

# C O N T E N T S

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# Bharat Heavy Electricals Limited

Regd. Office: BHEL House, Siri Fort, New Delhi-110049

## NOTICE

Notice is hereby given that the 40<sup>th</sup> Annual General Meeting of the Members of BHARAT HEAVY ELECTRICALS LIMITED will be held on 'Tuesday', the 28<sup>th</sup> September, 2004 at 10.00 A.M. at FICCI Auditorium, Barakhamba Road (Tansen Marg), New Delhi-110001, to transact the following business:-

### ORDINARY BUSINESS

1. To receive, consider and adopt the audited Balance Sheet of the Company as at 31<sup>st</sup> March, 2004 and the Profit & Loss Account for the financial year ended on that date together with the Reports of the Directors and Auditors thereon.
2. To declare dividend.
3. To appoint a Director in place of Shri H. W. Bhatnagar, who retires by rotation and being eligible, offers himself for re-appointment.
4. To appoint a Director in place of Shri C. Srinivasan, who retires by rotation and being eligible, offers himself for re-appointment.
5. To appoint a Director in place of Shri Sharad Upasani, who retires by rotation and being eligible, offers himself for re-appointment.
6. To fix the remuneration of the Auditors.

### SPECIAL BUSINESS

7. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:  
"RESOLVED THAT Shri Ramji Rai, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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 S. K. Jain, who was appointed as a Director of the Company pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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."

9. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

"RESOLVED THAT Shri A. H. Jung, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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."

10. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Ordinary Resolution**:

"RESOLVED THAT Shri S. S. Supe, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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."

11. To consider and, if thought fit, to pass with or without modification, the following resolution as an

**Ordinary Resolution:**

“RESOLVED THAT Shri Ranjan Pant, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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.”

12. To consider and, if thought fit, to pass with or without modification, the following resolution as an

**Ordinary Resolution:**

“RESOLVED THAT Shri Vineet Nayyar, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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.”

13. To consider and, if thought fit, to pass with or without modification, the following resolution as an

**Ordinary Resolution:**

“RESOLVED THAT Shri A. K. Puri, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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.”

14. To consider and, if thought fit, to pass with or without modification, the following resolution as an

**Ordinary Resolution:**

“RESOLVED THAT Shri Naresh Chaturvedi, who was appointed as a Director pursuant to Article 67

of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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.”

15. To consider and, if thought fit, to pass with or without modification, the following resolution as an

**Ordinary Resolution:**

“RESOLVED THAT Shri D.R.S. Chaudhary, who was appointed as a Director pursuant to Article 67 of the Articles of Association of the Company read with Section 260 of the Companies Act, 1956 and who holds 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.”

16. To consider and, if thought fit, to pass with or without modification, the following resolution as an **Special Resolution:**

“RESOLVED THAT subject to the provisions of the Companies Act, 1956, (including any statutory modification(s) or re-enactment thereof for the time being in force and as may be enacted hereinafter), the Securities and Exchange Board of India (Delisting of Securities) Guidelines, 2003 and subject to such other approvals, permissions and sanctions, as may be necessary, consent be and is hereby accorded to the Board of Directors of the Company to delist its equity shares from the Stock Exchanges viz., the Delhi Stock Exchange Association Ltd., New Delhi, the Stock Exchange, Ahmedabad, the Madras Stock Exchange Ltd., Chennai and the Calcutta Stock Exchange Association Ltd., Kolkata at such time as the Board may decide, without giving an exit option to the shareholders of the region of the Stock Exchanges where they are situated, as the Company's shares would continue to be listed with the Stock Exchange, Mumbai (BSE) and the National Stock Exchange of India Limited (NSE).



RESOLVED FURTHER THAT for the purpose of giving effect to this resolution, the Board of Directors or any Committee thereof be authorised on behalf of the Company to do all such acts, deeds, matters and things as it may, in its absolute discretion, deem necessary for such purpose and with power on behalf of the Company to settle any questions, difficulties or doubts that may arise in this regard without requiring the Board to secure any further consent or approval of the Members of the Company.”

By Order of the Board of Directors  
Sd/-

( N. K. SINHA )  
COMPANY SECRETARY

New Delhi

Dated: 1<sup>st</sup> September, 2004

Registered Office:

**"BHEL House", Siri Fort, New Delhi-110 049.**

**NOTES:-**

1. A MEMBER ENTITLED TO ATTEND AND VOTE AT THE MEETING IS ENTITLED TO APPOINT A PROXY TO ATTEND AND VOTE INSTEAD OF HIMSELF/HERSELF AND THE PROXY NEED NOT BE A MEMBER OF THE COMPANY. PROXY FORM DULY COMPLETED SHOULD BE DEPOSITED AT THE REGISTERED OFFICE OF THE COMPANY NOT LESS THAN FORTY-EIGHT HOURS (48 HOURS) BEFORE THE SCHEDULED TIME OF THE ANNUAL GENERAL MEETING. BLANK PROXY FORM IS ENCLOSED.
2. 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.
3. Brief resume of each of the Directors proposed for appointment and re-appointment is given as Annexure- 2 to the Directors' Report.
4. Shri H. W. Bhatnagar, Shri C Srinivasan and Shri Sharad Upasani, Directors retire by rotation and being eligible, offer themselves for reappointment. However, as per terms of their appointment, the tenure of Shri H. W. Bhatnagar is upto 28.02.2005, Shri C Srinivasan upto 31.05.2005 and Shri Sharad Upasani upto 25.12.2004.
5. The Register of Members and Share Transfer Books of the Company shall remain closed from 8<sup>th</sup> September, 2004 to 28<sup>th</sup> September, 2004 (both days inclusive) for the purpose of payment of dividend, if any, approved by the Members.
6. Members are advised to submit their Electronic Clearing Service (ECS) mandates 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 dividend on the Equity Shares as recommended by the Board of Directors for the year ended 31<sup>st</sup> March, 2004 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 27<sup>th</sup> October, 2004, 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 Depository as on Wednesday, the 8<sup>th</sup> September, 2004.
8. 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 dividend for the Financial year 1996-97 which remains unclaimed is due to be transferred to the said account after 29<sup>th</sup> September 2004 and for the further years commencing from 1997-98 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 1997 or any subsequent financial year(s) may approach the Company for obtaining payments thereof before expiry of the stipulated 7 years period.
9. Members may avail facility of nomination in terms of Section 109A of the Companies Act, 1956, by nominating in the 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.

10. Pursuant to Section 619(2), as amended by the Companies (Amendment) Act, 2000, the Auditors of a Government Company shall be appointed or re-appointed by the Comptroller and Auditor General of India and in terms of Clause (aa) inserted in sub-section (8) of Section 224 of the Amendment Act, 2000 their remuneration has to be fixed by the Company in the Annual General Meeting. The appointment of Statutory Auditors of the Company for the year 2004-2005 is awaited from C&AG of India. The General Meeting may, authorise the Board to fix up an appropriate remuneration of Auditors for the year 2004-2005 after taking into consideration the increase in volume of work and prevailing inflation.

11. 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.

12. Members are requested to notify immediately any change of address:

- i. to their Depository Participants (DPs) in respect of their electronic share accounts, and
- ii. to the Company at its Registered Office or its Registrar (RTA) M/s Karvy Computershare Pvt. Ltd. in respect of their physical shares, if any, quoting their folio number, Banker's name and account number to ensure prompt and safe receipt of dividend warrants.

13. Members attending the meeting are requested to complete the enclosed Attendance Slip and deliver the same at the entrance of the meeting venue. 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.

14. Members desirous of getting any information about the accounts and operations of the Company are requested to address their queries to the Company atleast a week prior to the date of the meeting, so that the information required can be made readily available at the meeting.

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/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 Annual General Meeting.

By Order of the Board of Directors

Sd/-

( N. K. SINHA )

COMPANY SECRETARY

#### **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 to 16 of the accompanying Notice dated 1<sup>st</sup> September, 2004.

#### **ITEM NO. 7**

Shri Ramji Rai aged 58 years is a Mechanical Engineer. As per the direction of the Govt. of India, Shri Ramji Rai was appointed as Director (E, R&D) of the Company w.e.f. 01.02.2004 for a period of 5 years or till the date of his superannuation or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Ramji Rai 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 Ramji Rai 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 Santosh Kumar Jain aged 57 years is a Mechanical Engineer. As per the direction of the Govt. of India, Shri Jain was appointed as Director (HR) of the Company w.e.f. 01.03.2004 for a period of 5 years or till the date of his superannuation or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Jain 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.K. Jain is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

#### **ITEM NO. 9**

Shri Akbar Hameed Jung, aged 62 years is a retired Civil Servant. As per the direction of the Govt. of India, Shri Jung was appointed as a Part time non-official Director of the Company w.e.f. 01.03.2004 to hold the Office for a period of three years i.e. upto 28.02.2007 or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Jung 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 A.H. Jung is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

#### **ITEM NO. 10**

Shri Sudhir Shridhar Supe aged 47 years is a retired Government Servant. As per the direction of the Govt. of India, Shri Supe was appointed as a Part time non-official Director of the Company w.e.f. 01.03.2004 to hold the Office for a period of three years i.e. upto 28.02.2007 or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Supe 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. S. Supe is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

#### **ITEM NO. 11**

Shri Ranjan Pant aged 45 years is a global Management Consultant. As per the direction of the Govt. of India, Shri Pant was appointed as a Part time non-official Director of the Company w.e.f. 01.03.2004 to hold the Office for a period of three years i.e. upto 28.02.2007 or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Pant 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 Ranjan Pant is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

**ITEM NO. 12**

Shri Vineet Nayyar, aged 66 years is Vice Chairman of HCL Technologies and Chief Executive Officer of HCL Perot Systems. As per the direction of the Govt. of India, Shri Nayyar was appointed as a Part time non-official Director of the Company w.e.f. 01.03.2004 to hold the Office for a period of three years i.e. upto 28.02.2007 or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Nayyar 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 Vineet Nayyar is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

**ITEM NO. 13**

Shri Ashok Kumar Puri, aged 56 years is an Electrical Engineer and MBA in Marketing & Finance. As per the direction of the Govt. of India, Shri Puri was appointed as Director (Power) of the Company w.e.f. 01.04.2004 for a period of 5 years or till the date of his superannuation or until further orders, whichever event occurs the earliest. Having been so appointed, Shri Puri 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 A. K. Puri is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

**ITEM NO. 14**

Shri Naresh Chaturvedi, aged 56 years is the Additional Secretary & Financial Advisor to Government of India, Ministry of Heavy Industries & Public Enterprises. As per the direction of the Govt. of India, Shri Chaturvedi was appointed as a Part time official Director of the Company w.e.f. 29.07.2004. Having been so appointed, Shri Chaturvedi 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 Naresh Chaturvedi is, in any way, concerned or interested in the resolution.

The Board of Directors commends the resolution for approval of the shareholders.

**ITEM NO. 15**

Shri Dilip Raj Singh Chaudhary, aged 51 years is the Joint Secretary to the Government of India, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises. As per the direction of the Govt. of India, Shri Chaudhary was appointed as a Part time official Director of the Company w.e.f. 23.08.2004 vice Shri A. Didar Singh. Having been so appointed, Shri Chaudhary 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 D.R.S. Chaudhary is, in any way, concerned or interested in the resolution.



The Board of Directors commends the resolution for approval of the shareholders.

#### **ITEM NO. 16**

The Securities and Exchange Board of India (SEBI) has issued the Securities and Exchange Board of India (Delisting of Securities) Guidelines, 2003 (hereinafter referred to as the Delisting Guidelines) inter alia incorporating the provisions for delisting of Securities of a body corporate voluntarily. The Equity Shares of the Company are currently listed on the following 6 Stock Exchanges in India:

1. The Stock Exchange, Mumbai
2. The National Stock Exchange of India Limited
3. The Delhi Stock Exchange Association Limited
4. The Calcutta Stock Exchange Association Limited
5. The Madras Stock Exchange Limited
6. The Stock Exchange, Ahmedabad

With the extensive networking of the Stock Exchange, Mumbai (BSE) and the National Stock Exchange (NSE) as also the extension of BSE and NSE terminals to other cities as well, investors have access to online dealings in Equity Shares of the Company across the Country. The bulk of the trading in the Company's equity shares in any case takes place on the BSE and NSE. Trading in the Company's Equity Shares on all the other Stock Exchanges is nil / negligible. It is also observed that the listing fee paid to the other Stock Exchanges (other than BSE and NSE) is disproportionately higher, compared to either nil or negligible trading volumes of the Company's securities on those Stock Exchanges as evident from the data collected from all the stock exchanges for the year 2003-04, as below:

Sl. No.	Name of the Stock Exchange	No. of shares	No. of Trades	Net turnover (Rs./Lakhs)
1	The Stock Exchange, Mumbai	66314028	674139	264379.62
2	National Stock Exchange	181765958	-N.A.-	641138.90
3	Delhi Stock Exchange	Nil	Nil	Nil
4	Calcutta Stock Exchange	21175	14	61.35
5	Madras Stock Exchange	Nil	Nil	Nil
6	The Stock Exchange, Ahmedabad	Nil	Nil	Nil

The Company has proposed this Resolution, as part of its cost reduction measures, which will enable it to delist its Equity Shares from the following Stock Exchanges:

1. The Delhi Stock Exchange Association Limited
2. The Calcutta Stock Exchange Association Limited
3. The Madras Stock Exchange Limited
4. The Stock Exchange, Ahmedabad

In line with SEBI regulations and approvals, if any, required of any authorities, Members' approval is being sought by a Special Resolution for enabling voluntary delisting of its securities from the said Stock Exchanges. The proposed delisting of the Company's Equity Shares from the said Stock Exchanges, as and when it takes place, will not affect the investors adversely as the Company's shares will continue to be listed on BSE and NSE. The delisting will take effect after all approvals, permissions and sanctions are received. The exact date on which delisting will take effect will be suitably notified at that time.

None of the Directors of the Company 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  
Sd/-  
(N. K. SINHA)  
COMPANY SECRETARY

New Delhi.

