of HRSG as well as Gas Turbine for cogeneration application.
- Maiden order for 42 MW Gas Turbine Generator for Nasiriyah Power Plant, Iraq from Power Engineers, UK.
- Secured first-ever export order for 400 kV class Shunt Reactors (3 nos. 30 & 1 no. 50 MVAR reactors) from Public Power Corporation, Greece. This is 21st consecutive order since 1995 from Greece for transmission equipment totalling over 3000MVA, an unparalleled achievement.
- Maiden order for 64 MW Hydro Power plant from the Democratic Republic of Congo.
- Other notable export orders include first-ever overseas order for Field Discharge Circuit Breakers from Nigeria, Wellheads from Oman and Boiler Structures from New Caledonia.
- Continued focus on After Sales Services led to orders for Spares & Services from Oman, Saudi Arabia, Indonesia, UAE, Nepal, France, Sri Lanka, Kazakhstan, Iraq and Libya.

STRATEGIC BUSINESS INITIATIVES

Aimed at enhancing business, BHEL entered into the following strategic tie-ups:

- BHEL and Toshiba Corporation, Japan have signed a MoU to explore the possibility of establishing a Joint Venture Company to address Transmission and Distribution (T&D) business in India and other mutually agreed countries. The JV company will undertake marketing, designing, engineering, supply, erection, testing and commissioning of equipment and projects in Extra High Voltage Alternating Current (EHVAC) and Ultra High Voltage Alternating Current (UHVAC) range including 765kV transformers and reactors and Gas Insulated Switchgear (GIS), in addition to other products and systems.

- MoUs have been signed with Alstom for participating in the tender for setting up a factory for Electric Loco components at Dankuni, West Bengal and with GE for participating in the tender for setting up a Diesel Loco factory at Marhowra, Bihar.

- BHEL has been nominated as the Nodal agency for serial production of Marine Gas Turbines named Sagar Shakti Engine for propulsion of Indian Naval Ships, with rated power of 12 MW.

- BHEL and Maharashtra State Power Generation Company Limited (Mahagenco) have signed a MoU for setting up a JV Company to build, own and operate a 1500-1600 MW Power Plant at Latur in Maharashtra.

- BHEL and Madhya Pradesh Power Generation Company Limited (MPPGCL) have formed a JV Company to build, own and operate a 2x800MW Thermal Power Plant with Supercritical parameters at Khandwa in Madhya Pradesh.

PROJECT COMMISSIONING

- BHEL synchronized/commissioned **6,583 MW** of power plant equipment during the year which includes **5,220 MW** for Utility, **634 MW** for Captive/Industrial sets and **729 MW** in overseas markets. In addition, BHEL was ready for commissioning of **412 MW** of hydro power projects and is awaiting critical inputs viz. water / power evacuation system.

- BHEL also commissioned the **2x220 MW** (RAPP Unit V & VI) Non-BHEL nuclear set.

- A major milestone of the year was the commissioning of **four** power plants in overseas markets – the maximum in a single year. While power projects were commissioned in Bangladesh, Iraq, UAE and Indonesia, substations were commissioned in Afghanistan, Ethiopia and Bangladesh.

- The installed capacity of BHEL supplied Utility sets went up to **91,481 MW** and BHEL maintained its two-third share in the country's total installed capacity.

- Trombay TPS of Tata Power Company Limited, set up by BHEL on EPC basis, was awarded with the Government of India's National Award for Early Completion.

Major power projects commissioned include:

- 1x500 MW for Kahalgaon STPS
- 1x500 MW for Vijayawada STPS
- 1x490 MW for Dadri TPS
- 1x500 MW for Kakatiya TPS
- 2x250 MW for Chandrapura TPS
- 1x250 MW for Bhilai TPS
- 1x250 MW for Budge Budge TPS
- 2x250 MW for Chhabra TPS
- 1x250 MW for New Parli TPS
- 1x250 MW for Suratgarh TPS
- 1x250 MW for Paras TPS
- 1x210 MW for Bakreswar TPS
- 1x195 MW for Kota TPS
- 2x125 MW for Surat Lignite TPS
- 1x125 MW for Giral TPS
- 1x125 MW for Barsingsar TPS
- 1x75 MW for Kutch Lignite TPS
- 1x126 MW for Siddhirganj, Bangladesh
- 4x126 MW for Sulaymaniah, Iraq
- 2x42 MW for Al Ghail, UAE
- 1x15 MW for PTIBR, Indonesia
- 1x120 MW for NALCO
- 1x30 MW for IOCL, Gujarat
- 1x30 MW for Silk Road Sugars
- 1x43 MW for Finolex
- 2x36.8 MW for IOCL, Panipat
- 1x33 MW for HEG, Mandideep
- 1x33 MW for Ambuja Eastern Cement
- 1x30 MW for GACL
- 1x30 MW for Tata Hooghly, Metcoke
- 1x30 MW for BPCL Kochi Refinery
- 1x34.5 MW for West Coast Dandeli

EQUIPMENT PERFORMANCE

- During the year, BHEL-built power generating sets generated an all-time high **490 Billion Units** of electricity which was **74%** of the total power generation in the country.

- Consistently exceeding the national average efficiency parameters, BHEL built thermal sets achieved an impressive Operating Availability (OA) of **87.5%**; Plant Load Factor (PLF) at **78.5%** was also higher than the national average.

- BHEL make 200-500 MW thermal sets, which form the backbone of the country's thermal generating capacity, operated at a PLF and OA of **82.2%** and **90.1%**, respectively. Significantly, these sets have been achieving an availability of more than **90%** consistently for the last three years.

- Notably, **72 sets** achieved PLF of over **90%** and **133** thermal sets achieved operational availability higher than **90%**.

- Of the 8 thermal power stations awarded with the Ministry of Power's Meritorious Productivity Awards for 2008-09, as many as **7** are equipped with generating equipment manufactured and supplied by BHEL, reaffirming the quality and reliability of BHEL's equipment.

CUSTOMER FOCUS

- BHEL reinforced its commitment to providing prompt and efficient customer service aimed at facilitating uninterrupted power supply and keeping power plants in good running condition. During the year, BHEL overhauled **96** thermal utility/captive sets.

- Responding to the customer's emergency call, BHEL took up on war footing and completed the rehabilitation and re-commissioning work of the flood-affected 770 MW Srisailam Hydro Station of APGenco. All the 7 units of 110 MW each at the power station which was totally submerged in water, were successfully restored in record time and are operating at full load.

TECHNOLOGY DEVELOPMENT

- BHEL's products and systems are technology intensive and R&D/technology development is of strategic importance to the company. During the year, BHEL invested **Rs.788 Crore** on R&D efforts : 14 **%** higher than the previous year. This corresponds to 2.3% turnover of the company.

- A turnover of **Rs. 6334 Crore** was achieved through products and systems developed in-house.

- BHEL also filed **263** patents and copyrights, enhancing the company's intellectual capital to **1100** patents and copyrights filed, which are in productive use in the company's business. The year witnessed a massive growth in grant of patents and copyrights. A total of 145 patents and copyrights were granted which is 60% higher than last year.

- Significantly, BHEL is one of the only four Indian companies figuring in 'The Global Innovation 1000' of Booz & Co., a list of 1,000 publicly-traded companies which are the biggest spenders on R&D in the world. BHEL is ranked at 590.

Some of the significant developments during the year include:

- *To address the emerging market of supercritical power plants, BHEL has successfully developed in-house a new design variant of Condenser for 660 MW steam turbines. The development addresses a new design challenge with*

respect to the large size of LP turbine inter-phased with single condenser, resulting in a more compact Condenser of single shell design. This design will be offered for upcoming supercritical plants in addition to the 2x 660 MW Barh project.

