3rd April, 2006
Press Conference Address by
Shri Ashok K. Puri
Chairman & Managing Director, BHEL
on the Company’s performance
during 2005-06

Bharat Heavy Electricals Limited
www.bhel.co.in

Committed to Enhancing Stakeholder Value
BHEL powers ahead with 39% growth on top of 19% & 16% of the preceding years — Highest growth in the last three decades
## BHEL powers ahead...
### Highest growth in last three decades.

<table>
<thead>
<tr>
<th>2004-05</th>
<th>2005-06 (Provisional)</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Turnover</td>
<td>Rs. 10,336 Cr</td>
<td>Rs. 14,410 Cr</td>
</tr>
<tr>
<td>Profit Before Tax (PBT)</td>
<td>Rs. 1,582 Cr</td>
<td>Rs. 2,484 Cr</td>
</tr>
<tr>
<td>Net Profit (PAT)</td>
<td>Rs. 553 Cr</td>
<td>Rs. 1,621 Cr</td>
</tr>
<tr>
<td>Economic Value Added (EVA)</td>
<td>Rs. 504 Cr</td>
<td>Rs. 988 Cr</td>
</tr>
<tr>
<td>Value Added per employee</td>
<td>Rs. 5.82 Lakh</td>
<td>Rs. 12.84 Lakh</td>
</tr>
<tr>
<td>Earnings per share (EPS)</td>
<td>Rs. 36.95</td>
<td>Rs. 66.2</td>
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- BHEL enlarges its footprint in the global arena — by recording highest-ever export orders of Rs. 3,348 Cr, which included largest single export order for 4x125 MW HST Power Plant in Sudan. Overseas business now established in all six continents.
- Turnover at Rs. 14,410 Cr — an impressive growth of 39% on top of 19% achieved in 2004-05 and 16% in 2003-04, highest YoY growth in last three decades.
- Net profit at Rs. 1,621 Cr witnessed an increase of 70% over that of 2004-05.
- EVA at Rs. 988 Cr — up by 190% over that of Rs. 553 Cr achieved in 2004-05.
- Overall order inflow of Rs. 18,937 Cr — while operating in intensely competitive national & international markets ensures an outstanding order book of Rs. 37,500 Cr for execution in 2006-07 & beyond.
- Customers in domestic as well as export market segments both in the government & private sector demonstrated their confidence in BHEL by placing repeat orders.
- BHEL has maintained its share of 65% in the country’s total installed power generating capacity and has significantly contributed to 73% of the power generated in the country during the year.
- BHEL is equipping itself to cater to the country’s ambitious future power capacity addition programme including ultra-mega projects — total-up technology for 800 MW thermal sets operating with super critical parameters as well as enhancing its annual manufacturing capacity from the present 6,000 MW to 10,000 MW.
- 84 Patents were filed during the year taking the total number of patents filed till date to 330. Out of this, BHEL has been granted 26 patents and the rest are in various stages of processing. 13 copy right applications were also filed during the year.
- BHEL restated and re-commissioned the flood-ruined 6x250 MW Northotu Jhelum HEP of Saitaj Jul Vidyut Nigam Ltd. in record time. All six units were made available in just 72 days at the power station, which was badly damaged in flood floods due to a burst hou.
- In the continuing efforts to maintain technology edge through R&D, BHEL is setting up Centres of Excellence for Surface Engineering (CDE-SE) and for Intelligent Machines and Robotics (CIMAR).
- BHEL is the first engineering & manufacturing organisation and the first PSU in the country to have received ‘Best in Class Distinction’ from the International Asia Pacific Quality Organisation (APQO) through its Ramsar unit winning international Asia Pacific Quality Award (APQA-2005).
- National Award for Best Disabled Employees — for the year 2005 conferred on BHEL employees, Mr. RC Parsad by the President of India.
- BHEL’s units at Haridwar, Thrissur-Kollam and Power Sector Northern & Eastern Regions have received CII-GOM Selected certificarations for Business Excellence.