Dated: 1<sup>st</sup> September, 2004

Registered Office:

**"BHEL House", Siri Fort, New Delhi-110 049.**



## BHEL AT A GLANCE

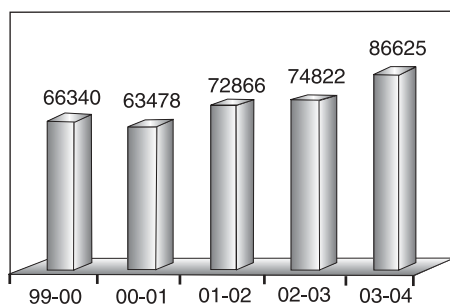
	<u>2002-03</u>	<u>2003-04</u>	(Rs. in million) <u>CHANGE (%)</u>
Turnover	74822	86625	15.77
Value Added	32475	36800	13.32
Employee (Nos.)	46855	43952	-6.20
Profit Before Tax	8024	10148	26.47
Profit After Tax	4445	6582	48.08
Dividend	979	1469	50.05
Dividend Tax	125	190	52.00
Retained Earnings	3341	4923	47.35
Total Assets	95879	116564	21.57
Net Worth	47082	52781	12.10
Total Borrowings	5310	5400	1.69
Debt : Equity	0.11	0.10	-9.29
Per Share (in Rupees) :			
- Net worth	192.36	215.64	12.10
- Earnings	18.16	26.89	48.06
- Dividend	4.00	6.00	50.00
			(US \$ in million)
Turnover	1581	1976	25.05
Profit Before Tax	169	232	36.60
Profit After Tax	94	150	59.93

Conversion Rates (Rate as on 31st March):

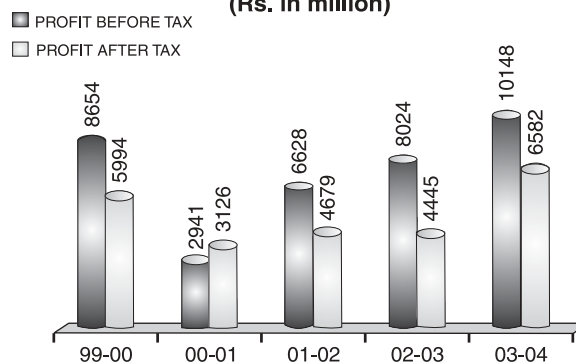
1 US \$ = Rs. 47.34 for 2002-03

1 US \$ = Rs. 43.83 for 2003-04

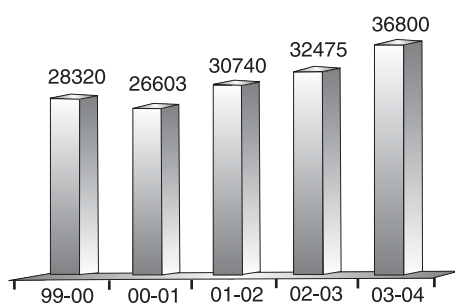
### TURNOVER (Rs. in million)



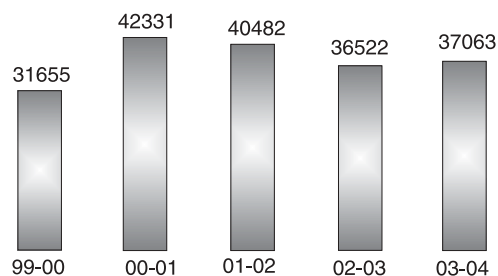
### PROFIT (Rs. in million)



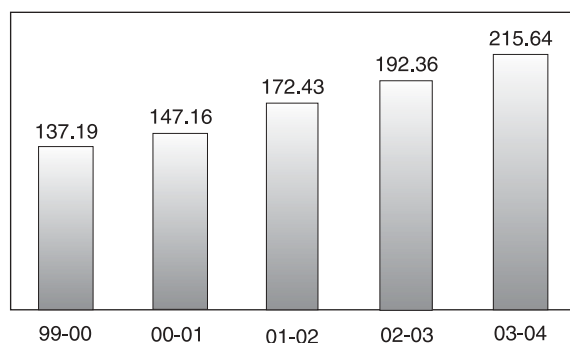
### VALUE ADDED (Rs. in million)



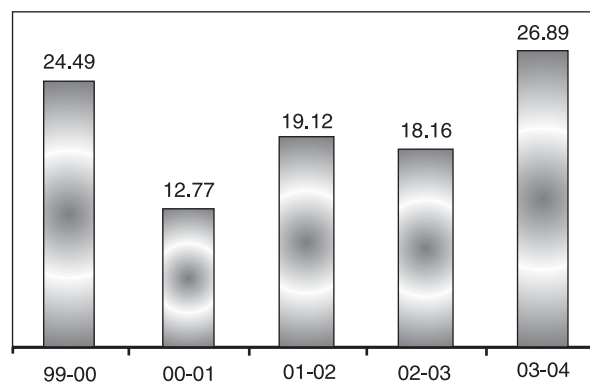
### CAPITAL EMPLOYED (Rs. in million)



### NET WORTH PER SHARE (Rupees)



### EARNINGS PER SHARE (Rupees)



## FIVE YEAR SUMMARY

(Rs.in million)

	2003-04	2002-03	2001-02	2000-01	1999-2000
<b>EARNINGS</b>					
Sale of products & services to customers	86625	74822	72866	63478	66340
Other Income	5127	5087	4940	5054	4704
Changes in stock	-306	-453	-373	2507	-237
Total Earnings	91446	79456	77433	71039	70807
Materials	36347	31604	33068	30496	28120
Personnel Payments	16395	15046	14446	21702*	11330
Other mfg., admn. & selling expenses	25975	22380	20629	13884**	20951
Outgoings before interest & depr.	78717	69030	68143	66082	60401
Profit before depreciation, interest & tax	12729	10426	9290	4957	10406
Depreciation	1980	1854	1692	1578	1535
Gross Profit	10749	8572	7598	3379	8871
Interest	601	548	970	438	217
Profit before tax	10148	8024	6628	2941	8654
Provision for tax	3566	3579	1949	-185	2660
Profit after tax	6582	4445	4679	3126	5994
Dividend (incl.dividend tax)	1659	1104	979	809	855
Retained Profit	4923	3341	3700	2317	5139
* includes arrears of wage revision of Rs. 7078 million from 1.1.97 to 31.3.2000					
**after withdrawal of provision in respect of wage arrears Rs. 5140 million					
<b>WHAT THE COMPANY OWNED</b>					
Gross Block	34596	33493	31820	30040	28109
Less: accumulated depreciation & lease adj.	23655	21788	20054	18614	17230
Net Block	10941	11705	11766	11426	10879
Capital WIP	1086	587	567	612	724
Investments	290	103	103	103	103
Current Assets, Loans & Advances	104247	83484	80514	75762	70190
Total assets	116564	95879	92950	87903	81896
<b>WHAT THE COMPANY OWED</b>					
Borrowings (incl. Credits for assets taken on lease)	5400	5310	6658	10256	2407
Current liabilities & provisions	63369	47561	47135	41630	45911
Total liabilities	68769	52871	53793	51886	48318
<b>NET WORTH OF THE COMPANY</b>					
Share Capital	2448	2448	2448	2448	2448
Reserves & Surplus @	50512	45589	42248	35856	33539
Less : Deferred Revenue Expenditure	179	955	2493	2286	2409
Net Worth	52781	47082	42203	36018	33578
<b>CAPITAL EMPLOYED</b>	37063	36522	40482	42331	31655
<b>VALUE ADDED</b>	36800	32475	30740	26603	28320
<b>RATIOS</b>					
PBDIT to total assets (%) #	12.0%	11.0%	10.3%	5.8%	13.1%
Gross profit to capital employed (%) #	29.2%	22.3%	18.3%	9.1%	30.5%
Earnings per share (Rs.)	26.89	18.16	19.12	12.77	24.49
Net worth per share (Rs.)	215.64	192.36	172.43	147.16	137.19
Current Ratio	1.65	1.76	1.71	1.82	1.53
Total Debt / Equity	0.10	0.11	0.16	0.28	0.07

@ includes Rs. 4985 million for 2003-04, Rs. 4074 million for 2002-03 and Rs. 3046 million for 2001-02 towards deferred tax assets

# On the basis of average net assets and capital employed



## DIRECTORS' REPORT

Your Directors have pleasure in presenting their 40<sup>th</sup> Annual Report together with audited accounts of the Company for the year ended March 31, 2004.

### PERFORMANCE HIGHLIGHTS

Your company has achieved impressive results in 2003-2004 and has registered a net profit of Rs. 6582 million. Net worth of the company has gone up from Rs. 47082 million in 2002-2003 to Rs. 52781 million in 2003-2004 registering an increase of 12.10%. Net worth per share has increased from Rs. 192.4 in 2002-2003 to Rs. 215.6 in 2003-2004.

Major highlights of performance during 2003-2004 are summarised below:

	(Rs. in million)		
	<u>2003-2004</u>	<u>2002-2003</u>	<u>Increased by</u>
Turnover	86625	74822	15.77%
Profit Before Tax	10148	8024	26.47%
Profit After Tax	6582	4445	48.08%
Net worth per share (Rs.)	215.6	192.4	12.10%

The details of appropriation of profit for the year are as follows:

	(Rs. in million)	
	<u>2003-2004</u>	<u>2002-2003</u>
Profit After Tax	6582	4445
Add : – Balance of Profit b/f from last year	519	190
– Transfer from Foreign Project Reserve	106	68
	<u>7207</u>	<u>4703</u>
Appropriations:		
– Foreign Project Reserve	14	12
– Bond Redemption Reserve	1000	1000
– Dividend – Interim	734	
– Final	734	979
– Corporate Dividend Tax	190	125
– Transfer to General Reserve	3500	2068
– Carried to Balance Sheet	1035	519
	<u>7207</u>	<u>4703</u>

Dividend of 60% (including an interim dividend of 30% approved by the Board and already paid), amounting to Rs. 1469 million, on the paid up capital of Rs. 2447.60 million

has been recommended for 2003-2004, as compared to 40% dividend declared for 2002-2003. In addition, a provision of Rs. 95.96 million has been made for Corporate Dividend Tax and Education Cess on the final dividend proposed. Corporate Dividend Tax of Rs. 94.08 million has already been paid on the interim dividend.

### ORDERS RECEIVED

Orders received during the year increased by 46.77% from Rs. 112270 million in 2002-2003 to Rs. 164775 million in 2003-2004. Sector wise orders booked are as follows:

	(Rs. in million)	
	<u>2003-2004</u>	<u>2002-2003</u>
Power Sector	126785	68800
Industry Sector	35670	28920
International Operations	2320	14550
Total Orders booked	164775	112270
Order book outstanding as at the end of the year	236500	158000

### OPERATIONS OF THE YEAR VIS-À-VIS MOU TARGETS

Performance of BHEL for the year 2002-2003 has been rated as 'Excellent' in terms of the Memorandum of Understanding signed with the Government of India. The rating for 2003-2004 is under evaluation.

### MANAGEMENT DISCUSSION AND ANALYSIS

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

### BOARD OF DIRECTORS

The following changes took place in the constitution of the Board of Directors of the Company since last report:

#### Appointment

Shri Ramji Rai was appointed as Director (E, R&D) w.e.f. 1<sup>st</sup> February, 2004.

Shri Harsh Wardhan Bhatnagar, Director (IS&P) held additional charge of the post of Chairman & Managing Director from 12<sup>th</sup> February 2004 to 8<sup>th</sup> April, 2004. He has been acting as Chairman, Committee of Directors since 9<sup>th</sup> April 2004.

Shri Santosh Kumar Jain was appointed as Director (HR) w.e.f. 1<sup>st</sup> March, 2004.

S/Shri Akbar Hameed Jung, Sudhir Shridhar Supe, Ranjan Pant and Vineet Nayyar were appointed as part-time non-official Directors w.e.f. 1<sup>st</sup> March, 2004.

Shri Ashok Kumar Puri was appointed as Director (Power) w.e.f. 1<sup>st</sup> April, 2004.

Shri Naresh Chaturvedi, Additional Secretary & Financial Advisor to the Govt. of India, Ministry of Heavy Industries & Public Enterprises, was appointed as Part-time Official Director of the Company w.e.f. 29<sup>th</sup> July, 2004.

Shri Dilip Raj Singh Chaudhary, Joint Secretary to the Govt. of India, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, was appointed as Part-time Official Director of the Company w.e.f. 23<sup>rd</sup> August, 2004 vice Shri A. Didar Singh.

In accordance with Article 67 (iv) of the Articles of Association of the Company, S/Shri Ramji Rai, S. K. Jain, A. H. Jung, S.S. Supe, Ranjan Pant, Vineet Nayyar, A. K. Puri, Naresh Chaturvedi and D.R.S. Chaudhary shall hold office as Directors upto the date of the ensuing Annual General Meeting of the Company and are eligible for re-appointment.

### **Cessation**

Shri K. G. Ramachandran ceased to be the Chairman & Managing Director w.e.f. 19<sup>th</sup> October 2003 on completion of his tenure.

Shri Virendra Kumar laid down the office of Director (E, R&D)) on attaining the age of superannuation on 31<sup>st</sup> January, 2004.

Shri Ishan Shankar laid down the office of Director (HR) on attaining the age of superannuation on 29<sup>th</sup> February, 2004. He acted as Chairman, Committee of Directors from 29<sup>th</sup> October, 2003 to 11<sup>th</sup> February, 2004.

Shri Ramesh Chand Aggarwal laid down the office of Director (Power) on attaining the age of superannuation on 31<sup>st</sup> March, 2004.

The Board of Directors records its sincere appreciation for the long, dedicated and distinguished services rendered by S/Shri K. G. Ramachandran, Virendra Kumar, Ishan Shankar and Ramesh Chand Aggarwal during their respective tenure.

Shri Avinash Chandra Wadhawan and Dr. Anand Prabhakar Patkar who were appointed as part-time non-official Directors w.e.f. 15<sup>th</sup> June, 2001 ceased to be Directors of the Company on completion of their tenure on 14<sup>th</sup> June, 2004.

Shri Gian Prakash Gupta who was appointed as part-time non-official Director w.e.f. 14<sup>th</sup> August, 2001 ceased to be Director of the Company on completion of his tenure on 13<sup>th</sup> August, 2004.

Shri A. Didar Singh, Joint Secretary to the Govt. of India, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, ceased to be Director of the Company w.e.f. 23<sup>rd</sup> August, 2004.

The Board of Directors places on record its deep appreciation for the valuable advice and guidance given by S/Shri A.C. Wadhawan, Dr. Anand Patkar, G.P. Gupta and A. Didar Singh, during their tenure as Directors of the Company.

In accordance with Article 67 (i) of the Articles of Association of the Company, S/Shri H. W. Bhatnagar, C. Srinivasan and Sharad Upasani retire by rotation at the ensuing Annual General Meeting and, being eligible, offer themselves for re-appointment.

In compliance with Clause 49 (VI) (A) of the Listing Agreement, a brief resume of the Directors proposed for appointment and re-appointment, nature of their expertise in specific functional areas and names of Companies in which they are Directors is given in Annexure-2 forming part of the Directors' Report.

### **OFFICIAL LANGUAGE IMPLEMENTATION**

Official Language Implementation Committees have been constituted in all the regional offices/units of BHEL. All the committees meet regularly and appropriate steps are taken to promote the use of Hindi. Manuals of the company are available in bilingual form. Annual Report, MOU, Performance Budget, Revenue Budget, Press Releases, Advertisements, Promotion Orders, Calendars and Diaries are also published bilingually.

As in other years, BHEL Hindi Co-ordinators' Meet was held this year too. A Seminar was organised on "Economic-Social scenario of the world and Hindi". Work oriented competitions were conducted to encourage the implementation of Official Language. Under these competitions, the work done by the officers/employees in Hindi was evaluated at the end of every quarter and winners were awarded. A number of Hindi Workshops were conducted to encourage employees to work in Hindi. In addition, a Kavi Sammelan was also organised.

With a view to provide working knowledge of Hindi to our employees, training is being imparted by the company and specially on large scale by our Hyderabad, Corporate R & D, Trichy Units and all the three Units of Bangalore. Hyderabad and Haridwar units organised five days translation training





programmes for their employees. In addition, Hindi computer training programmes were conducted in the Company covering a large number of employees.

A special workshop on “Inspection Questionnaire of Parliamentary Committee on Official Language” was organised by our Bhopal and Hyderabad Units for other BHEL units and offices of Central Govt./Banks/PSUs. Committee of Parliament on official language visited our Hyderabad and Trichy Units and offices of Power Sector-HQ, New Delhi and ROD, Mumbai, to review the status of implementation of official language. Necessary follow up action on their suggestions for further improvement are being taken.

### **PARTICIPATION IN THE GLOBAL COMPACT OF THE UNITED NATIONS**

In keeping with its tradition of upholding human values and environmental responsibility, your Company had joined the United Nations’ Global Compact – a partnership between the United Nations, the business community, international labour and NGOs.

During the year, BHEL took lead role in forming a Global Compact Society (GCS) in India. The Society acts as an Apex level nodal agency representing various Indian Corporate bodies, Institutions / Organisations, who are committed to UN’s Global Compact principles. The main objective of the society is to provide a forum for exchanging experiences, networking and working together on activities related to Corporate Social Responsibility. BHEL being one of the founder members of this society is playing a vital role in upgrading corporate practices through greater cooperation and sharing experiences related to social responsibilities. Following is a brief report of how the company has addressed each of the nine principles during the year 2003-04.

#### **Human Rights:**

- 1) *Business should support and respect the protection of internationally proclaimed human rights;*  
The company’s policies have been meticulously drafted keeping the principles of human rights, the constitution of India, labour laws etc. in mind.
- 2) *make sure they are not complicit in human rights abuses;*  
There has been no instance of the company having abused human rights in any manner.

#### **Labour Standards :**

- 3) *Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;*

The Government of India has enacted various laws to adequately protect the interest of the working class. These laws are strictly adhered to in BHEL. All Heads of Units are required to submit a report about compliance with different laws. This is done to ensure that the interests of labourers are protected. Apart from this, BHEL has various bipartite fora for workers where the issues/problems concerning the workers are discussed and settled. BHEL has also an apex level bipartite forum wherein representatives of all Units of BHEL, along with the Central Trade Union Organisations to which the Unions are affiliated, are represented from the workers’ side and the Management is represented by Chairman and Functional Directors along with the Heads of Units.

- 4) *the elimination of all forms of forced and compulsory labour;*

The company does not employ forced and compulsory labour.