- *In line with its developmental work in futuristic areas, a High Temperature Superconducting (HTSC) Power Transformer using liquid nitrogen has been developed and tested. HTSC transformers are more efficient, smaller in size/weight/volume and safer than conventional oil-filled transformers. This development will catapult BHEL into a new era of applying superconductivity which is a futuristic technology, in the area of transformer development, hitherto the domain of a very few countries. It will open up new vistas in the area of efficient transmission and distribution of power, contribute to reduction in the loss of energy and also usher in an era of safe and environment-friendly technologies.*

- *To cater to the requirement of upcoming Ultra Mega Power Projects, BHEL has successfully developed the highest rating 310 MVA Single Phase Generator Transformer (GT) for the 5x800 MW Mundra UMPP. This newly developed GT has better performance with respect to power loss and has enhanced the competitive position of BHEL. With respect to supply of such high rated 400 kV class GTs.*

- *Consistently offering tailor-made designs to suit customer needs, BHEL has developed a new LP Module suitable for higher back pressure along with new type of blading to sustain high pressure drop across the stage, specifically to meet the requirement of high back pressure turbines in the output range of 200-400 MW for desert application. This in-house developed design is being used for 2x200MW Tishreen Project in Syria and will be subsequently offered for projects with similar application.*

- *For the benefit of its customers by way of developing import substitution products a new Primary Air Fan variant has been developed for 600 MW thermal set. Such Fans were being completely outsourced till date from Germany. This will be used in the North Chennai project and has also been selected for other 600 MW boilers for Jindal and Shree Singhaji projects.*

- *In order to address the emerging requirements of 765 kV transmission systems, BHEL has developed a Current Transformer (CT) design for 765 kV ultra high voltage (UHV) transmission substations. Based on gaseous (SF6) insulation and light weight FRP-silicon composite insulators, the new design is safer, more reliable and compact.*

- *As part of its initiative to increase its portfolio of products, BHEL has designed and developed an IGBT-based three-level diode clamped inverter for Induction Motor Drive for ID fan application, to meet the emerging demands of industrial sectors. With this, BHEL can address a large volume of business for medium-voltage drives based on IGBT technology of 1 MW to 4 MW ratings for various applications, hitherto being offered only by multinational companies.*

- *As part of its endeavour to continuously upgrade its offerings to customers, BHEL has successfully developed a complete control system on the state-of-the-art metsoDNA DCS platform for steam generators, turbines, balance of plant equipment, SCADA including its HMI.*

- *Aimed at enhancing efficiency as well as revenues for hydro utilities, BHEL has developed and supplied an operation optimization and scheduling package for hydro electric power plants The software, that can be used as a decision support system (DSS), provides an optimal or best-fit solution to the operational dilemmas faced by hydropower system operators under the Availability based tariff regime. Its use can result in significant improvement to daily energy production and revenues. This product will establish BHEL as a supplier of advanced software packages for hydro power plants integrated with its DCS system.*

- *To meet the requirements of Indian Railways for diesel electric locomotives with 3-phase AC drive systems, BHEL has developed and type tested two types of traction motors for low-voltage high-current IGBT-based 3-phase drive systems for AC EMU & DEMU application. With this, BHEL can now cater to the market of IGBT-based new projects for 25 kV AC EMUs and 1600 HP AC-AC DEMUs.*

- *For the first time, a Digital Governor for the speed control of hydro turbines has been developed and successfully commissioned at the 3x5 MW Indirasagar Left Bank Canal HEP. The digital governor offers flexibility in operation, stability of set values, fine control of the machine and fast response time.*

- *For the benefit of its customers by way of developing more efficient products/technologies, BHEL has established a Centre of Excellence for Machine Dynamics (COE-MDF) – the **sixth** in the series. The centre will consolidate BHEL's position as a pioneer in R&D in the area of rotational dynamics including dynamic analysis and online monitoring of rotating machines and shall contribute to products such as Steam Turbines, ID & FD Fans, Switchgear and OLTC Mechanism Analysis, Diesel locomotives, products requiring noise source identification, sound power estimation, noise mapping studies, etc.*

- *Continually striving to improve the economies of solar PV systems, BHEL has developed its largest size 220-Watt*

PV Module using 156-mm Size Multi Crystalline Silicon Solar Cells. The use of 156-mm size solar cells as against the present 125-mm has resulted in increased production throughput by approximately 60%. This will meet customer demand for larger wattage modules, especially for MW Size grid-connected applications, as it will reduce the number of modules required per system thereby improving reliability.