### Financial Performance
- BHEL recorded the highest ever turnover of Rs. 14,410 Cr, matching the highest ever growth of 39% on top of 19% and 16% top line growth achieved in 2004-05 and 2003-04 respectively, highest YoY growth in last three decades.
- The company’s Net Profit (PAT) stood at Rs. 1,621 Cr against Rs. 953 cr in the previous fiscal, Profit before Tax (PBT) was Rs. 2,484 Cr, during the year. Consequently, all-time high interim equity dividends totaling to 125% were paid for fiscal 2005-06, maintaining the track record of paying dividends unimpaired for the last 30 years.
- Earnings Per Share (EPS), during the year, stood at Rs. 66.2 — registering an increase of 70% over that achieved in 2004-05.
- Net Asset Value (NAV) per share increased to Rs. 297.4 from Rs. 248.2 in the previous year, indicating further growth in the intense strength of the company.
- In the same period, the highest-ever Economic Value Added (EVA) of Rs. 988 Cr was recorded, an increase of 96% over that of Rs. 504 Cr in 2004-05 — commendable performance for the engineering industry.
- Value Added per employee rose to Rs. 12.84 Lakh from Rs. 9.82 Lakh in 2004-05.
- Total export turnover (Physical + Deemed) soared to Rs. 3,875 Cr during the year, accounting for 21% of the company’s turnover during the year.

### Orders Inflow
- BHEL in the last three years has been able to consistently secure orders at record levels and this has resulted in considerable order book standings position of Rs. 37,500 Cr as on 31st March 2005, in the Power Sector business segment, BHEL, secured orders worth Rs. 9,008 Cr. In terms of power plant equipment, the orders amounted to 3,473 MW. Also, renewed thrust on innovation & modernisation, spans and services business resulted in booking orders worth Rs. 1,853 Cr in the Industry Sector business segment, BHEL secured the highest-ever orders worth Rs. 4,728 Cr during the year. In International Business, BHEL recorded the highest-ever physical export orders of Rs. 3,348 Cr — a six-fold increase over last year and more than double the previous highest export order booking achieved by BHEL. For the first time, export orders have contributed 18% to the company’s total order booking.

### Some significant aspects to be noted are:
- Major breakthrough achieved in CFB technology with the receipt of order for country’s highest rating (250 MW) CFB boiler for Neyveli TPS. In fact, all orders for CFB technology-based power plants in the country — highest in a year, have been won by BHEL.
- APJ400’s first two 500 MW sets at Vindhyachal and Bhilai TPPs were ordered on BHEL.
- Single largest contract awarded for a 4x125 MW substitution for 8x250 MW placed on BHEL.
- Largest ever export order secured for a 4x125 MW steam turbine-based thermal power plant at Kost, Sudan from National Electricity Corporation, Sudan on EPC basis.

### Key Projects — Significant Orders
- Vijayawada TPS stage II (2x250 MW & Bhadradri TPS (1,500 MW) from APGENCO: these are the first two 500 MW sets being set up by APGENCO.
- Major breakthrough in CFB technology-based power plants with EPC contracts for Neyveli TPS Stage II (2x250 MW) — the largest CFB power plant in the country and Barisagar TPS (2x125 MW), both from M/s. Alstom CFB (India) Ltd., based at Bareilly (1,125 MW) of BRPL and GUL & GPCL, Surti Lighter Power Project (2x125 MW) on O&PC basis.
- Chattisgarh TPS (2x250 MW) of BRPL. With this, BHEL maintained 100% share of supply of thermal power plant equipment in Rajasthan.