- 5) *the effective abolition of child labour;*

As per BHEL Recruitment Policy, the minimum age for the employment is 18 years. No person below this age can be employed in BHEL, thereby ensuring that child labour is not employed in BHEL.

- 6) *eliminate discrimination in respect of employment and occupation;*

The Company has a uniform set of rules (The Personnel Policy) that applies to all employees, irrespective of factors such as sex, caste, religion, race etc.

#### **Environment:**

- 7) *Businesses should support a precautionary approach to environment challenges;*

During the year, BHEL has integrated its Health, Safety and Environment policy and has implemented the same through Management Systems aligned to international standards viz. OHSAS-18000 on Occupational Health and Safety and ISO-14000 on Energy Management System. M/s Det Norske Veritas (DNV) has certified all BHEL units to these standards, after stringent audits.

8) *undertake initiatives to promote greater environmental responsibility;*

As part of its commitment towards society and as a responsible corporate citizen, BHEL is involved in a host of community development programmes in various parts of the country.

Some of the initiatives during the year were commissioning of rain water harvesting plant at BHEL township at NOIDA, near New Delhi, mass afforestation involving the employees and surrounding community besides conservation of natural resources, generation of energy from waste and efficient water management.

In addition, a large number of health camps were organised with a view to improving the health standards of people staying in villages in the vicinity of BHEL's units and project sites. Solar-powered streetlights were provided in Kilakurichi, Kanthalur and Varahasandra villages.

Three children from BHEL managed schools for mentally challenged children achieved a rare feat by winning six medals at the 'World Special Olympics 2003' which concluded at Dublin in Ireland.

9) *encourage the development and diffusion of environmentally friendly technologies;*

The Company has developed and offers products in the area of non-conventional and renewable sources of energy like wind electric generators, solar photovoltaic systems, solar heating systems, solar lanterns and battery powered road vehicles. The company has taken up Research and Development efforts for development of fuel cells and multi-junction amorphous silicon solar cells.

As part of rural/remote area development, BHEL has commissioned a 'Stand-Alone' Solar Photovoltaic power plant (105 Kilowatt), capable to illuminate 700 homes, across the Mousuni Island in Eastern India- isolated from the grid.

During the year, BHEL received a special award from our customer - Petroleum Development Oman, for exemplary achievements in the area of Health, Safety and Environment, for the second consecutive year, thus proving our commitment and concerns to the Global Compact principles.

Apart from the above, during the year, BHEL management supported UN's proposal for eradication of corruption and

recommended its inclusion as tenth principle of the Global Compact thereby reaffirming company's concern for global issues.

## **VIGILANCE**

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

The thrust of BHEL Vigilance during 2003-04 was on Preventive Vigilance. It has been observed that many a times lapses / irregularities take place because of inadequate knowledge or wrong interpretation of rules and procedures. With the basic philosophy of 'prevention is better than cure' in mind, awareness of rules and procedures amongst concerned employees is generated by organising training programmes as a measure of preventive vigilance. 61 training programmes have been organised for officers at various levels. System studies were also carried out with a view to improve the existing systems and procedures. Interactive sessions were also held with the line executives representing different functional areas, in order to create vigilance awareness and enhance their knowledge about Company's rules, procedures and policies. BHEL Vigilance also brought out the third issue of its annual journal "DISHA".

It was felt that several of the Vigilance objectives could be achieved through implementation of Transparency Measures in various areas of Company operations. Therefore, BHEL Vigilance assumed the role of a catalyst for enhancement of transparency in Company operations especially in areas having interfaces with customers and suppliers.

The handling of complaints was streamlined and a computerised register was set up to maintain and monitor the processing of complaints. All complaints were verified and disposed within the stipulated period of one month as per CVC guidelines. Extensive use of Information Technology was made by BHEL Vigilance during the year 2003-04. Vigilance Home Page was created for information sharing, display of rules, policies & circulars etc. for the benefit of employees.

## **SECURITY**

The company has a well defined security mechanism. The physical security of most of the major plants of the company is being managed by the CISF. In some of the smaller plants, the company has its own security, while in other plants,



Corporate Office and Regional Offices, the security is managed by security personnel taken on deputation from the Central Police Organisations (CPOs). At the project sites, private security is engaged as per requirement.

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. Review of Security is done internally also from time to time.

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

### **DIRECTORS' RESPONSIBILITY STATEMENT**

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

- (i) that in the preparation of the annual accounts for the financial year ended March 31, 2004, 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 at the end of the financial year 2003-2004 and of the profit or loss 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 March 31, 2004 on a 'going concern' basis.

### **AUDITORS**

The Auditors of your Company are appointed by the Comptroller and Auditor General of India. The names of auditors appointed for the year 2003-2004 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 3. The Review of Accounts of the Company for the year ended 31<sup>st</sup> March, 2004 by the Comptroller and Auditor General of India is also given at Annexure 3.

### **CORPORATE GOVERNANCE**

As per Clause 49 of the Listing Agreement, a detailed report on Corporate Governance together with a certificate from the Company's Auditors is given at Annexure 4.

### **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 5.

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.

### **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 and branch auditors. The Company also wishes to place on record its appreciation of the continued co-operation received from all the technical 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 a satisfying performance possible.

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

**Sd/-  
C. SRINIVASAN  
DIRECTOR (FINANCE)**

**Sd/-  
H.W.BHATNAGAR  
DIRECTOR (IS&P) AND  
CHAIRMAN  
(COMMITTEE OF DIRECTORS)**

Place : New Delhi  
Dated : 23<sup>rd</sup> August, 2004

## MANAGEMENT DISCUSSION AND ANALYSIS

### FINANCIAL OPERATIONS

Turnover for the year has touched an all time high for the third year in succession thereby touching the figure of Rs. 86625 million against Rs. 74822 million in 2002-2003, an increase of 15.77%.

Value addition for the year 2003-2004 stood at Rs. 36800 million as against Rs. 32475 million for the year 2002-2003, registering an increase of 13.32%.

Profit before tax for the year stood at Rs. 10148 million and is higher by 26.47% compared to profit before tax of Rs. 8024 million in 2002-2003. Gross margin as a percentage of a value of production (net of excise duty) increased to 16.14% as against 15.21% in 2002-2003. Profit before tax as a percentage of value of production increased from 11.70% in 2002-2003 to 12.87% in 2003-2004.

Profit after tax at Rs. 6582 million has increased by 48.08% over the previous year's Profit after tax of Rs. 4445 million.

Net working capital (other than cash and bank balances) decreased by Rs. 8432 million during the year. The factors contributing to the decrease are:

- a) Increase in Advances from Customers by Rs. 13314 million over previous year.
- b) Increase in Other current liabilities and Provisions by Rs. 3281 million.

However, increase in debtors (by Rs. 5327 million), increase in inventory (by Rs. 1028 million), increase in Other current assets loans and advances (by Rs. 1021 million) and decrease in Creditors (by Rs. 787 million) have marginally offset the decrease in working capital.

Although, debtors and inventory have gone up in absolute terms, in terms of number of sales days, Sundry debtors declined from 199 days in 2002-2003 to 194 days in 2003-2004. Inventory in number of days of turnover declined from 98 days in 2002-2003 to 89 days in 2003-2004.

Cash and bank balances, including short term deposits, at the year-end stood at Rs. 26596 million as against Rs. 13209 million at the end of last year. Equity remained at Rs. 2448 million. Net worth increased by Rs. 5699 million to Rs. 52781 million. Debt-Equity Ratio declined from 0.11 in 2002-2003 to 0.10 in 2003-2004.

### POWER SECTOR

- During the year, Power Sector secured orders worth Rs. 126785 million for supply and installation of total 5313 MW Generating Equipment, Plant Performance

### ANNEXURE-1 TO THE DIRECTORS' REPORT

Improvement Business, Services and Spares. This is the highest ever order booking by Power Sector in a year in terms of financial value as well as in physical terms.

- The year witnessed highest number of orders received for 500 MW sets (6 Nos.) as also 6 Nos. of Turnkey/EPC contracts.
- 80% of the main equipment orders i.e. 4270 MW were won against stiff International Competitive Bidding (ICB).
- Because of multi task activities involved in setting up of Power Station and requirement of faster completion of the project, customer bestowed higher responsibilities on BHEL and ordered projects to be executed on EPC / Turnkey basis. 2132 MW orders i.e. 40% of total orders booked during the year have to be executed on EPC / Turnkey basis.
- Significant orders received including those against International Competitive Bidding were:

#### Thermal (5080 MW)

- **Kahalgaon STPP- Ph I (2x500 MW)**, order received from National Thermal Power Corporation (NTPC) against International Competitive Bidding (ICB)
- **Kahalgaon STPP- Ph II (1x500 MW)**, orders received from National Thermal Power Corporation (NTPC) against International Competitive Bidding (ICB).
- **Sipat (2x500 MW)**, two separate orders received from National Thermal Power Corporation (NTPC) on International Competitive basis (ICB).
- **Bellary (1x500 MW)** an EPC contract including Civil Works received from Karnataka Power Corporation Ltd. (KPCL) against stiff International Competition.
- **Korba (East) (2x250 MW)**, a turnkey order, against International Competitive Bidding (ICB), received from Chhattisgarh State Electricity Board (Ch SEB).
- **Rayalaseema TPP Stg. II (2x210 MW)**, EPC contract from Andhra Pradesh Generation Company (APGENCO). Order earlier placed on CMEC, China in 1999, was won back through concerted marketing efforts.
- **Unchahar St III (1x210 MW)**, orders received from National Thermal Power Corporation (NTPC) on negotiated basis for Main Plant Equipment Package including Switchyard.
- **New Parli (1x250 MW)**, Order received from Maharashtra State Electricity Board (MSEB) on International Competitive basis (ICB).
- **Giral TPP (1x125 MW)**, Order received from Rajasthan Rajya Vidyut Utpadan Nigam Ltd. (RRVUNL) on negotiated basis.





- **Kutch Lignite (1x75 MW)**, Order for CFBC Boiler and STG from Gujarat Electricity Board (GEB) on negotiated basis.
- **Lehra Mohabbat – Stg II (2x250 MW)**, EPC contract received from Punjab State Electricity Board (PSEB) on negotiated basis.

#### **Gas & CCP (133.45 MW)**

- **Dhuvaran CCP (112.45 MW)**, EPC contract received on negotiated basis from Gujrat State Electricity Corporation Limited (GSECL) for supply, erection and commissioning of 72.51 MW Gas Turbine (Fr 6FA + e) & 39.94 MW STG.
- **Rokhia GT (21 MW)**, Order received from Tripura Government on negotiated basis for supply, erection & commissioning of Fr 5 GT.

#### **Hydro (100 MW)**

- **Kuttiyadi (2x 50 MW)**, Turnkey order received from Kerala State Electricity Board (KSEB) on International Competitive basis (ICB).

#### **Service After Sales**

- Orders worth Rs. 6704 million for supply of O&M spares, Rs.1615 million for Renovation & Modernisation (R&M), Rs. 38 million for Operation and Maintenance/AMC and Rs. 1120 million for services works were booked during the year. This is the highest amount of orders received in SAS area in a year.
  - With the completion of Renovation & Modernisation (R&M) works by BHEL, Korba 6 (120 MW) of Chhattisgarh State Electricity Board (Ch SEB), which had earlier been running at 80 – 90 MW for a very long period, is now operating at 120 MW
  - Refurbishment of Kothagudem unit 8 was successfully completed during the year, up rating its capacity from 110 MW to 120 MW.
- During the year, BHEL added 20 utility sets totalling 2125.54 MW to the country's installed electric power generating capacity. With this, BHEL built sets now account for 71255 MW, which is nearly 64% of Country's total installed capacity. Thermal sets commissioned during the year were Suratgarh (1x250 MW) and Kota (1x195 MW) in Rajasthan, Talcher (1x500 MW) in Orissa. In addition, gas based sets of 106.62 MW at Dhuvaran in Gujarat, 101 MW at Kuttalam in Tamilnadu and diesel sets of 22.92 MW at Bhairabi in Mizoram were commissioned. In addition to above, 9 industrial sets of 325.35 MW were commissioned in the country.

- There has been a constant endeavor on part of BHEL to meet customer demand through quicker delivery. During the year, BHEL set a new bench mark by commissioning Kota V (195 MW) in 24 months and 19 days.
- The overall performance of BHEL thermal sets was once again better than the national average.

- BHEL thermal sets achieved **highest ever PLF of 74.3%**, which is 1.6% higher than national average. The combined Plant Load Factor (PLF) of BHEL 500 / 250 / 200 / 210 MW thermal sets which form the backbone of country's electric power generating capacity registered the **highest ever PLF of 80.1%**. Operating Availability (O.A.) of these sets was at 88.5% **was also the highest**. 200 / 210 MW, 250 MW and 500 MW BHEL Thermal sets recorded the PLF of 79.1%, 88.3% and 81.4% respectively during the year.
- 130 BHEL thermal sets clocked uninterrupted operation of more than 90 days, out of which 16 sets ran continuously for more than 200 days during the year.
- Unit availability of BHEL hydro sets during the year was 98.9%.

- BHEL continued its endeavor 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 135 thermal utility and industrial sets including 16 non-BHEL sets covering various products like boilers, TGs and auxiliaries.

#### **INDUSTRY SECTOR**

Industry Sector made highest ever order booking in a year of Rs. 35670 million during the year 2003-04 as against Rs. 28920 million achieved last year. Overall success rate of over 54% has been achieved during the year.

#### **Major business highlights are as under:**

- The Indian Oil Corporation continued to repose its trust in BHEL by placing the largest order for Captive Power Plant for its Panipat Refinery on EPC basis. The order includes 4x30.5 MW GTG, 4x110 TPH HRSG, 2x230 TPH Utility Boilers and related BOP.
- Hindustan Zinc Ltd., after its take over by the Sterlite group, placed a major order for 2x77 MW CPP on EPC basis.
- A number of our satisfied customers, including following, placed repeat orders for Captive Power Plants:
  - Tata Power- 1x120 MW BTG Unit-IV of Jojobera



- Bhushan Group- 1x30.75 MW STG + 1x60 MW STG + 1x77 MW STG + 2x57.5 TPH WHRB + 2x57.5 TPH HRSG + 1x120 TPH AFBC
- Jindal Group- 5x25 MW STG + 2x28 TPH WHRB
- ACC Ltd- 15 MW STG
- Gujrat Ambuja- 3x15 MW STG
- To reduce cycle time of erection and commissioning, skid mounted small STG sets were developed in-house for ratings upto 25 MW. A number of such units have been installed including one at Jindal Steel & Power Co., Raigarh where the set was commissioned within one month of receipt of turbine at site.
- Entry was made in the business for Power Distribution by getting an order for Bhopal Circle of Madhya Pradesh Vidyut Nigam (MPVN). A detailed plan has been prepared to become a major player in this area. To showcase the capabilities of BHEL in this area, a project has been undertaken to develop the distribution system of BHEL, Bhopal Township as a model distribution system by installing the state of art systems.
- The company continued its efforts to enter the different segments of Water Management Systems as its strategy for entry in new areas of business. The major achievements in this effort have been as following:
  - An order for 40 MPD Sewerage Treatment Plant was received from Chennai Metropolitan Water Supply & Sewerage Board.
  - Successfully commissioned Naveli Pump House under Rampur Lift Irrigation Scheme of M/s Krishna Bhagya Jala Nigam Ltd., Karnataka. This marks BHEL's entry in the Lift Irrigation segment of Water Management Systems. BHEL has already commissioned a Clear Water Pumping Scheme for Bangalore Water Supply and Sewerage Board (BWSSB) and is executing an order for 40 MLD Sewerage Treatment Plant at Chennai.
- While inflow of orders in the area of Transportation continued to be low due to lack of demand by Indian Railways, the company successfully entered into a new area of business for Track Machines. Order for Dynamic Track Stabilizer received from Indian Railways. This marks entry of BHEL in the high technology area of Automatic Track Maintenance for Indian Railways, which was hitherto monopoly of selected multinationals.
- The company improved its presence in the business for Non Conventional Energy Sources. Major successes in this area have been as following:
  - Booked largest single order for Solar Photo Voltaic Power Plants of 618 kW from Jharkhand Tribal Development Agency.
  - Commissioned India's largest stand alone Solar Photo Voltaic Power Plant of 105 kW at Mausumi Islands in the Sunderban, West Bengal. This would provide power to about 700 houses in this remote location. A 55 kW Solar PV Power Plant was installed by BHEL at this location earlier which is successfully operating for last 3 years.
- An independent group to focus on the business areas under Distributed Power Generation Systems was constituted during the year. The group registered its initial successes by booking orders for following two Small Hydro Projects :
  - Sikasar 2x3.5 MW, Chattisgarh
  - Serlui 3x4 MW, Mizoram
- BHEL is a constituent member of the Rural Electricity (REST) mission started by the Government of India for Accelerated Village Development Programme with an aim to electrify One Lakh villages (10 million households) in next two years and electrify every household in India by 2012. BHEL will provide various systems for power generation including Non Conventional Systems to achieve the above objective.
- Company is proud of its association with the prestigious Sea bird project of Indian Navy at Karwar with receipt of following orders for this project:
  - 4x2.5 MW DG Captive Power Plant
  - Manufacture and supply of 42 nos. hoist assemblies

## INTERNATIONAL BUSINESS

- During 2003-04 overseas export orders worth Rs. 2320 million have been booked in diverse product areas. Ordering for certain major tenders where BHEL is favourably placed, got shifted due to delay in finalisation of orders by customers.
- The company secured several prestigious orders, each one of which signifies a major step forward towards consolidation in international business:
  - Supply and supervision of Fabric Filter for Romania – the first-ever order for Fabric Filters in the export market and the first ever export order from Romania. The order has been secured by BHEL from Ispat Sidex, Romania for their Cast House Blast Furnace.
  - Supply and Erection & Commissioning of 10 numbers 135 MVA Transformers for Zambia, secured from Zambia Electricity Supply Company, for their Kafue



Gorge Hydro Power Station. This is one of the largest export orders for Transformers. With this order, BHEL has further consolidated its presence in Zambia where BHEL is already executing a project for rehabilitation of 13 substations.