- *High voltage (70V) space-grade Solar Panels for high power applications were jointly developed with ISRO for deployment in GSAT-4 satellites of ISRO. Significantly, 12 Satellites launched by ISRO are powered by BHEL manufactured Solar Panels & 7 Satellites with BHEL manufactured Batteries.*

- *In addition to the above, R&D projects driven by business plans are at various stages of execution. Areas covered include:*

  - **Transmission systems –** Identified products for 765 kV/1200 kV transmission systems and substation automation systems compliant to international standards.
  - **Transportation systems** - Capability building through joint design/development of IGBT-based electrics for AC Locos of over 5000 HP and IGBT-based 3-Phase Drive Equipment.
  - **Nano Technology –** Development of Nano fluids for enhancing efficiency in Transformer oil and in solar heating, Precursor and Process Stabilisation for the Synthesis of Nano-structured Materials by Spray Pyrolysis System
  - **Semiconductor & Photovoltaics** – Various development initiatives for delivering higher output and higher efficiency modules viz. design & development of 240 to 270 Watts module using 72 nos. of 156-mm multi crystalline silicon solar cells, etc.

CAPACITY AUGMENTATION & ASSET MODERNISATION

- BHEL made a capital investment of **Rs.1767 Crore** during 2009-10 towards augmentation of manufacturing capacity and modernisation of facilities in manufacturing units and at power project sites, as against Rs.1082 Crore invested during 2009-10, registering an increase in capital investment of about **63%**.

- Focused attention was given on rebuilding and retrofitting of existing facilities to enhance their life, accuracy and productivity through an additional investment of **Rs. 51 Crore**.

- BHEL has set-up state-of-the-art facilities to manufacture supercritical equipment. A world-class facility for manufacture of high rating transformers has also been set up at Bhopal.

- A new Centralised Stamping Unit (CSU) commenced production at Jagdishpur in Uttar Pradesh.

- BHEL has developed the capability to deliver 15,000 MW of power equipment per annum. Further augmentation to 20,000 MW per annum is underway and is expected to be completed by March 2012.

HUMAN RESOURCE

- In line with changing market requirements, the knowledge and skills of BHEL employees are continuously upgraded. Developmental programmes for **19** mandays per employee were conducted during the year. In addition, **1231** customer personnel were trained at various units.

- Manpower is being ramped up in a commensurate and timely manner and **3500** persons have been recruited in 2009-10.

- An exercise for preparing role requirements and mapping of technical competencies required for key positions was conducted in four major units. The assessment of competencies possessed by the role-holders was also completed in two units. This will help in identifying gaps and planning inputs for improving technical competencies of employees.

- The long term wage settlement in respect of all categories of employees, which was due with effect from 1.1.2007, was finalised during the year and payments arising there from were made.

- Industrial Relations continued to remain cordial contributing to production and productivity. Thrust on participative culture continued during the year through the apex level bipartite forum, 'Joint Committee'.

- BHEL was selected as one of the 'Best Companies to Work For' by an independent survey of 1,000 small and big companies, conducted by Business Today Magazine, Indicus Analytics and PeopleStrong. The survey reached out directly to employees without involving the companies. Former as well as future (potential) employees were also targeted.

- BHEL won the top awards for recruitment practices at the prestigious World HRD Congress. The top honours for 'Recruitment & Staffing Industry Leader of the Year' and 'Most Innovative Recruiting & Staffing Programme' were awarded to the Trichy unit of BHEL. Significantly, BHEL is the only Public Sector enterprise to figure in the awards list and bagged awards in both the categories for which it had submitted entries. The Recruitment & Staffing Best in Class (RASBIC) awards are presented annually by the World HRD Congress - a caucus of 100 countries worldwide.

CORPORATE SOCIAL RESPONSIBILITY

- As part of its Corporate Social Responsibility (CSR), during the year, BHEL undertook socio-economic and community development programmes to promote education, improvement of living conditions and hygiene in villages and communities located in the vicinity of its manufacturing plants and project sites spread across the country.

- During the year, nine social welfare projects were completed by various units of BHEL. These include construction of community facilities in villages, upgradation of schools, scholarship schemes for underprivileged children, providing water facilities, organising eye camps, and creation of self employment opportunities for unemployed women from the downtrodden community.