### Industry Sector — Significant Orders
- Highest-value single order for 2x120 MW Captive Power Plant (unit 666) of NALCO — this will be Asia’s largest CCGT on commission. It entails 120 MW each have been set up by BHEL at the same CPP earlier.
- 1x260 TPH Steam Generator & 2x15 TPH Back pressure Turbine-Duty Power Plant from NALCO Damanjodi.
- 1x80 MW Captive Power Plant from Hindustan Zinc Ltd.; following successful execution of EPC order for 2x75 MW CFP.
- Turnkey contract for 20 MW Co-generation Captive Power Plant from IOCL, Haldia.
- 2x75 TPH & 2x40 TPH BFBC boilers, 1x125 MW Non-renewable STG from Bhutan-based Sino Ltd.
**BHEL powers ahead...**  
**Highest growth in last three decades.**

- Single largest stand-alone ESP package contract for Barh STPS Stage I (3x660MW) from NTPC.
- Condition study, supply of spares and erection of Ratnagiri CCGT Block II (1000MW) from MSRPL.
- Pump Motor Set for Kattumannarkoil Stage I & II (7x3.7 MW) from BHEL Engineering.
- Allian Duhangang HEP (2x66 MW) from XDPAM, Shihwa, China, a joint development — the third order for a hydro project from the same group.
- Kotla STPP (2x500 MW) of NTPC — 3 sets of 500 MW and 3 sets of 200 MW supplied by BHEL already in operation.
- Laxniggaat Waste Heat Recovery Project (1x37.2 MW) of AESCO on turnkey basis.
- Erection and commissioning of 2x220 MVA 76 sets and Auxilary Systems for Khapli and RAPP-Kota Units 5&6 of HPCL.

**INTERNATIONAL MARKET — Significant Orders**

- Largest ever export order received for a 666 MW steam turbine based thermal power plant at Koelti, Sudan from National Electricity Corporation Sudan, on EPC basis. This is the first order for a power plant from Sudan and the first-ever order of fossil fired 325 MW unit based EPC order for a thermal power plant from overseas markets.
- Stronghold in Oman retained with the sixth & seventh power project orders for 3 x 125 MW Gas Turbine based power plants at Mulhaqainia and Salami Power Station at Petroleum Development Oman, on EPC basis. With this, BHEL has secured ten large orders from Oman since its entry into that market, a decade back.
- First coal-fired thermal plant (2x660 MW) on EPC basis — order received from PPI (Venezuela). This has given BHEL a foothold in the Venezuelan market where large investors/owners are preferential to coal based power plants.
- 42 MW Hydro Electric Power Plant order — First Power Plant order for Afghanistan.
- Two consecutive order for compression — for Marmol Project of Petroleum Development Oman. This success gives further impetus to export of compressors not only to Oman but also to the entire Middle East market, where large investments are planned for expanding Oil & Gas facilities.
- First ever export order for 220 kV sub-station from EGPOC Ethiopia. This World Bank funded project order has been secured against stiff competition from (Chinese & European suppliers, opening a new market for BHEL in Ethiopia and other African countries, where large Transmission & Distribution and Sub-station projects are planned.
- First ever export order from South America — 1x25 and 1x15 MVA Transformers for NVEBS, Peru. With this, BHEL has established its footprints in all the six inhabited continents of world.
- Orders for PV Modules from Poland & Germany. The order from Sunflower Farm, Poland is the first ever order for PV modules from this country and further expands BHEL’s presence in the export market for photovoltaic.
- Other notable export orders received during the year included:
  - Order for 40 acetal clad wall heads from JPC, Spain.
  - Orders from Thailand.
  - Shunt Reactors from EPC, Greece.
- Continued focus on After-Sales Services led to orders for spares & services from Sri Lanka, Oman, Azerbaijan, Malaysia, South Arabia, Singapore, Cyprus, Thailand and Malaysia.
- Pursuant to its efforts to become a sourcing center for OEM/EMOs, orders were received for supply of Soot Blowers from Indonesia and Insulators from UK.