- Overhauling of 120 MW Unit at Tripoli West Power Station, Libya - Further enhancing BHEL's presence in Libya, this order was secured from GECOL, Libya and is one of the largest orders for services business, providing an impetus to BHEL's efforts to further expand its activities in the Overseas Services Market.
- First ever export order for Electro Static Precipitators (ESPs) on turnkey basis received from Thailand. In addition, order for supply & supervision for ESP also received for Phillipines. Success in this Product area is expected to give further impetus to the export of ESPs in the South East Asian market where a large potential exists.
- Other notable export orders received during the year included:
  - Transformers from Greece;
  - Solar Cells from Germany, Australia, Thailand and Italy;
  - Residual Life assessment (RLA) Studies for Boilers for Finland and Malaysia.
  - Thyristors from Germany
  - Valves from Malaysia
- Continued focus on After-Sales Services led to orders for spares & services from Thailand, Oman, Indonesia, Malaysia, Azerbaijan, Kazakhstan, Libya, Bangladesh, Malta, Malaysia, Sri Lanka, Zambia, Finland and Saudi Arabia.
- Pursuant to its efforts to become a sourcing centre for OEMs/MNCs, following orders were received:
  - Diodes from Siemens, Germany and Sumitomo, Japan.
  - Bushings from ABB, Indonesia
  - Hollow Insulators from Passoni and Villa, Italy
- Major overseas orders executed during the year include:
  - In the area of overseas project execution, a significant milestone was achieved with the export of India's first ever Advanced Class Gas Turbine Generator (70 MW ISO), for the Qarn Alam Power Project, Oman.
  - Under extremely challenging and hostile circumstances, another landmark was achieved with the synchronisation of the second 159 MW ISO Gas

Turbine in Iraq against an order for four such units covered under the UN's Oil for Food Programme.

- Commissioning of 168.1 MW Combined Cycle Power Plant of AES at Kelanitissa Sri Lanka - the first-ever IPP commissioned overseas by BHEL.
- Supplies for 2x123 MW ISO Gas Turbine Generator sets for Rumaila Open Cycle Power Plant in Iraq, to SITEA International, Switzerland.
- Supplies against maiden export order for Steam Cycle Project (2x10.8 MW) in South East Asia, received from PT Indo Bharat Rayon Indonesia.

## CAPITAL INVESTMENT

In our continued efforts to upgrade the manufacturing technology and facilities, capital investment of Rs. 1264 million was made on plan capital programs during the year 2003-04. The thrust of investment during the year was on implementation of the ongoing product modernisation schemes and also on replacement and up-gradation of ageing facilities. To meet the increasing intensity of competition, investment planned for the year 2004-05 is directed towards improving product quality, introducing new manufacturing technologies, cycle time & cost reduction measures etc.

Highlights of the major schemes are as follows:

### Schemes Completed:

- New Blade Shop (Rs. 730 million)
- Facility for Total Impregnation of TGs (TARI) (Rs. 133 million)
- New Office Building for PS-ER at Kolkata (Rs. 65 million)
- Satellite Battery Assembly project at Electronics Division, Bangalore (Rs. 5 million)

### In addition, following major approved schemes are under implementation:

#### At Haridwar unit

- Modernisation of Steam Turbine Manufacturing facilities/ Phase-I (Rs.565 million) and Phase-II (Rs. 290 million) to reduce manufacturing cycle and improve quality.
- Modernisation of Generator Manufacturing facilities (Rs. 780 million)
- Fume Extraction and Dust Collection system at CFFP/ Haridwar (Rs. 61 million) for a cleaner environment and to meet statutory emission norms.

#### At Bhopal unit

- Modernisation of Hydro product manufacturing facilities (Rs. 406 million).

### **At Hyderabad unit**

- Facilities to enable in-house manufacture of GT Nozzles and Buckets (Rs. 324 million)
- Modernisation of Pumps manufacturing facilities (Rs. 104 million)
- Augmentation of facilities for advanced class and large size gas turbines (Rs. 365 million)

Completion of these ongoing schemes will enable the company in modernising the manufacturing facilities and upgrading its technology to international levels.

### **Science and Technology:**

In our endeavor to develop new technologies for the existing and new products/systems, in the year 2003-04 company has spent Rs. 102 million on capital Science and Technology schemes such as Centre of Excellence for Computational Fluid Dynamics (CFD), Centre of Excellence for Simulators for Power plants and Industries, Centre for Development of Permanent Magnet Machines at Corporate (R&D) Hyderabad and Integrated Gasification Combined Cycle (IGCC) plant up-gradation at Trichy. BHEL further plans to invest on Science and Technology development schemes such as Centre for Development of Robotics & Manufacturing automation, Centre for Surface Engineering, Developmental facilities for Gas Insulated Sub-station etc.

### **10<sup>th</sup> Plan Period Capital Investment:**

BHEL has plans to invest Rs. 9000 million during the 10<sup>th</sup> five year plan period on procurement of new facilities and upgradation of existing assets. Out of this Rs. 2881 million has been spent in first two years of the plan and Rs. 1815 million is planned in the year 2004-05 which includes following major modernisation/ product development schemes:

- Modernisation of Hydro Products Manufacturing Facilities at Bhopal;
- Augmentation of facilities for advanced class and large size gas turbines, Modernisation of Pumps, Generator at Hyderabad,
- Development of Model Power Distribution project and marketing of Modern Power Distribution Net working at Bhopal.
- Development and introduction of Poly-Crystalline solar cells in the area of non-conventional energy area at Electronics Division, Bangalore.
- New Blade Shop phase – II at Haridwar.
- Gas Insulated Sub-stations for 145 kV and higher voltage applications.
- Cold Mill Modernisation at SSTP, Trichy.

Further due to enhanced market requirement, expansion of installed capacity for Thermal and Hydro sets is also envisaged during this plan.

### **Up gradation / Reconditioning and Retrofitting Efforts:**

Thrust is also continuing towards enhancing the life of existing facilities by way of re-conditioning, up-gradation and retrofitting. In the year 2003-04, Rs. 264 million was spent on such activities and Rs. 520 million is planned for the year 2004-05. Inter PSU help is being taken for reconditioning and retrofitting of old facilities of BHEL.

### **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 six full financial years of operation.

BGGTS achieved a sales turnover of Rs. 2338 million during the year 2003-04 with a Profit After Tax of Rs. 246 million. Orders of Rs. 2480 million were booked by BGGTS during the year. After having been already certified as “GE Authorized Repair Facility”, the Repair Facility of BGGTS at Hyderabad has now been duly accredited with ISO 9001, ISO 14001 and OHSAS 18001 certifications. BGGTS has paid a final dividend of 400% for the year 2002-03 and the Board of BGGTS has proposed a final dividend of 410% for 2003-04.

During the year 2003-04, PPIL accomplished a sales turnover of Rs. 262.6 million with order booking of Rs. 18.5 million. As against a profit after tax of Rs. 0.03 million last year, PPIL recorded a profit after tax of Rs. 1.1 million during the year 2003-04. The third 110 MW unit at Kothagudem T.P.S. was also refurbished and uprated to 120 MW. With this, PPIL has so far successfully demonstrated uprating of three Kothagudem units and enhanced performance of units at Neyveli, Durgapur and Korba (East) Thermal Power Stations, after refurbishment.

### **R&D AND TECHNOLOGICAL ACHIEVEMENTS**

During the year, a turnover of Rs. 5911 million was achieved by commercializing products and systems developed through in-house R&D. Credit for products and systems which have been commercialised during the last five years only has been taken.

An amount of Rs. 900 million was spent on R&D programmes, focusing on new product and system developments and



improvements in existing products for cost effectiveness and higher reliability, efficiency, availability, quality, etc. In addition, an expenditure of Rs.141 million has been incurred for purchase of capital assets for R&D programmes.

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

- BHEL has recently established a 'Centre of Excellence for Simulators' dedicated to developing software packages for improving the operational efficiencies of power and process plants, and to developing training simulators for power plant operators. It also has facilities to provide training to operators on a simulator. It is equipped with an array of sophisticated hardware like high-end workstations, state-of-the-art software and large format plasma displays.
- To enhance power transfer capability and improve system stability between two parallel 33 kV transmission lines, BHEL has developed, for the first time in India, a 2 MVA Phase Shifting Transformer (PST) with thyristor controlled static tap changer. This development is an innovation in the field of Flexible AC Transmission (FACTS) devices and has given a technological edge to BHEL in the transmission sector.
- A 145 kV Gas Insulated Switchgear (GIS) has been developed and tested successfully at Hyderabad Substation of APTRANSCO. GIS are replacing conventional yard substations to conserve space and ensure reliable power supply. With this field demonstration, the technical capabilities of BHEL in 145 kV GIS have been established and this development will open a new line of business for the company.
- BHEL has developed the electrics for three-phase AC drive system for a 700 HP diesel electric locomotive. The entire system was successfully tested at the Centre of Electric Transportation at BHEL Bhopal. The Railways are gradually shifting to three-phase AC drives because of their higher efficiency, ruggedness and reduced requirement of maintenance.
- BHEL has developed a Micro-Controller based Flame Scanner (MCFS) to detect flames of different fuels in boiler furnaces. The MCFS can reliably detect and discriminate between flames of oil and coal with a single optic sensor. The MCFS is a compact system, containing fewer modules compared to conventional system. The MCFS has been installed at Mettur Thermal Power Station, where it has been in operation since August, 2003.

- BHEL has received the first commercial order for its indigenously developed High Velocity Oxy Fuel (HVOF) coating on all the submerged parts of the turbines for Maneribhali Stage-II (4x76 MW) Hydro Electric Plant. HVOF coatings on hydro turbine parts help combat silt erosion.
- India's largest vertical AC motor of 6 MW, 6.6 kV, 1500 rpm capacity has been designed and developed for the first time in the country.
- BHEL has developed and tested a model for six jet Pelton hydro turbine, with a head of 789 metre for the 4 x 200 MW Parbati HEP. The model was designed, fabricated and tested at the Hydro Lab Bhopal. The test results indicate that the weighted average efficiency achieved is competitive with the current international level.
- BHEL has commissioned a Performance Analysis, Diagnostics & Optimisation (PADO) system at Simhadri STPP, the first package of its kind in India. It facilitates optimized generation with minimum fuel consumption, timely diagnosis of faults, controlling important emission parameters like NOx and CO, thereby improving the availability and performance of the plant. The PADO system mainly consists of Boiler Performance Optimisation System (BPOS), Performance Analysis, Monitoring & Optimisation, Simulator System and Performance Diagnosis, Water Chemistry and Boiler Stress Analyser.

## HUMAN RESOURCE MANAGEMENT

### 1. Industrial Relations

The Industrial Relations at various Units and Service Divisions of the Company remained harmonious and cordial during the year under report. The thrust on participative culture continued during the year.

The apex level bipartite forum viz. Joint Committee for BHEL held two meetings while the Plant and Shop Councils at the Unit level held 71 & 346 meetings respectively during the year at various Units of the Company.

#### Voluntary Retirement Scheme

A focused Voluntary Retirement Scheme was in operation in the Company during the year. A total of 2116 employees (455 Executives, 429 Supervisors and 1232 Workmen) opted for retirement under this Scheme.

### 2. BHEL Excel Awards

BHEL Excel Awards Scheme instituted in the year 2000 with an objective to recognise, reward and place on record



outstanding contribution by an employee towards growth and profitability of the company successfully completed three years of implementation in 2003. The awards presented in this year recognize the excellent work completed in the financial year 2002-03.

The year 2003 saw streamlining and expansion in the scope of the scheme. Apart from the nine categories of award stipulated in the original scheme, a new category of award to recognize individual skill termed as “Vyaktigat Nipurnta Puraskar” was introduced in the year 2003. The abundance of technical and non-technical skill nurtured in the company gets recognized through this category of award. The process of refinement also resulted in defining essential attributes and results thereof more sharply for each category of awards by which the selection process is made more objective and transparent.

To focus on innovation in the performance culture of the organization, CMD's award for best performance by a unit in Intellectual Property Related Activities was also presented. This award specially recognizes units which perform research in addition to the regular operations. A well defined evaluation criteria brought forth our Trichy unit as winner by scoring maximum number of points for the year 2002-03.

### **3. Awards won by BHEL Units and Employees during 2003-04**

#### **Prime Minister's Shram Awards**

From the prestigious “Prime Minister's Shram Awards” (namely Shram Bhushan, Shram Vir and Shram Shri), 3 Awards have been won by 5 workmen of BHEL, for the year 2002, out of 17 awards declared by Ministry of Labour.

#### **Vishwakarma Rashtriya Puruskars**

Nine Vishwakarma Rashtriya Puruskars have been won by 19 employees of BHEL for the year 2001 and four awards have been won by 11 employees of BHEL for the year 2002. The award is instituted by Ministry of Labour.

#### **National Safety Awards**

Two BHEL Units viz., Trichy and Electronics Division – Bangalore have won three awards for the year 2001. Also, Trichy Unit has won three awards for the year 2002. The award is instituted by Ministry of Labour.

#### **National Award for Excellence in Energy Management**

CII Award for “Excellence in Energy Management” awarded by CII Southern Region has been won by BAP-Ranipet for the year 2003.

#### **National Design Award**

One employee from Corporate R&D, Hyderabad was selected for the National Design Award 2003. This Award, instituted by the Institution of Engineers (India) and the National Design and Research Forum was given to him in recognition of his outstanding contribution in the field of engineering design of gas insulated substations (GIS).

### **4. Human Resource Development**

During the year 2003-04 over 30,000 participants were exposed to different programmes in training centres at Units and HRDI, Noida. The training mandays per employee during the year was 2.2. In addition, training to Act Apprentices was also provided at our Units, as a part of fulfillment of our social objectives. Joint Training Programmes with customers and specific programme for customers such as ONGC/HPCL/EP(I)L on Products/ Services were also held at Units and HRDI, Noida.

### **5. Activities of the Company for Welfare and Advancement of Scheduled Castes (SCs), Scheduled Tribes (STs) and other Backward Classes (OBCs)**

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

#### **Representation of SC/ST/OBC employees**

The representation of SC/ST/OBC employees in total manpower was 18.38%, 3.95% and 6.11% for SCs, STs and OBCs respectively as on 01/01/2004.