- Reaching out to the distressed victims in the flood-ravaged areas of Andhra Pradesh and Karnataka, BHEL has made a humble contribution to help alleviate their suffering.

- BHEL reiterated its commitment to the United Nations' Global Compact Programme on CSR and continued to play a lead role in promoting the set of core values enshrined in its ten principles on human rights, labour standards, environment and anti-corruption. It intends to advance these principles within its sphere of influence and has made it a part of its strategy, culture and day-to-day operations. BHEL demonstrated its commitment through regular pooling of communication of progress (COP) on the UNGC website and organising a National Convention to disseminate the concepts of Global Compact.

- As part of social commitment, **3626** Act Apprentices were trained in the company. In addition, **7011** students/trainees from various professional institutions underwent vocational training.

QUALITY

- Continuing its winning streak in the CII Exim Award Scheme for business excellence as per the globally recognised model of European Foundation for Quality Management, BHEL has become the first Public Sector Company in the country, whose six units participated in the CII-EXIM Business Excellence award scheme and all got recognition certificates from CII. While its Bhopal, Trichy and Power Sector Eastern Region have won the 'Commendation for Significant Achievements in TQM', its Ranipet unit, Electronics Division and Power Sector Southern Region have received the 'Commendation for Strong Commitment to TQM'.

- Quality Systems of all Manufacturing Units, Business Sectors, Engineering Centres, Power Sector Regions and Corporate Office of BHEL have been upgraded to the revised ISO Certification for Quality Management System - ISO 9000 - 2008.

- Three Quality Circles from BHEL units at Haridwar, Bhopal and Bangalore won prizes for their case studies at the International Quality Circle Conference (ICQCC – 2009) held in the Philippines.

- BHEL Units – Electroporcelains Division, Bangalore and Insulator Plant, Jagdishpur bagged the 'Certificate of Merit' Commendation from the R.K. Bajaj Quality Awards.

GREEN INITIATIVES

- In conformity with its concern for the environment, BHEL has been contributing to the national effort for developing and promoting renewable energy based products on a sustained basis. During the year, as its contribution to the Jawaharlal Nehru National Solar Mission, BHEL is in the process of setting up two eco-friendly Grid-Interactive Solar Photovoltaic (SPV) Power Plants of 2 MW & 1 MW, on turnkey basis, for KPCL in Karnataka. This is the first order won by BHEL for megawatt size grid connected SPV power plants.

- In recognition of BHEL's contribution to the greening of the Lakashadweep Islands, BHEL was awarded the 'India Power – Jury award 2009'. BHEL has commissioned 1065 kw of solar photo-voltaic grid interactive as well as stand-alone plants at 12 locations contributing to the preservation of the natural habitat of these pristine islands.

- BHEL's commitment towards environment conservation continued with the completion of several Environment Improvement Projects (EIPs). These projects helped in creating a pollution-free environment, conservation of precious resources like energy, water, fuel oil, coolant, lubricant, besides installation of proper systems for storage/handling of chemical waste, using state-of-the-art technologies. Major EIPs included plantation of 25 lakh trees in and around units/sites, rainwater harvesting plants and energy and resources conservation projects.

- CII's National Award for Excellence in Energy Management 2009 was awarded to BHEL's Hyderabad unit. The unit has been winning the prestigious National Award consecutively for the last three years.

- For excellent performance on sustainable development, the CII-ITC Sustainability Award 2009 was also conferred on BHEL's Hyderabad unit. The award recognises BHEL-Hyderabad's excellent performance on the three parameters of sustainability i.e. Environment, Social and Economic.

ACCOLADES

- Continuing its tradition of bagging prestigious national/international awards, the organisation and its employees won several awards during the year. Notable among these included;

  - Business Standard newspaper recognised BHEL as the Star Public Sector Company of the year 2009. Significantly, BHEL was earlier awarded the same recognition in 2006, making it the only PSU to have won it twice.