**PROJECT COMMISSIONING**

- During the year, besides overseas commissioning BHEL added 2365 MW in the country comprising 13 Utility sets and 15 Captive/Industrial sets.
- With this, the installed capacity of BHEL Utility sets went up to 76,741 MW and BHEL maintained its share of 65% in the country’s total installed capacity of 1,18,561 MW.
- 120 MW (Unit 4) at Tata Jajpurra TPS was commissioned 26 days ahead of schedule.
- In the area of overseas project execution, a significant landmark was achieved with the commissioning of two Gas Turbine generating units (1.57 MW ISO each) at the 600 MW Weston Mountain Power Project in Libya. Significantly, the Turbines exceeded the guaranteed performance in the performance tests. Supplies for the remaining two units have also been completed.
- BHEL’s first Industrial steam turbine generating unit (15.3 MW) with dual controlled extraction was successfully commissioned, against initial export order received from Thy Carbon Black Co. Ltd., Thailand.
- Bag Filters were manufactured and commissioned for a steel mill in Romania against the first ever order for Fabric Filters in the export market, which was also the first ever export order from Romania.
- For the first time Mark-V based GT controls were commissioned at RL Haisa for their CHP Unit (Unit B).

**Major Utility power projects commissioned included:**

- 1 x 640 MW Thermal set for Sui-Pakar Atomic Power Project
- 1 x 500 MW Thermal set for Rihand STPS
- 1 x 265 MW thermal set for Panchari TPS
- 7.5 x 3 MW Gas Turbine for Oluwaace CCGT
- 1 x 260 MW Hydro sets for Sandal Sarovar HEP
- 3 x 50 MW hydros sets for Pukhees Ultimate HEP
- 2 x 20 MW Hydro sets for Amrup HEP
- 1 x 38 MW Gas Turbine for Rekha

**EQUIPMENT PERFORMANCE**

- During the year, BHEL’s thermal set generating set generated an all-time high: 402.6 Billion units of electricity — 73% of the total power generation in the country.
- BHEL’s unit thermal sets achieved an impressive Plant Load Factor of 78.5% — higher than the national average by 1.5%. Operating Availability (OAV) was recorded at a high 93.4%.
- BHEL made 203/210/250/300 Mw thermal sets, which form the backbone of the country’s thermal generating capacity, operated at a PLF of 78.7%-80.4% at 87.4%. Notably, 33 sets achieved PLF of over 90%.
CONTINUED CUSTOMER SUPPORT

- BHSL reinforced its commitment to providing prompt & efficient customer service aimed at facilitating uninterrupted power supply & keeping power plants in good running condition. During the year, BHSL overhauled 110 thermal units & industrial sets and 27 hydro sets.

- BHSL once again demonstrated its customer focus when it took up on war footing and completed the restoration and re-commissioning work of the flood-affected 6x220 MW Nathpa Jhakri HE of Satluj Jal Vidyut Nigam Ltd. in record time. All the six units were made available in just 72 days at the power stations, which was badly damaged in flash floods due to a cloud burst.

TECHNOLOGY DEVELOPMENT

- BHSL’s products and systems are highly technology intensive and R&D and technology development are of strategic importance to the company. During the year, a turnover of around Rs. 5,064 Crore was achieved through products and systems developed in-house.

Notable technology developments during the year included:

- In conformity with BHSL’s concern for society and environment, BHSL has developed a Bypass Over Fire Air (BOFA) system, which reduces Nitrogen Dioxide (NOx) pollutants from coal-based thermal power plants by up to 50% from the present level.

- BHSL continues its thrust to exploit the potential of renewable energy. It has developed and tested a 500-metre-based Francis Turbine having higher efficiency for hydro power generation.

- As part of its efforts to provide maximum value to its customers, BHSL has developed a steam leak detection system, which allows early detection of boiler tube leaks in thermal power plants. This prevents catastrophic failures and large-scale outages, by facilitating preventive shutdowns.