The Annual Statement in the revised prescribed format showing the representation of SCs, STs and OBCs as on 01/01/2004 and No. of appointments made during the preceding calendar year as furnished to the Government is given at Annexure – A.

### **6. Manpower Strength of Physically Challenged employees as on 01/01/2004.**

The groupwise manpower strength of Physically Challenged employees in the Company as on 01/01/2004 is given at Annexure – B.

### **7. Manpower Strength of BHEL as on 31/03/2004.**

The manpower strength of BHEL as on 31/03/2004 was 43952.





## ANNEXURE-A

Annual Statement showing the representation of SCs, STs and OBCs as on 01/01/2004 and No. of appointments made during the preceding calendar year

Groups	Representation of SCs/STs/OBCs				No. of appointments made during the calendar year 2003									
					By Direct Recruitment				By Promotion**			By Deputation/Absorption		
	Total No. of Employees	SCs	STs	OBCs	Total	SCs	STs	OBCs	Total	SCs	STs	Total	SCs	STs
Group A	11101	1388	442	705	162	23	18	40	0	0	0	1	0	0
Group B	10354	1333	304	182	0	0	0	0	0	0	0	0	0	0
Group C	19759	4458	903	1428	240	53	4	31	0	0	0	0	0	0
Group D (Excl. Sanitary workers)	2404	583	80	349	3	1	0	1	0	0	0	0	0	0
Group D (Sanitary Workers)	426	333	9	25	0	0	0	0	0	0	0	0	0	0
<b>Total</b>	<b>44044</b>	<b>8095</b>	<b>1738</b>	<b>2689</b>	<b>405</b>	<b>77</b>	<b>22</b>	<b>72</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>

## ANNEXURE - B

Group wise status of physically challenged in the total manpower as on 1 Jan., 2004

Group	Total No. of employees	No. of Physically Challenged
A	11101	62
B	10354	49
C	19759	236
D	2830	65

## **INTERNAL CONTROL SYSTEM**

The Company has full fledged Internal Audit Cells located at manufacturing units and regional offices of the company which carry out audit as per annual audit programme approved by Director (Finance)/Board Level Audit Committee and monitored by Corporate Internal Audit. Apart from the above, the company has an adequate internal control procedure prescribed in various codes and manuals issued by the Management covering all important areas of activities viz. Budget, Purchase, Material, Stores, Works, Accounts, Personnel etc. These codes and manuals are updated from time to time. The prime objective of the Internal audit is to check the adequacy and effectiveness of Internal Control System laid down in the prescribed codes and manuals of the company. Functioning of Internal Audit and adequacy of Internal Control System is reviewed by Unit Level Audit Committees and Board Level Audit Committee.

## **OPPORTUNITIES & THREATS**

### **World**

The global power industry is still facing uncertainty post-Enron collapse. In this context, other energy traders have suffered fall in their share prices and utility companies are going slow on their investments. This is partly attributable to the sluggish state of the global economy and also because of unsatisfactory financial performance of many acquisitions in the electric power sector. The move towards electricity market restructuring and reforms is gaining momentum. The total worldwide order booking for power plant equipment has been much below the manufacturing capacity leading to more aggressive marketing by global power plant equipment manufacturers, who have also been undergoing a phase of consolidation.

While there has been a decline in overall orders in the previous years, many developing nations are planning to expand their electricity infrastructure over the coming years. As per an estimate (*International Energy Outlook 2004*) the electricity sectors of developing Asia are expected to be the fastest growing in the world in next two decades. A rapid growth in demand for electricity is also envisaged in the countries of Middle-East. There are, therefore, promising markets for new power equipment in a number of South-East Asian countries and China, Middle-East and Gulf Cooperation Council (GCC) countries. Moreover, there are global opportunities in servicing of generating machinery and emerging trends towards distributed generation in some of the developing countries.

### **India**

#### **Power Sector**

The Ministry of Power's target of providing 'Power for all by 2012' has led to an improved investment climate in the sector

through positive developments like power sector reforms, increased outlay for APDRP, extension of the Accelerated Generation & supply programme, creation of National Grid, securitisation of SEB dues and specifically the enactment of Electricity Act 2003, 50,000 MW Hydro-electric initiative, increased public funding in the 10<sup>th</sup> plan outlay etc.

Further, a task Force on Power Sector Investments & Reforms was constituted by Ministry of Power to evolve and recommend, inter alia, the National Electricity Policy. A draft policy has already been formulated which aims at achieving objectives viz., providing access to electricity to all households in next five years, demand of power to be fully met by 2012, supply of reliable and quality power of international standards at reasonable rates to be achieved by 2012 etc. Ministry of Power is also working on National tariff Policy and has also recently come out with a draft scheme for providing financial assistance to achieve the objective of rural electrification.

There has been an improvement in the orders committed for Power capacity addition in the 10<sup>th</sup> plan compared to the previous plan. The trend is expected to continue in the balance period of 10<sup>th</sup> plan as well as during 11<sup>th</sup> plan.

While Coal as a fuel will continue to be the main stay of power in the medium and long term, Government is working on strategies to improve hydro-thermal mix and developing hydropower at a faster pace. A 'Hydro policy', evolved by the Government, outlines various initiatives in this regard like higher budgetary allocations and speedier clearance process. With the recent gas findings in the private and public sector, Gas can emerge as a major source of power generation if prices are reasonable. The new Renewable Energy Policy aims to provide electricity to remote villages through renewable stand-alone systems and local electricity grids. Life extensions, higher capacity factors, and capacity up-rating programmes are expected to offset some of the capacity losses in the electric power sector.

The new Electricity Act, 2003 is opening up opportunities for private sector utilities in the generation, transmission and distribution sectors alongwith Central Public Sector Undertakings and the equipment manufacturers. The new provisions offer opportunities of risk mitigation and payment security as the monopolistic model of supplying power only to SEBs would be replaced by opportunities of supplying power directly to the consumers. This is also leading to a situation of higher investments in captive power generation capacity.

### **Industry Sector**

The Government's focus on infrastructure development, reforms in the core sectors coupled with policy changes in the power sector are having positive changes in the country's



industrial sector. The industrial sector is showing signs of an upturn which is reflected in the improved performance of Index of Industrial Production (IIP) and capital goods growth. The capital goods growth turned positive in 2002-03 with a growth of 10.5% after recording a negative growth in 2001-02 of -3.4% and the growth is expected to sustain in the coming year as well.

Investment in manufacturing is looking up to scale up the production capacities and signals tapering of capacity overhang that has dragged down investment since the mid 90's. Heavy industries like oil, cement, steel and aluminum have increased their capacity utilisation and are now looking at future demand. Along with mega infrastructure projects underway, the revival of private investment is expected to give a further boost to the multipliers in the economy.

With the recent gas discoveries and renewed efforts for increasing oil exploratory activities, the demand for oil & gas sectors is likely to pick-up – in particular, refurbishment of old rigs, requirement for new rigs as well as for pipelines, compressors etc.

### **POSITIONING FOR THE FUTURE**

BHEL has taken up various strategic initiatives as part of the implementation of the 'Strategic Plan 2007', to face the challenges going forward and to seize emerging opportunities in the old as well as new economy sectors. BHEL's focus areas include repositioning the organisation, globalisation/ export strategies, keeping technology contemporary and maintaining its competitive edge, besides Information Technology, Human Resource Management and Financial Management initiatives. Major initiatives undertaken include:

- A Central Marketing Group has been created for renewed thrust on Non-Conventional Energy Sources (NCES) products, services and distributed power generation.
- A state-of-the-art Blade Shop has been set up for manufacture of advanced turbine blades for thermal sets with higher efficiency and heat rate.
- Total Quality Management is being encouraged at all levels in the journey towards business excellence. Knowledge Management is also being given thrust.
- Intensified and focussed efforts to seek overseas business which have yielded excellent results and have helped BHEL emerge as a Global Player.
- With the services sector emerging as the growth engine of the economy, a focussed approach has been adopted to tap opportunities like Engineering Procurement and Construction (EPC), Operation and Maintenance (O&M) and after-market services.
- As a process of linking HRM to market forces / stakeholder driven policies, an e-enabled Performance Management

System has been established for executives - a new benchmark in promoting performance-led growth.

BHEL has also taken steps to reposition and reorient itself to meet the demands of the new market economy including globalisation and initiatives for accelerated growth with the goal of enhancing stakeholder value.

### **RISKS AND CONCERNS**

In the global market environment, a major concern of developing countries to meet their goals in the electricity sector is how quickly they can make the sector more investment friendly through reforms and thereby ushering capital inflows.

The domestic power sector has not kept pace with the growth in demand with the result the country has faced energy and peaking shortages. In fact, only 19,015 MW power generating capacity addition against a target of 40,245 MW was achieved during the 9<sup>th</sup> Plan. In the 10<sup>th</sup> Plan however, there is an improvement in the position of ordering of Power Projects against 41,110 MW of planned capacity. The proposed Review of the Electricity Act, 2003 by the new Govt. and the pace of reforms in electricity sector are some uncertainties which have a linkage with the future investments in the sector. Restoration of the financial health of SEBs and improvement in their operating performance continues to be a critical issue.

The domestic industrial group of "machinery & equipment other than transport equipment" has continued to record subdued growth showing that despite industrial recovery, investments are yet to pick up.

The downturn in world Power Plant Equipment (PPE) market is necessitating a fresh round of mergers and acquisitions for the already dwindling number of Original Equipment Manufacturers (OEMs). Licensing restrictions of market access constrains opportunities for BHEL, in select parts of the world. Moreover, in the domestic market, BHEL is facing stiff international competition from the major global PPE manufacturers having financial muscle, economies of scale, technology leadership and global reach in their favour. However, the business opportunities in the market place may help in keeping the shops adequately loaded.

Since most of the projects in industry are being planned on BOO/BOOT basis, various issues viz. business model of the Project, revenue collection, operation and maintenance etc. would need to be suitably addressed to gain entry in the business.

The steep rise in the prices of input materials such as steel, aluminium, copper etc., in the global and Indian markets, has affected the competitive margins of domestic power plant equipment manufacturers.

## ***ANNEXURE-2 TO THE DIRECTORS' REPORT***

### **Brief resume of Directors proposed for appointment and re-appointment as per Listing Agreement [Clause 49 (VI) A]**

#### **WHOLE TIME FUNCTIONAL DIRECTORS**

**Shri Harsh Wardhan Bhatnagar**, aged 59 years, is a Mechanical Engineer with exceptional managerial capabilities. He has an experience of more than three decades in various fields.

He joined BHEL Hardwar in 1967. After working in various capacities in the areas of Electrical Machines Production, Maintenance and Productivity etc., he rose to the position of Executive Director, BHEL Hardwar in 1997 and managed the operations of BHEL Hardwar Complex comprising Heavy Electrical Equipment Plant, Central Foundry Forge Plant, Heavy Equipment Repair Plant at Varanasi and Pollution Control Research Institute. He has been involved in productivity movement at BHEL Hardwar and also instrumental in the Development of proactive, planned and preventive approach towards equipment upkeep and maintenance. He has wide and varied experience and has worked as Incharge of Corporate Communications & International Operations.

Shri Bhatnagar has been on the Board of BHEL as Director (IS&P) since October 2000, and also held additional charge of the post of CMD from 12.02.2004 to 08.04.2004. Presently, he is Chairman, Committee of Directors of BHEL.

Shri Bhatnagar is a member of Institution of Engineers and Indian Institution of Industrial Engineering.

**Shri Chinnasamy Iyengar Srinivasan**, aged 59 years, is a Fellow member of the Institute of Cost & Works Accountants of India (FICWA). Prior to joining Board of BHEL as Director (Finance) w.e.f. March 2001, Shri Srinivasan was the Chief Financial Controller of Indian Petrochemicals Corporation Limited (IPCL). Earlier, Shri Srinivasan held the position of Management/Chief Accountant of Zambia Steel & Building Supplies Limited, Lusaka for 5 years.

Shri Srinivasan has wide experience in the area of Corporate Finance and has successfully managed the debt portfolio of IPCL. During his tenure at IPCL, he was instrumental in mobilising large foreign currency loans from the World Bank and the Exim Banks of Japan & USA. IPCL also emerged as the first Indian PSE to successfully complete a GDR issue in the overseas market, under his stewardship.

Shri Srinivasan was also a Director on the Board of GE Plastics (India) Limited, a Joint-Venture Company of IPCL and GE, set up for manufacturing engineering plastics material.

**Shri Ramji Rai**, aged 58 years, is a Mechanical Engineering Graduate from Banaras Hindu University.

Shri Ramji Rai joined BHEL in 1969 and played a pivotal role in various fields viz. Planning, Project Management, Manufacturing Technology and various other disciplines within BHEL. A specialist in Electrical Machines, he made significant contribution in the area of rotating electrical machines. He was also primarily responsible for absorption and assimilation of Siemens advance technology for manufacture of 210MW, 250MW and 500MW sets.

Prior to his appointment as Director (Engineering, Research & Development) in February 2004, Shri Rai was Executive Director heading BHEL's Electronics Division at Bangalore.

Under Shri Rai's stewardship, BHEL's Electronics Division was accredited with the prestigious ISO-14001 and OHSAS-18001 certifications and as Head of BHEL's Power Sector-Eastern Region, many landmarks were achieved including the successful execution and commissioning of 2 cylinder 120MW steam turbine set for the first time in the country.

Shri Rai has widely traveled abroad to countries like USA, France, Germany, Netherlands and Brazil for business promotion.

**Shri Santosh Kumar Jain**, aged 57 years, is a Mechanical Engineering Graduate (1969) from Raipur Engineering College.

Shri Jain joined BHEL in 1970. During his over three decades association with BHEL, he has brought about several major changes in technical as well as managerial attributes leading to significant value addition.



During his stints at BHEL's Bhopal and Jhansi plants, Shri Jain spearheaded major breakthroughs and improvements in the areas of Traction Commercial, Insulation Division, Electrical Machines Division and Transformer Division, through his professional approach and administrative skills.

Prior to his appointment as Director (Human Resources) in March 2004, Shri Jain was heading BHEL Hardwar Unit. He is a pioneer in evolving new 'Business Policy' and identifying 'Critical Success Factors' through Annual Top Management Workshops. A keen observer of Quality in all walks of life, he propounded the unique method of 'Quality through Measurement' which earned him the coveted BHEL 'Excel' award.

In addition, Shri Jain introduced many creative initiatives like Root Cause Analysis, Critical to Quality, 'Grahak Safal - Hum Safal', MoU with Vendors, Auto-Indenting and B2B portal etc. Under his stewardship, the Hardwar Unit was awarded CII's 'Commendation Award for Strong Commitment to TQM', in November 2003.

As a crusader for Total Quality movement, Shri Jain is associated with many leading organisations. He is also a member of the Technical Committee for the CII Exim Bank Award.

**Shri Ashok Kumar Puri**, aged 56 years, is an Electrical Engineer and MBA in Marketing & Finance from University of Delhi. Shri Puri joined BHEL in 1976 after a brief stint in the private sector.

In his 34 years of professional experience, Shri Puri has had diversified, versatile and hands-on experience through working in all major segments of the organization viz.

- Corporate Management
- All three Business Sectors of BHEL – Power, Industry & International Operations; and
- Operations in two manufacturing units of BHEL, namely, Electronics Division, Bangalore and Electronics Systems Division, Bangalore.

As Head of Corporate Long Range Planning, Shri Puri was instrumental in guiding the development of Vision, Mission & Values for BHEL during 1996, resulting in "BHEL VISION 2001" and formulation of "Perspectives for 2002" - Corporate Plan of BHEL. Another notable achievement has been efforts put in the area of market research and techno-economic studies which had a vital role to play in the company's diversification and expansion plans. Notable amongst various diversified products taken up was Gas Turbine which today is one of the Growth Engine products of BHEL.

As Head of Manufacturing Units at Bangalore, Shri Puri brought in all round improvement in all facets of operations especially achieving Highest ever Turnover and Cash inflow. He spearheaded introduction & assimilation of state-of-the-art technology for Controls & Instrumentation in record time as also Business Process Improvements through focused Business Management System introduced in each business area.

As Head of International Operations Division, there was sevenfold increase in business in a short span of two years. BHEL made its mark with orders from Middle East for large size gas turbine based project. This was followed with orders for large size Gas Turbine based projects from Sri Lanka, Oman and Bangladesh. Order was also secured for Hydro Generator package from a new market viz., Azerbaijan besides a number of businesses from other parts of the globe.