  - For the fourth consecutive year, BHEL's performance was recognised by the prestigious publication 'Forbes Asia', which featured BHEL in its fifth annual 'Fabulous 50' list of the best of Asia-Pacific's publicly-traded companies with revenues or market capitalisation of at least US$ 5 billion, having highest long-term profitability and sales & earnings growth. Notably, BHEL is the only Indian PSU to figure on the elite list.

  - Five Prime Minister's Shram Awards including one Shram Bhushan.

  - EEPC's Top Export Award for Project Exports for the nineteenth year in succession.

  - India Pride Gold Award of the Dainik Bhaskar Group for its immense contribution to the steady economic growth of the country in the Heavy Industries Category.

SUBSIDIARY

- Bharat Heavy Plates & Vessels (BHPV), BHEL's fully owned subsidiary at Visakhapatnam has achieved a turnover of Rs 105 Crores during 2009-10, compared to Rs. 84 Crore during the previous year.

- Though the company was taken over in May 2008, reconstitution of the Board of Directors happened in October 2009. Since then there is a marked improvement in the company's operations.

- The Draft Rehabilitation Scheme (DRS) for revival of BHPV is under final stages of approval by the BIFR and the same is expected to be cleared in April 2010.

- BHEL is addressing critical issues like improving the order book, manufacturing facilities and employee morale at BHPV. The company is expected to turnaround soon.

FUTURE DIMENSIONS

- The power sector is poised to remain in a growth trajectory even during XII and XIII Plan periods as the government shifts gears on infrastructure. As a part of the plan to shift to energy-saving technology and lower emissions, the share of thermal projects based on supercritical technology will rise, going forward. Robust demand in the domestic market for

power plant equipment will drive intense competition where BHEL intends to retain its leadership position.

- To maintain a balanced growth, BHEL will focus efforts on Transportation and Transmission sectors.

- To achieve time cycle reduction, BHEL is implementing companywide ERP covering technical, commercial and manpower areas. Further, appropriate organization structures are planned to be put in place with a focus on key functions like project engineering and project management.

- The new paradigm of competitiveness calls for a strategic shift that will require enhancement of capabilities. With capacity expansion to 20,000 MW by March 2012, we are building a new foundation for BHEL by ensuring that investments are timely, well planned, scalable and competitive.

- Engineering and technology have been BHEL's core capabilities. Greater standardisation of components and sub-systems that will drive cost competitiveness and faster delivery is being pursued.

- Against the backdrop of Climate Change, there would be increased focus of BHEL on low Carbon Path Technologies such as Ultra Supercritical, IGCC, Solar Power etc. BHEL would play a lead role in 'development and deployment' of advanced Ultra Supercritical Power Plant under the proposed National Mission for Clean Coal (Carbon) Technologies.

- Considering need of the Country to transmit bulk power over long distance, BHEL would continue its development of 1200 kV products such as Transformer and CVT which are slated for field trial at 1200 kV BINA Test Station of PowerGrid.

- Product cost competitiveness is a prerequisite for maintaining leadership position. Capability-building initiatives like design to cost, lean manufacturing and purchase & supply management would continue to be pursued.

- Diversification through inorganic growth calls for capturing emerging opportunities in nuclear power, transmission, transportation and renewable energy. Coupled with this, BHEL would continue to pursue strategic alliances by way of Joint Ventures to leverage equipment sales in supercritical thermal projects, and for sourcing of technology, critical inputs and equipment.

- Focus on consolidation in existing international markets and tapping opportunities in new markets will be the drivers for BHEL to expand its international footprint. Manufacturing and service presence in export markets will need to be explored for growth.

- The company is on track to becoming a $10-11 billion turnover company by 2011-12 in line with its strategic plan.

BHEL's performance in the year gone by was made possible by the confidence reposed by its stakeholders including the Government of India. I thank BHEL's stakeholders, our friends from the media and my colleagues for enabling BHEL to scale new heights.

Note: Company results for 2009-10 are provisional, subject to audit

Issued by Corporate Communication, BHEL, Jeevan Tara Building,
5, Sansad Marg, New Delhi – 110 001 Phone: 23347335, 23365669, Fax: 23342769
Email:**ccadhar@bhel.in**

Powering progress … Brightening lives
Touching every Indian Home