- For enhancing the country’s generating capacity at moderate investments through R&M of existing units, BHSL has developed a new LP turbine variant, which can be retrofitted in old UFW sets. There are 57 nos. of 200/210 MW UFW sets (supplied by BHSL), which have completed over 20 years of service life. After retrofitting, the units can be uprated by 6-8 MW and their life can be extended by another 20 years.

- As its contribution to modernise the storage and inventory management system of the Indian Army, BHSL is executing a contract for installing its In-House developed Automatic Storage & Retrieval Systems (ASRS). Spread over 13 warehouses, the ASRS comprises more than 1,28,000 storage bins and a computer-based Warehouse Management System with automatic operation through Radio-Frequency Communication. Valued at over Rs. 300 Crore, the contract was placed by Centro Defence Estate, New Delhi.

- For the benefit of its customers by way of developing more efficient products/technologies, BHSL has established several Centres of Excellence (CoE). Set up last year, the CoE for Permanent Magnetic Generator (PMG), which is lighter and smaller (40K), and more reliable in comparison with the present PMG.

- Continuing its tradition of contributing to the country’s space programme, BHSL manufactured solar panels comprising high-efficiency multi-junction solar cells with 5500 watts output and Satellite Bases (Neon- Hydrogen type 70 Ah). These were deployed in the Communication Satellite INSAT-4A, which was put in geostationary orbit by ISRO in Dec., 2005.

- As part of improving the economics of solar photovoltaic systems to enhance the conversion efficiency of the solar cell by around 10-15%, anti-reflection coating technology has been developed.

- As part of its endeavour to offer to its customers, quality products conforming to International Standards, BHSL has put its large-scale higher wattage (150 watts) PV modules certified by European Solar Test Installation (ESTI), Joint Research Centre (JRC), European Commission, ISPEA, Italy. BHSL had earlier obtained the certification for low wattage modules. This international recognition development will facilitate marketing of the entire spectrum of PV products in overseas markets.

REMOTE AREA DEVELOPMENT

- BHSL has been contributing to the national effort for development of far-flung/remote areas on a sustained basis. Highlights during the year included:

  - Three ‘Stand Alone’ Solar Photovoltaic (SPV) power plants were commissioned by BHSL for WIBREDA at Rekhaipur, Kaliappara and Daudpur islands, in the Sunderbans. Honble President of India, Dr. A.P.J. Abdul Kalam visited the Solar Power Plant at Nayaparae and admired the efforts of BHSL, and WIBREDA in harnessing renewable energy for the welfare of people living in remote parts of the country.

  - India’s largest Solar-Diesel Hybrid Power Plant of 50 Kw capacity was commissioned at Bangalore Island of Lhasiladweep. This will facilitate availability of un-interrupted, environment-friendly power for various applications in the world-famous tourism island.

  - 120 sets of Solar Powered Water Pumping Systems were supplied, installed and commissioned in various parts of Punjab. Each system will cater to the power requirement of 2 HP pumps used for irrigation purposes.

CAPACITY AUGMENTATION & ASSET MODERNISATION

- Aimed at meeting customer commitments and enhanced market demand, an investment of Rs. 312 Crore was made under a plan capital programme, during the year. This was done through completion of ongoing modernization schemes and replacement of ageing facilities. Out of this, an investment of Rs. 222 Crore was made for introduction of state-of-the-art facilities for improving product quality, reducing cost and cycle time and enhancing productivity. In addition, Rs. 110 Crore was spent on modernizing and aligning equipment at various power plant sites for meeting enhanced emission load and shorter commissioning schedules.

- BHSL is investing more than Rs. 1,200 Crore during the 11th plan period for modernization of facilities for various products in its units, and for an extensive & comprehensive equipment at power plant sites.