Prior to his appointment as Director (Power) in April 2004, Shri Puri was heading BHEL Power Sector-Marketing. He was instrumental in an all time high order booking in 2003-04. Cumulative order booking in Power Sector in the 2 years of his tenure (2002-03 and 2003-04) exceeded aggregate of the preceding 5 years. Strategic initiatives taken by him in 2003-04 have resulted in BHEL retaining 100% market share in Coal based power projects staving of stiff global competition particularly from China, Russia, Korea, Czech Republic etc.



## PART TIME OFFICIAL DIRECTORS

**Shri Naresh Chaturvedi**, aged 56 years, is an IAS Officer of 1970 batch from West Bengal cadre. Before joining as Additional Secretary & Financial Advisor, Ministry of Heavy Industries & Public Enterprises, Govt. of India (in May 2003), he was Managing Director of Food Corporation of India. He also held several positions such as Excise Commissioner U.P., Secretary U.P. Uchhattar Siksha Seva Ayog, Joint Secretary, School Education, Govt. of West Bengal, Excise Commissioner, West Bengal, Special Secretary, Home Department, Govt. of West Bengal, Secretary to Governor of West Bengal, Principal Secretary, Fisheries Department, Govt. of West Bengal and Director General, Food & Ex-officio Principal Secretary, Food & Supplies Department, Govt. of West Bengal.

Shri Chaturvedi is a gold medalist in M. Sc. (Physics ) and also a Law graduate.

Shri Chaturvedi is also Director on the Boards of Bharat Bhari Udyog Nigam Limited, HMT Limited, Heavy Engineering Corporation, Andrew Yule Company Limited, DPSC Limited and Cement Corporation of India Limited.

**Shri Dilip Raj Singh Chaudhary**, aged 51 years, is an IAS Officer of 1977 batch. Before joining as Joint Secretary to the Govt. of India, Department of Heavy Industry, Ministry of Heavy Industries & Public Enterprises, Govt. of India, he worked in various capacities in the State Government of Madhya Pradesh, including as District Magistrate and Collector of Betul and Raipur districts in the erstwhile Madhya Pradesh. In the Govt. of India, he was posted to the Ministry of Steel and Mines as Deputy Secretary; he was also Director and later on Joint Secretary in the Department of Economic Affairs, Banking Division. On return to his cadre, he held the post of Registrar, Cooperative Societies. Later on, he was posted as Finance Secretary in the State Government for a period of four years. On promotion, to the next level, he was posted as Commissioner, Housing Board and later was posted as Principal Secretary in the Finance Department.

Shri Chaudhary has completed his education from Campion School, Bhopal and St. Xavier's College, Mumbai.

Shri Chaudhary is also Director on the Boards of Hindustan Paper Corporation Limited, Hindustan Cables Limited and Andrew Yule Company Limited.

## PART TIME NON-OFFICIAL DIRECTORS

**Shri Sharad Pandurang Upasani**, aged 66 years, is a M.Com and LL.B from University of Bombay and MBA from USA. He joined Indian Administrative Service in 1962.

Shri Sharad Upasani has varied experience in Administration as he had the opportunity to work both in State and Central Governments and Public Sector Corporations. At the State level, he has worked as Secretary, Industry Department and also as Managing Director of Maharashtra State Finance Corporation, Chairman of Maharashtra State Textile Corporation, Vice-chairman of Maharashtra State Road Transport Corporation. At the Central level, he has worked in Finance Ministry, Industry Ministry and Information and Broadcasting Ministry. He was also Chairman of Company Law Board and Chairman, Bureau of Cost and Prices, New Delhi. He had occupied the highest position in Maharashtra Administration as Chief Secretary of the State.

From 1974 to 1978, Shri Upasani was on deputation to International Monetary Fund, Washington, USA. He is currently working as Advisor in Corporate Law and also as Advisor to Maharashtra Board for restructuring of State Enterprises.

Shri Sharad Upasani joined the Board of BHEL as Director since 26th December, 2001.

Shri Sharad Upasani is Director and member of Board level committees in various companies viz., Andrew Yule & Company Ltd., United Western Bank Ltd., and Management Council Member in M. Visvesvaraya Industrial Research & Development Centre.

**Shri Akbar Hameed Jung**, aged 62 years, has done his Masters in Science and also a graduate in Law. He has vast service experience in the fields of Financial management, Accounts & Audit and administration & management involving infrastructure & economics.

Shri Jung had undergone one year training at Birmingham University, U.K., for Development Administration & Dynamics of Change and two-month training course in Public Enterprise Management at Harvard University, USA. While in India, he



completed courses in Personnel Management in IIPA and Administrative Staff College in Public Enterprise and Project Financing conducted by the Economic Development Institute of the World Bank etc.

He held key positions as Social Security Adviser to Government of Afghanistan (1984-87), Accountant General, Maharashtra, Director General, Central Revenues, CAG Office, New Delhi, in CAG Office - incharge of Personnel and was posted to London for Audit of European Missions, FA & CAO, Central Provident Fund Commissioner under the Ministry of Labour, Deputy Secretary in Ministry of Home Affairs, Incharge of Para Military forces like BSF, CRPF, ITBP, CISF & IB.

He was the Joint Secretary in Ministry of Power (1991-96), the Additional Deputy Comptroller & Auditor General (1996-97), Additional Secretary & Financial Adviser, Ministry of Steel & Mines (1997-99), Special Secretary, Ministry of Power (1999-2000) and retired as the Secretary, Ministry of Civil Aviation and Chairman, Air India Limited (2000-2002).

During his service, Shri Jung supervised accounts of the States & Centre and was Incharge of Revenue Audit – Direct Taxes of the Government of India mainly Income Tax & States Sales Tax.

He also served as Member on the Board of various companies like Kudremukh Iron Ore Company, Vizag Steel Plant, NALCO, BALCO, Hindustan Zinc Limited, Hindustan Copper Limited, NTPC, Power Finance Corporation and Power Grid Corporation as Government Nominee.

During his tenure as Director of the aforesaid Companies, he shared responsibilities in disinvestment of PSUs, financial restructuring, trade & purchase of vast amount of raw material, finalization of contracts, financial and business restructuring of public enterprises, budgetary control, offered finance advice to the Secretaries / Ministries on important proposals, looked after Transmission (Power Grid) and Power Generation (NTPC), DVC, Coordination of coal movement for SEBs, Incharge of management of five Power Grids and had close interaction with World Bank.

Presently, he is on the Board of Food Corporation of India and Steel Authority of India Limited.

**Shri Sudhir Shridhar Supe**, aged 47 years, has done his B.Sc. and LL.B. from Nagpur University and MFAS from MPSC.

He was selected by MPSC to Maharashtra Finance & Accounts Service in 1979 and joined as Accounts Officer in Directorate of Accounts & Treasuries M. S. Mumbai during 1980-81. During 1981-83, he served as District Audit Officer in local bodies, Akola (MS) and during 1983-86, he was Accounts Officer in Horticulture Dept., Govt. of Maharashtra, Nagpur and Social Welfare Department, Nagpur. He was deputed as Regional Manager in Mahila Arthik Vikas Maha Mandal, Govt. of Maharashtra Undertaking, Nagpur during 1989-92. He was promoted as Chief Accounts and Finance Officer in Zilla Parishad Amravati (1992-94). Then, he served as the Assistant Director of Accounts & Treasuries M. S. Nagpur (1994-97) and deputed as the Chief Accounts & Finance Officer in Nagpur Improvement Trust, Nagpur (1997-2001). Later on he was elevated as the Deputy Chief Auditor, Local Funds Accounts M.S.Wardha.

In January 2003, Shri Supe opted for voluntary retirement from the Government of Maharashtra Class 1 Service. Since then, he has been pursuing business and social work.

**Shri Ranjan Pant**, aged 45 years, has done his Masters in Business Administration (Directors Honors List) from The Wharton School, University of Pennsylvania and B.E. (Honors) from Birla Institute of Technology & Science, Pilani.

Shri Pant is highly experienced global management consultant and change management leader advising Boards / CEO level management with a unique blend of expertise in strategy development (portfolio, growth); post-merger integration; operational change. He is an expert in Industrial products, Utilities, Technology, Life Sciences and Conglomerates.

He has demonstrated creation of tangible results in Portfolio revamping of multi-billion utility and industrial conglomerates and growth strategy development and detailed implementation plans for utility, life sciences and cable operator. He was successful in post-merger integration implementation creating a global life sciences leader and lead change management with cutting-edge approaches across General Electric's Industrial businesses.

He was winner of Bain & Company Grail Award in 2001 (voted # 1 of 200 projects for best results) and Leader of Bain & Company's world wide Utility Practice Area.

He served as Strategy Consultant / Senior Manager for Bain & Company, Boston, MA and Dallas, TX, USA (1986-91), Change management / Director, Corporate Business Development, General Electric, Fairfield, CT, USA (1991-95) and Strategy Consultant / Partner and Vice President, Bain & Company, Boston, MA, USA (1996-2002).

Shri Pant had advised Board / CEO Level management resulting in dramatic revamping of multi-billion dollar companies, accelerated reinvestment in the core business and sale of non-core assets etc.

He was instrumental in flawless structuring and implementation of CEO and board lead post merger process as life sciences global leader, cross border (US/Europe) integration to create largest global commodity packaging manufacturer and turnaround of Telecommunications CLEC operator.

A key leader in identifying world-class operational practices external to General Electric and successfully implementing pilots across GE's industrial business globally (faster-cycle and productivity enhancement). Specific emphasis on New Product Introduction and information technology. Examples: Power Generation, USA (Turbine development programs), Medical Systems, France (X-Ray Imaging development), Industrial Plastics, Holland (Product development), Joint Ventures (India), Software-outsourcing (multiple-US business to India).

Shri Pant also successfully implemented cutting-edge parts-management software across all major GE industrial units was highlighted in CEO Jack Welch's letter to the shareholders.

Shri Pant also lead GE Corporate effort in acquisition evaluation (corporate, aircraft engines) and new business development (health care JV).

Presently, Shri Pant is also on the Board of Directors of DSP Merrill Lynch Fund Managers, HDFC Standard Life & Mahindra USA Inc.

**Shri Vineet Nayyar**, aged 66 years, presently Vice Chairman of HCL Technologies and Chief Executive Officer of HCL Perot Systems.

During a career spanning 39 years, Shri Nayyar has handled an array of vastly different and critical assignments.

As member of the prestigious Indian Administrative Services, he served the Government of India in various capacities including Director, Department of Economic Affairs.

He also served two tenures with the World Bank holding diverse portfolios including Director of Oil and Gas Department and Chief of Energy operations for East Asia. Last position held in Government service, was as Chief of Energy, Finance, Industry and Infrastructure.

He was also Chairman & Managing Director of Gas Authority of India Limited for a period of five years.

Presently, he is on the Board of HCL Perot Systems India Limited, Indian Oil Corporation Limited, Om Kotak Mahindra Life Insurance Co. Ltd., Great Eastern Shipping Co. Ltd., Perot Systems TSI (Netherlands) B.V., The Netherlands, HPS America Inc., Delaware, USA, Perot Systems TSI (UK) Limited, England, HCL Perot Systems, Gmbh, Switzerland, HPS Social Welfare Foundation, HPS Global Systems (Germany) Gmbh and HPS Global Systems (Middle East) FZLLC.



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

### **MANAGEMENT'S REPLY**

## **AUDITORS' REPORT**

To  
The Members of  
Bharat Heavy Electricals Limited  
New Delhi.

We have audited the attached Balance Sheet of Bharat Heavy Electricals Limited as at 31st March, 2004 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.

- I. The aforesaid Balance Sheet and Profit and Loss Account incorporate the accounts of the Corporate Office, Advance Research Project, Power Sector - Project Engineering Management & Marketing Group and Power Sector - Head Quarter at New Delhi, audited by us and the other Units, branches and offices/divisions, not visited by us and audited by Branch Auditors appointed by the Comptroller and Auditor General of India.
- II. The reports of the Branch Auditors have been furnished to us and have been considered by us for the purpose of framing our opinion on the said Balance Sheet and Profit and Loss Account of the Company.
- III. The "Balance Sheet", the "Profit & Loss Account" and the "Cash Flow Statement" for the year ended 31st March, 2004 adopted by the Board on 8th June, 2004 and reported by us on 9th June, 2004 have been revised to give effect to the provision for dividend amounting to Rs. 7342.80 lakhs proposed by the Board of Directors and provision of applicable taxes thereon amounting to Rs. 959.61 lakhs (inclusive of "proposed Education cess on Income-tax")

amounting to Rs. 18.82 lakhs which is subject to the assent of the President of India).

IV. As required by the Companies (Auditors' Report) Order, 2003, issued by the Company Law Board in terms of Section 227 (4A) of the Companies Act, 1956, we enclose in the Annexure a statement on the matters specified in paragraphs 4 & 5 of the said Order.

V. Further to our comments in the Annexure referred to in paragraph IV above, we report that :

(1) Excess depreciation of Rs. 226.88 lakhs has been provided, due to charging off "Fixed Assets" costing upto Rs. 10,000/- and those whose written down value is Rs. 10,000/- or less at the beginning of the year, on account of Accounting Policy No. 9(iii). (Refer Note No. 3 of Schedule 19).

(2) The balances of Sundry Debtors, Creditors, Contractors, Advances, Deposits and stocks/materials lying with sub-contractors/fabricators are subject to confirmation and reconciliation. The consequential impact thereof, if any, on the accounts remains unascertained (Refer Note No. 24 of Schedule 19).

(3) Attention is drawn to:

(i) Note No. 8(a) of Schedule 19 regarding disputed Income Tax demand amounting to Rs. 24,974.61 lakhs.

(ii) Note No. 21(i) of Schedule 19 regarding change in accounting policies relating to accounting of construction contracts in line with Accounting Standard-7 – Construction Contracts (Revised) resulting in decrease in profit for the year by Rs. 5,689.88 lakhs.

(iii) Note No. 21(ii) of Schedule 19 regarding change in accounting policy relating to accounting of intangible assets in line with Accounting Standard-26 – Intangible Assets resulting in increase in profit for the year by Rs. 1,075.84 lakhs.

(iv) Note No. 21(iii) of Schedule 19 regarding change in accounting policy relating to amortization of lump sum payment under Voluntary Retirement Scheme resulting in decrease in profit for the year by Rs. 11,417.30 lakhs.

(v) Note No. 21(iv) of Schedule 19 regarding change

(1) The policy referred by Auditors is being followed by the company consistently for several years along with necessary disclosures in the accounts.

(2) Requests for confirmations are sent and reconciliations with the parties are carried out as an ongoing process and the management does not envisage any significant impact on the accounts due to this.



in accounting practice relating to creation of provision for non-moving inventory to make it more objective resulting in decrease in profit for the year by Rs. 1,501.49 lakhs.

- (vi) Note No. 21(v) of Schedule 19 regarding modification of actuarial valuation method used for calculating retirement benefits in accordance with Guidance Note 12 of Actuarial Society of India resulting in decrease in profit for the year by Rs. 12,129.48 lakhs.
  - (vii) Note No. 22 of Schedule 19 regarding applicability of service tax relating to commissioning and installation including insurance of equipment transported for commissioning and installation.
- (4) We further report that, without considering the effect of paragraph 2 above and impact of earlier years on depreciation as mentioned in paragraph 1 above, the effect of which could not be determined, had the observation made by us in paragraph 1 above been considered, the Profit before tax for the year would have been Rs. 1,01,702.16 lakhs (as against the reported figure of Rs. 1,01,475.28 lakhs), Reserve & Surplus would have been Rs. 5,05,344.88 lakhs (as against the reported figure of Rs. 5,05,118.00 lakhs), and total Net Block of fixed assets would have been Rs. 1,09,640.97 lakhs (as against the reported figure of Rs. 1,09,414.09 lakhs).
- Subject to the foregoing and consequential effect thereof :
- (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 those books.
  - (c) 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.
  - (d) In our opinion, the Balance Sheet and Profit and Loss Account and cash flow statement dealt with by this reply comply with the Accounting Standards referred to in sub Section (3C) of Section 211 of the Companies Act, 1956.
  - (e) 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.

- (f) 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, 2004; 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 J.C. BHALLA & CO.  
CHARTERED ACCOUNTANTS**

**Sd/-  
(SUDHIR MALLICK)  
PARTNER  
Membership No. 80051**

**Place : New Delhi  
Dated : 5.8.2004**



## ANNEXURE TO THE AUDITORS' REPORT

## MANAGEMENT'S REPLY

(Referred to in Para IV 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) Except in respect of assets given on lease, the 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.

(c) There has been no disposal of substantial part of the fixed assets affecting the going concern concept.

- ii) (a) Physical verification of inventory has been conducted by the management under Perpetual Inventory System at regular intervals during the year except 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 Planning Department of such units.

As regards the service divisions, the stores, spare parts etc., are purchased for immediate consumption and unused stocks have been physically verified at the year end.

In regard to stocks lying with contractors/fabricators and other parties, confirmations were received in a few cases only.

Subject to the above, 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) On the basis of our examination of the records of the inventory, in our opinion, the company has generally maintained proper records of inventory and the discrepancies noticed on physical verification of inventory having 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.

- iii) According to the information given to us, the company has neither granted nor taken any loans, secured or unsecured from companies, firms and other parties covered in the register maintained under section 301 of

BHEL has supplied 53 AC/DC locomotives of Type WCAM-3 and 12 AC/DC locomotives of Type WCAG-1 to Indian Railways on lease. As per terms of Lease Agreement with the Indian Railways, a certificate confirming physical possession of these locomotives has been obtained from Indian Railways like in the past.

Requests for confirmations are sent and reconciliations with the parties are carried out as an ongoing process and the management does not envisage any significant impact on the accounts due to this.

the Companies Act, 1956. As the company has neither granted nor taken any loans, secured or unsecured to/ from companies, firms and other parties listed in the register maintained under section 301 of the Companies Act, 1956, clauses (iii)(b)(c)(d) of paragraph 4 of The Companies (Auditor's Report) Order, 2003 are not applicable to the company.

- iv) In our opinion and according to the information and explanation given to us, there are adequate internal control procedures, commensurate with the size of the company and the nature of the business with regard to purchase of inventory, fixed assets and sale of goods. Further on the basis of our examination of the books and records of the company and according to the information and explanations given to us, we have neither come across nor have been informed of any instances of major weaknesses in the aforesaid internal control procedures. During the course of our audit we have not observed any continuing failure to correct major weaknesses in internal control.
- v) In our opinion and according to the information and explanation given to us, there are no transactions that need to be entered into the register in pursuance of section 301 of the Companies Act, 1956 for the current year. In view of the above clause (v)(b) of paragraph 4 of The Companies (Auditor's Report) Order, 2003 are not applicable to the company.
- vi) The company has not accepted any deposits from public during the year within the meaning of section 58A and 58AA 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) Prima facie, the Company has maintained cost accounts and records prescribed for the manufacture of Electric Motors, Seamless Steel Tubes, Electric Generator, Power Transformers, Power Driven Pumps, Power generation through windmills, Control Instrumentation and Automation Equipment, pursuant to the rules made by the Central Government under Section 209(1)(d) of the Companies Act, 1956. No detailed examination of the records was, however, made with a view to determine whether they are accurate or complete. To the best of our knowledge and according to the information given to us the Central Government has not prescribed the maintenance of the cost records under Section 209(1)(d) of the Companies Act 1956 for other products of the Company.

ix) (a) According to the information and explanation given to us, and according to the books and records as produced and examined by us, in our opinion, undisputed statutory dues including Provident Fund, Investor Education and Protection Fund, Employees State Insurance, Income Tax, Sales Tax, Wealth Tax, Excise Duty, Customs Duty, Cess and any other statutory duty have generally been regularly deposited with the appropriate authorities

(b) According to the information and explanation given to us, there are no arrears of outstanding statutory dues as at 31<sup>st</sup> March, 2004 for a period of more than six months from the date they become payable except ground rent and sales tax of Rs. 254.47 lakhs and Rs. 3.22 lakhs respectively.

(c) According to the information and explanation given to us, there are no amounts in respect of Custom Duty, Wealth Tax and Cess which have not been deposited with the appropriate authorities on account of any dispute. Details of Sales Tax, Income Tax and Excise Duty which have not been deposited on account of dispute are as under:

(Rs. in lakhs)

Sl. No.	Name of the Statute	Nature of Statute	Amount	Forum where dispute is pending
1.	Central Sales Tax Act and Sales Tax Act of various states	Sales Tax	27.89 152.15 15147.10 1547.19 9512.65	Assessing Officer Commissioner (Appeals) Appellate Tribunal High Court Various Appellate Authorities
2.	Income Tax Act, 1961	Income Tax	121.07 9.26	Assessing Officer Commissioner (Appeals)
3.	Central Excise Act, 1944	Excise Duty	213.42 7653.91 99.93 10124.28	Commissioner (Appeals) Appellate Tribunal High Court Various Appellate Authorities
		<b>Total</b>	<b>44,608.85</b>	

x) The company has no accumulated losses as at March 31, 2004 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, bank 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) In our opinion, the company is not a chit fund or a *nidhi*/ mutual benefit fund/society. Therefore, the provisions of clause 4(xiii) of the Companies (Auditor's Report) Order, 2003 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 & vice versa.
- 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, 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 J.C. BHALLA & CO.  
CHARTERED ACCOUNTANTS**

**Sd/-  
SUDHIR MALLICK  
PARTNER**

Membership No. 80051  
Place: New Delhi  
Dated: 5.8.2004



**Comments of the Comptroller and Auditor General of India under section 619(4) of companies act, 1956 on the accounts of Bharat Heavy Electricals Limited, New Delhi for the period ended 31 March, 2004**

Comments of C & AG		Management's Reply							
<b>A. Profit &amp; Loss Account</b> <b>Profit after tax - Rs. 658.15 crore</b> Profit of the Company was overstated by Rs. 5.03 crore on account of following :		This does not have a material impact on the Company's PBT of Rs. 1014.75 crores.  Noted, necessary provision will be made in the year 2004-05  Provision of Rs. 17.65 Crores retained as Warranty obligation for this project, will be adequate to meet the cost of replacement.  Noted, necessary provision will be made in the year 2004-05							
	<table><tr><td></td><td><b>Rs. in crores</b></td></tr><tr><td>1. Non provision of amount withheld by a customer towards liquidated damages due to delay in ESP package of Vindhyachal (Stage II) power project</td><td>2.41</td></tr><tr><td>2. Non provision of the cost for replacement of damaged 'exhaust gas system' to be incurred by the Company in respect of Baiji, Iraq Project</td><td>1.50</td></tr><tr><td>3. Non provision of amount payable to a customer due to shortfall in guaranteed heat rate in respect of TG Package of Unit 7 of Vindhyachal project</td><td>1.12</td></tr></table>			<b>Rs. in crores</b>	1. Non provision of amount withheld by a customer towards liquidated damages due to delay in ESP package of Vindhyachal (Stage II) power project	2.41	2. Non provision of the cost for replacement of damaged 'exhaust gas system' to be incurred by the Company in respect of Baiji, Iraq Project	1.50	3. Non provision of amount payable to a customer due to shortfall in guaranteed heat rate in respect of TG Package of Unit 7 of Vindhyachal project
	<b>Rs. in crores</b>								
1. Non provision of amount withheld by a customer towards liquidated damages due to delay in ESP package of Vindhyachal (Stage II) power project	2.41								
2. Non provision of the cost for replacement of damaged 'exhaust gas system' to be incurred by the Company in respect of Baiji, Iraq Project	1.50								
3. Non provision of amount payable to a customer due to shortfall in guaranteed heat rate in respect of TG Package of Unit 7 of Vindhyachal project	1.12								
<b>B. General</b> 1. A reference is invited to comment No. B (i) of the Comptroller and Auditor General of India under section 619(4) of the Companies Act, 1956 on the accounts of the Company for the period ended 31 March 2003. The Company has been recognizing revenue at 100 per cent instead of 97.5 per cent of realizable value in respect of ongoing export contracts which is not in accordance with its accounting policy No. 5B(i). The management's contention that export sales have been recognized at 100 per cent with a corresponding 2.5 per cent warranty provision, with no impact on the results, is not tenable since revenue was required to be recognized at 97.5 per cent of the realizable value in respect of ongoing contracts in accordance with the accounting policy ibid and 2.5 per cent provision for warranties was to be created separately in terms of accounting policy No. 14, as is being done in respect of ongoing domestic contracts. Consequently, the turnover as well as the profit is being booked in excess by 2.5 per cent of the realizable value in respect of ongoing export contracts. 2. The Company has written back provision amounting to Rs. 22.53 crore for contractual obligation in respect of Simhadri project (unit I) on the ground that the warranty period was over and performance guarantee (PG) test was successfully completed and there was no claim of the customer pending on account of performance shortfall. It is, however, observed that the customer has not yet accepted the PG test, in the absence of which the Company's liability for liquidated damages towards performance shortfall, if any, is not ascertainable.		As mentioned in the reply to the comments for the period ended 31st March 2003, Export sales are recognized at 100% with a corresponding 2.5% warranty provision.  This will not have any impact on the profit as stated in the comment, as warranty provision of 2.5% is created simultaneously.  However policy of recognition of export turnover will be reviewed.    Performance test has been completed successfully. All the test results comply with contractual parameters and hence the company does not envisage any liability on this account.  Therefore the write back of contractual obligation provision is in order.							

# **REVIEW OF ACCOUNTS OF BHARAT HEAVY ELECTRICALS LIMITED, NEW DELHI FOR THE YEAR ENDED 31ST MARCH 2004 BY THE COMPTROLLER AND AUDITOR GENERAL OF INDIA.**

Note : The Review of Accounts has been prepared without taking into account comments under section 619 (4) of the Companies Act 1956 and qualification contained in the Statutory Auditor's Report.

## **1. FINANCIAL POSITION**

The table below summarises the financial position of the Company under broad headings for the last three years.

	(Rs. in crore)		
	<u>2001-2002</u>	<u>2002-2003</u>	<u>2003-2004</u>
<b>LIABILITIES</b>			
(a) Paid-up Capital			
(i) Government (Including share application money pending allotment)	165.76	165.76	165.76
(ii) Others	79.00	79.00	79.00
(b) (i) Free reserves and surplus	4222.08	4556.14	5048.43
(ii) Capital reserves	2.77	2.77	2.75
(c) Borrowings			
(i) From Financial Institution	15.61	4.69	1.56
(ii) Cash Credit	0.28	0.00	0.00
(iii) Others	626.28	500.00	500.00
(iv) Interest accrued and due	2.33	2.33	2.33
(d) (i) Current liabilities & provision	4715.86	4752.93	6336.85
(ii) Credits for assets taken on lease	21.29	27.20	36.13
<b>TOTAL</b>	<b>9851.26</b>	<b>10090.82</b>	<b>12172.81</b>
<b>ASSETS</b>			
(e) Gross block	3182.00	3349.31	3459.60
(f) Less: Depreciation	2057.68	2230.28	2411.51
Add : Lease Adjustment A/c	52.26	51.47	46.04
(g) Net block	1176.58	1170.50	1094.13
(h) Capital work-in-progress	56.67	58.70	108.56
(i) Investments	10.34	10.33	28.98
(j) Current assets, loans and advances	8053.77	8348.40	10424.70
(k) Deferred tax assets	304.62	407.39	498.52
(l) Miscellaneous expenditure not written off	249.28	95.50	17.92
<b>TOTAL</b>	<b>9851.26</b>	<b>10090.82</b>	<b>12172.81</b>
(m) Working Capital (j-d(i)-c(iv))	3335.58	3593.14	4085.52
(n) Capital employed (g+m)	4512.16	4763.64	5179.65
(o) Net worth (a+b(i)-l)	4217.56	4705.40	5275.27
(p) Net worth per rupee of capital	17.23	19.22	21.55



## 2. SOURCES AND UTILISATION OF FUNDS

Funds amounting to Rs. 922.76 crore from internal and external sources were realised and utilised during the year as detailed below:

(Rs. in crore)

### Sources of Funds

(a) Funds from operations :		
Profit after tax	658.15	
Add : Depreciation	181.23	839.38
(b) Decrease in Miscellaneous Expenditure not written off		77.58
(c) Increase in Borrowed funds		5.80
<b>TOTAL</b>		<b>922.76</b>

### Utilisation of Funds

(a) Increase in Fixed Assets	104.87
(b) Dividend paid (incl. Dividend Tax)	110.45
(c) Increase in Investments	18.66
(d) Increase in Deferred Tax Assets	91.13
(e) Increase in Working Capital (excluding proposed dividend & tax thereon)	547.79
(f) Increase in CWIP	49.86
<b>TOTAL</b>	<b>922.76</b>

## 3. WORKING RESULTS

The working results of the Company for the last three years ending 31st March are given below:

(Rs. in crore)

	2001-2002	2002-2003	2003-2004
(i) Sales	7297.28	7482.22	8662.47
(ii) Less : Excise Duty	691.54	551.92	643.44
(iii) Net Sales	6605.74	6930.30	8019.03
(iv) Other or Misc. Income	493.92	508.72	512.77
(v) Profit before tax and prior period adjustments	657.35	812.24	1027.50
(vi) Prior period adjustments	5.48	9.81	12.75
(vii) Profit before tax*	662.83	802.43	1014.75
(viii) Tax provisions	194.89	357.92	356.60
(ix) Profit after tax	467.95	444.51	658.15
(x) Proposed Dividend	97.90	110.45	165.86

\*Unit-wise working results are given in annexure.

## 4. RATIO ANALYSIS

Some important financial ratios on the financial health of the company at the end of last three years ending 31st March:

(Rs. in crore)

	2001-2002	2002-2003	2003-2004
A. Liquidity ratio:			
Current ratio [j/d(i)+c(iv)]	1.71	1.76	1.64

B. Debt Equity Ratio			
Long term debt/Equity [c(i) to (iii) excl. short term loans/o]	0.15	0.11	0.10
C. Profitability ratios:			(in Percentage)
(a) Profit before tax to			
(i) Capital employed	14.69	16.84	19.59
(ii) Net Worth	15.72	17.05	19.24
(iii) Sales	9.08	10.72	11.71
(b) Profit after tax to Equity	191.19	181.61	268.90
(c) Earnings per share (in Rupees)	19.12	18.16	26.89

## 5. INVENTORY LEVELS

The inventory levels at the close of the last three years ending 31st March are as under :

	(Rs. in crore)		
	2001-2002	2002-2003	2003-2004
(a) Raw materials	655.60	719.66	853.06
(b) Store, spares and loose tools	90.26	80.86	87.25
(c) Work-in-progress and semi-finished goods	1074.13	938.43	943.96
(d) Finished goods	185.62	274.81	235.82
(e) Scrap	12.11	13.30	13.60
<b>TOTAL</b>	<b>2017.72</b>	<b>2027.06</b>	<b>2133.69</b>

The stock of finished goods represented 0.31, 0.44 & 0.33 month's sales in 2001-02, 2002-03 & 2003-04 respectively.