QUALITY/ENVIRONMENT

- For attaining excellence in its operations, BHSL has adopted Total Quality Management (TQM) through self-assessment as per ISO9002 model of Business Excellence. In order to measure the maturity level achieved in this movement Units/Divisions of BHSL are participating in CEDIM Bank Award for Business Excellence. BHSL’s efforts have been recognised by the award committee and all 5 Units/Divisions, which participated in the award, have been recognised with award of commendation certificates for efforts towards continuous improvement and Business Excellence. BHSL has thus become the first PSU to win this recognition for all Units/Divisions participating in the CEDIM Bank Award for Business Excellence.

- BHSL became the first Public Sector as well as the first engineering and manufacturing organisation in the country to win the coveted ‘Best in Class Distinction’ from the International Asia Pacific Quality Organisation (APIQO). BHSL’s Renew plant won the recognition as part of the International Asia Pacific Quality Award (BAPQA) 2005, when more than 56 countries participated.

- As a responsible corporate citizen and to meet existing international standards in occupational health, safety and environment, BHSL completed recertification of all its units/divisions for OHSAS 18001:2007 Occupational Health and Safety Management System as well as ISO-14001: Environmental Management System.
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HUMAN RESOURCE — A SPECIAL FOCUS
- During the year 7 employees received individual National awards. This brings the cumulative National awards in BHEL to 386 employees.
- In keeping with its unique tradition of Participative Management, BHEL’s Apex-level participative forum — Joint Committee, completed 38 years of successfully steering positive & harmonious industrial relations and fostering joint-decision-making in the company. The forum consists of Central Trade Union leaders, Plant-level Union Leaders and the top-management, with linkages right up to shop floor participation. BHEL is a pioneer in Participative Management in the Public Sector and is constantly endeavouring to revive and strengthen this participative culture.
- With a view to encouraging creatively — which is so essential to meet the ever-increasing competition in the market, employees are encouraged through suitable reward schemes to take up improvement Projects. As a result, over 6,000 projects were registered apart from 22,000 suggestions, during the year. This has resulted in substantial savings for the company as well.
- In line with the changing market requirements the knowledge & skills of the employees are continuously upgraded. Accordingly, during the year 31,500 employees (74% of the total employees) were exposed to 3.6 lakh man days of different training programmes, during the year. This translates into 8.45 training man days per employee. In addition, over 520 customer personnel also were trained on various themes. Also, as part of social commitment over 4,500 Apprentices were trained in the company.

SOCIAL RESPONSIBILITIES
- BHEL and its employees once again rose to the occasion and demonstrated their solidarity with fellow citizens and victims of natural calamities, which rocked the nation during the year. A sum of Rs. 3 Crore was contributed by the company to help mitigate the suffering of the people devastated by the severe earthquake in the state of Jammu & Kashmir.
- As part of its Corporate Social Responsibility, BHEL undertook a number of welfare projects during the year at the company's adopted villages located across the country. These included Blood Donation Camps, Health Check-up Camps & Infrastructure upgradation at these adopted villages.
- Also, as part of the company's commitment towards conservation of the environment, several tree plantation drives were organized at its plants and townships, located across the country. With this, the total number of trees planted by the company has gone up to 30 lakh trees.

AWARDS
- Continuing its tradition of bagging prestigious national/international awards, the organisation and its employees won several awards during the year. Notable among these include: Indian Nuclear Society's Industrial Excellence Award 2004-05, FICCI Award for Environmental Conservation & Pollution Control, Vistashakrami Roasting Awards, National Safety Awards, EEPC's Top Exporter Award for the Fifteenth year in succession, British Safety Council’s International Safety Award for the BHEL eighteenth year and IDA'S National Award for Excellence in Cost Management 2005.
- For his overall outstanding performance in the face of all adversaries, a BHEL employee, Mr. R.C. Patole, was conferred the ‘National Award for Best Disabled Employee for the year 2005’, by the President of India.

Note: Company results for 2005-06 are provisional, subject to audit.
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