## 6. SUNDRY DEBTORS

The sundry debtors and sales in the last three years ending 31st March are as follows :

As on 31st March	(Rs. in crore)			Sales (including excise duty)	%age of Sundry debtors to sales
	Considered Good	Considered Doubtful	Total		
2001	4584.19	638.30	5222.49	7297.28	71.57
2002	4075.78	677.56	4753.34	7482.22	63.53
2003	4608.48	686.27	5294.75	8662.47	61.12

Agewise analysis of sundry debtors as on 31.03.2004 is as follows:

	(Rs. in crore)
(i) Less than 6 months	2976.42
(ii) 6 months to 1 year	478.30
(iii) 1 year to 3 years	1030.18
(iv) More than 3 years	809.85
<b>TOTAL</b>	<b>5294.75</b>

New Delhi  
Date : 20.08.2004

Sd/-  
(REVATHI BEDI)  
PRINCIPAL DIRECTOR OF COMMERCIAL AUDIT  
AND EX-OFFICIO MEMBER, AUDIT BOARD-III, NEW DELHI





## WORKING RESULTS OF BHEL UNITS

### ANNEXURE (Rs. in crore)

	<u>2001-2002</u>	<u>2002-2003</u>	<u>2003-2004</u>
Heavy Electricals Equipment Plant, Haridwar	65.72	117.05	127.98
Heavy Power Equipment Plant, Hyderabad	104.46	136.80	157.73
High Pressure Boiler Plant, Trichy	148.40	131.21	150.27
Heavy Electricals Plant, Bhopal	16.40	56.13	131.37
Central Foundry Forge Plant, Haridwar	-21.62	-9.65	4.48
Transformer Plant, Jhansi	-20.90	1.44	3.28
Electronics Division, Bangalore	47.21	78.61	101.92
Industrial Valves Plant, Goindwal	1.18	1.79	2.02
Industrial Systems Group, Bangalore	-10.99	-9.81	3.17
Boiler Auxiliary Plant, Ranipet	28.23	20.41	15.87
Electro Porcelains Division, Bangalore	11.75	1.45	1.43
Insulator Plant, Jagdishpur	-9.00	-6.90	-5.10
Power Group (Four Regions and PEM)	224.60	220.72	299.85
Overseas Project Co-ordination, New Delhi	3.25	13.38	5.55
Centre of Technology Transfer, Hyderabad	1.77	2.50	3.63
Component Fabrication Plant, Rudrapur	-1.53	-1.32	-2.28
Heavy Equipment Repair Plant, Varanasi	5.57	1.67	3.87
Advance Research Project, New Delhi	0.19	0.28	0.48
Transmission Projects Group, Bhopal	18.13	2.40	2.07
EMRP & OSB, Mumbai	-	0.12	-5.53
Distributed Power Generation Business Group, Haridwar	-	-	-1.01
Corporate & Other Adjustments	50.01	44.15	13.70
<b>TOTAL</b>	<b><u>662.83</u></b>	<b><u>802.43</u></b>	<b><u>1014.75</u></b>

## **CORPORATE GOVERNANCE**

### **1. Company's philosophy on code of Corporate Governance**

BHEL's Vision is to build a World-class Engineering Enterprise committed to enhancing Stakeholder Value and 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.

BHEL has adopted the following core 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
- Foster Learning, Creativity and Team-work
- Loyalty and Pride in the Company

BHEL has a long history of respecting the laws and ethical standards of the places where we do business. We strive to be a good business partner. Though our business environment will change, our commitment to ethical and moral standards of business conduct must remain constant.

BHEL has committed to conducting its business in a manner that exemplifies each of these core values. These values should serve as meaningful guides to all of our Employees and Directors as the Company goes about its mission. Sound corporate governance is an important component of our commitment to these values, and our philosophy on corporate governance begins with our Board of Directors.

- Independent directors comprise a majority of our Board.
- The Audit Committee is comprised exclusively of independent directors.
- The Investors / Shareholders Grievance Committee is chaired by Independent director.
- Our Board has established terms of reference for its operation and the operation of its Committees in line with Clause 49 of the Listing Agreement and Section 292A of the Companies Act, 1956, mentioned elsewhere in this report.

BHEL believes that conducting business in a manner that complies with the corporate governance procedures and Code of Conduct, exemplifies each of our core values, positions us to deliver long-term returns for our shareholders, favorable outcomes for our customers and attractive opportunities for our employees.

Our reputation is a priceless asset. Safeguarding our reputation requires each of us to make sound judgments every day. Consistently operating by the highest standards of code of Corporate Governance in all our relationships generates trust in us as individuals and as a Company.

### **2. Board of Directors**

#### **➤ Composition**

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.

As on 31<sup>st</sup> March, 2004, BHEL's Board comprised 16 (Sixteen) Directors viz., Chairman & Managing Director, five Whole-time Executive Directors (Functional Directors), two Government Nominees representing the Ministry of Heavy Industries & Public Enterprises, Government of India and Eight Non-executive Directors.

Shri K. G. Ramachandran ceased to be Chairman & Managing Director on completion of his tenure on 19<sup>th</sup> October 2003. However, pursuant to Order of Department of Heavy Industry, Government of India, Shri H. W. Bhatnagar held additional



charge of the post of Chairman & Managing Director from February 12, 2004 to April 8, 2004. The vacancy caused on this account is yet to be filled up by the Government of India.

The Board of Directors constituted a Committee of Directors, comprising of all Functional Directors with the senior most Director (at present Director-IS&P) acting as its Chairman. The Committee has been exercising the powers of CMD as specified in the delegation of powers of BHEL.

➤ **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.

➤ **Role of Independent Directors**

The Independent Directors play an important role in deliberations at the Board meetings 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 and Share Transfer committee. In terms of Clause 49 of the Listing Agreement, the Audit and Shareholders / Investors Grievance committees 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 meeting.

➤ **Board Meetings**

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.

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

- |                       |                         |                        |
|-----------------------|-------------------------|------------------------|
| (i) April 1, 2003     | (ii) April 8, 2003      | (iii) April 30, 2003   |
| (iv) June 12, 2003    | (v) July 29, 2003       | (vi) August 11, 2003   |
| (vii) August 22, 2003 | (viii) October 29, 2003 | (ix) November 17, 2003 |
| (x) January 5, 2004   | (xi) January 30, 2004   | (xii) March 1, 2004    |
| (xiii) March 8, 2004  | (xiv) March 20, 2004    |                        |

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

- **Details of composition and category of Directors, attendance of each Director at the Board Meetings and the last AGM, directorship and membership in committees of other companies for each Director of the Company are given below (As on March 31, 2004):**

Name  S/Shri	Attendance Particulars		Details of Directorships and Committee Member / Chairmanship	
	Board Meetings (from 01.04.03 to 31.03.04)	Last AGM (held on 30.09.03)	Details of Directorships in other Public Limited Companies	Details of Committee Memberships and Committee Chairmanship
1	2	3	4	5
<b>a. Whole-time Functional (Executive) Directors</b>				
K. G. Ramachandran (CMD upto 19.10.2003)	7	Present	Nil	Nil
Ishan Shankar (Director (HR) upto 29.02.2004)	11	Present	Nil	Nil
*H. W. Bhatnagar (Director (IS&P) & CMD)	14	Present	Nil	Nil
R. C. Aggarwal (Director (Power) upto 31.03.2004)	12	Absent	Nil	Nil
C. Srinivasan Director (Finance)	14	Present	Nil	Nil
Virendra Kumar (Director (ER&D) upto 31.01.2004)	11	Present	Nil	Nil
Ramji Rai (Director (ER&D) from 01.02.2004)	3	N. A.	Nil	Nil
S.K. Jain (Director (HR) from 01.03.2004)	3	N. A.	Nil	Nil
<b>b. Part-time official (Non-Executive / Promoter) Directors</b>				
V. K. Malhotra (upto 12.06.2003)	1	N.A.	1. Andrew Yule & Co. Ltd. 2. HMT Ltd. 3. Maruti Udyog Ltd.	Nil
A. Didar Singh	12	Present	1. Bharat Yantra Nigam Ltd. 2. Hindustan Paper Corporation Ltd. 3. Triveni Structurals Ltd. 4. Andrew Yule & Co. Ltd. 5. Electrical Construction Co. Ltd. (Libya)	Nil

\* held additional charge of the post of CMD.



1	2	3	4	5
<b>c. Part-time non-official (Non-Executive / Independent) Directors</b>				
A. C. Wadhawan	13	Present	1. Tata Metaliks Ltd., 2. Transweigh (India) Ltd. 3. Reliance Cellulose Products Ltd. 4. Jindal Polyester Ltd. 5. Hindustan Zinc Ltd.	<b>Chairman:</b> <i>Audit Committee</i> 1. Jindal Polyester Ltd.  <i>Remuneration Committee</i> 1. Tata Metaliks Ltd. 2. Transweigh (India) Ltd. <b>Member:</b> <i>Audit Committee</i> 1. Tata Metaliks Ltd.
Dr. Anand Patkar	12	Present	1. SWIL Ltd.	Nil
G. P. Gupta	12	Present	1. Jammu & Kashmir Bank Ltd. 2. Swaraj Engines Ltd. 3. National Aluminum Co. Ltd. 4. Hindustan Aeronautics Ltd.  5. M. P. Power Generating Co. Ltd. 6. Birla Sun Life Insurance Co. Ltd.	<b>Chairman:</b> <i>Audit Committee</i> 1. Hindustan Aeronautics Ltd. 2. National Aluminum Co. Ltd. <b>Member:</b> <i>Audit Committee</i> 1. Jammu & Kashmir Bank Ltd. 2. Swaraj Engines Ltd.
Sharad Upasani	12	Absent	1. Andrew Yule & Co. Ltd. 2. United Western Bank Ltd.	<b>Member:</b> <i>Audit Committee</i> 1. Andrew Yule & Co. Ltd
A. H. Jung (from 01.03.2004)	2	N.A.	1. Food Corporation of India Ltd. 2. Steel Authority of India Ltd.	<b>Member</b> <i>Audit Committee</i> 1. Steel Authority of India Limited
S. S. Supe (from 01.03.2004)	1	N.A.	Nil	Nil
Ranjan Pant (from 01.03.2004)	1	N.A.	1. DSP Merrill Lynch Fund Managers. 2. Mahindra USA Inc.	<b>Member</b> <i>Audit Committee</i> 1. DSP Merrill Lynch Fund Managers.



1	2	3	4	5
Vineet Nayyar (from 01.03.2004)	1	N.A.	1. HCL Perot Systems India Limited 2. Indian Oil Corporation Limited 3. Om Kotak Mahindra Life Insurance Co. Ltd. 4. Great Eastern Shipping Co. Ltd. 5. Perot Systems TSI (Netherlands) BV, the Netherlands 6. HPS America Inc., USA 7. Perot Systems TSI (UK) Limited, England 8. HCL Perot Systems, Gmbh, Switzerland 9. HPS Global Systems (Germany) Gmbh 10 .HPS Global Systems (Middle East) FZLLC	Nil

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.

➤ **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.
- ✓ Detailed presentation on performance of various units/functions.

### 3. Audit Committee

As on 31<sup>st</sup> March 2004, the Audit Committee comprises solely of Non-executive Independent Directors. The members of the Audit Committee were Shri A. C. Wadhawan, Dr. Anand Patkar and Shri G. P. Gupta. Shri Wadhawan was Chairman of the Audit Committee.

The Audit Committee is constituted in accordance with the provisions of the Listing Agreement and the Companies Act, 1956. All the members of the committee are qualified and experienced in the fields of finance, accounts and company law. The quorum of the Audit Committee is two members. The Company Secretary is the Secretary to the Committee.

#### ➤ 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 Clause 49 of the Listing Agreement as well as Section 292A of the Companies Act, 1956. They are as follows:

1. Overseeing of the Company's financial reporting process and the disclosure of its financial information to ensure that the financial statement is correct, sufficient and credible.
2. Fixation of audit fee of the external auditors and also approval for payment for any other services.
3. Periodically reviewing with the Management, external and internal auditors, the adequacy of internal control systems, the scope of audit including the observations of the auditors and ensure compliance of internal control system.
4. Reviewing with Management the half-yearly and the annual financial statements before submission to the Board, focusing primarily on:
  - Any changes in accounting policies and practices.
  - Major accounting entries based on exercise of judgement by Management.
  - Qualifications in draft audit report.
  - Significant adjustments arising out of audit.
  - The going concern assumption.
  - Compliance with accounting standards.
  - Compliance with stock exchange regulations and legal requirements concerning financial statements.
  - Any related party transactions i.e. transactions of the company of material nature, with promoters or the management, their subsidiaries or relatives etc., that may have potential conflict with the interests of company at large.
5. Reviewing the adequacy of internal audit function, 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.
6. Discussing with internal auditors any significant findings and follow up thereon.

7. 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.
8. Discussion with external auditors, before the audit commences, on nature and scope of audit as well as to have post-audit discussion to ascertain any area of concern.
9. Reviewing the company's financial and risk management policies.
10. 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.
11. The Audit Committee shall have authority to investigate into any matter in relation to the items specified in Section 292A of the Companies Act, 1956 or referred to it by the Board and for this purpose shall have full access to information contained in the records of the Company and external professional advice, if necessary.
12. The Audit Committee shall comply with the requirements of the Companies Act and the Listing Agreement with Stock Exchanges in force and as amended from time to time.

➤ **Composition of Committee and attendance of members:**

The Committee met Nine times during the year under review. The details of composition, names of members & the Chairman and attendance of members are as under:

		Name of Director & Position		
		Shri A.C. Wadhawan (Chairman)	Shri G.P. Gupta (Member)	Dr. Anand Patkar (Member)
Meetings/ Attendance  ↓	30.04.2003	Present	Present	Present
	12.06.2003	Present	Present	Present
	29.07.2003	Present	Present	Present
	11.08.2003	Present	Present	Present
	22.08.2003	Present	Present	Present
	23.09.2003	Present	Present	Present
	29.10.2003	Present	Present	Present
	30.01.2004	Present	Present	Present
	08.03.2004	Present	Present	Present

Shri C Srinivasan, Director (Finance) was present in all Audit Committee meetings and Shri R Saraswathan, General Manager (Internal Audit & Taxation) was also present in all Audit committee meetings, except on January 30, 2004, held during the year under review, as invitees as per the requirement of Listing Agreement. As and when required, the representative of the Statutory Auditors of the Company also attended the Audit Committee Meetings.

#### 4. Remuneration Committee

BHEL being a Public Sector Undertaking, the appointment, tenure and remuneration of Directors are decided by the President of India. Hence, the Board does not decide the remuneration of Directors. Independent Directors are paid only sitting fees for attending the Board Meetings as well as Committee Meetings. However, as required by Clause 49 (III) (B), necessary disclosure with regard to remuneration of Directors is as follows:-



➤ **Details of remuneration of Functional Directors during the year 2003-04 are given below:-**

(in Rs.)

Sl. No.	Name of the Director S/Shri	Salary	Benefits	Arrears, if any	Performance Linked Incentives	Total	Service Contract/ Notice Period/ Severance Fee
1.	K. G. Ramachandran (upto 19.10.2003)	918881	156479	65670	15080	1156110	Ceased on completion of tenure
2.	Ishan Shankar (upto 29.02.2004)	1110565	329312	56129	15080	1511086	Retired on attaining the age of superannuation
3.	H. W. Bhatnagar	616589	415657	13525	15080	1060851	Retirement by Rotation
4.	R. C. Aggarwal (upto 31.03.2004)	1337144	449005	13525	15080	1814754	Retired on attaining the age of superannuation
5.	C. Srinivasan	499204	225027	13525	15080	752836	Retirement by Rotation
6.	Virendra Kumar (upto 31.01.2004)	975158	379376	6500	15080	1376114	Retired on attaining the age of superannuation
7.	Ramji Rai (from 01.02.2004)	87624	39958	0	0	127582	Retirement by Rotation
8.	S. K. Jain (from 01.03.2004)	43742	23130	0	0	66872	Retirement by Rotation

➤ **Details of payments made to Non- Executive Directors during the year 2003-04 are given below: -**

(in Rs.)

Name of the Non-Executive Directors S/Shri	Sitting Fees		Total
	Board Meeting	Committee Meeting	
A.C. Wadhawan	65, 000	60, 000	1,25, 000
Dr. Anand Patkar	60, 000	45, 000	1,05, 000
G.P.Gupta	60, 000	45, 000	1,05, 000
Sharad Upasani	60, 000	Nil	60, 000
A. H. Jung	10, 000	Nil	10, 000
S. S. Supe	5, 000	Nil	5, 000
Ranjan Pant	5, 000	Nil	5, 000
Vineet Nayyar	5, 000	Nil	5, 000

➤ **Equity Shares held by Directors**

Except as stated hereunder, none of the Directors, hold any Equity Shares in BHEL (as on 31<sup>st</sup> March 2004):

Name of the Director S/Shri	No. of shares held
H. W. Bhatnagar	250
R. C. Aggarwal	100

**5. Shareholders' Committees**

**i. 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. During the

year 2003-2004, the Share Transfer Committee met Twenty Two times and transacted business relating to share related issues. The work relating to Share Transfer etc., is looked after by Karvy Computershare Private Limited (Karvy Consultants Ltd., transferred its share registry business to Karvy Computershare Private Limited w.e.f. February 1, 2004). The minutes of the Share Transfer Committee meetings are periodically placed before the Board of Directors.

Since 99% shares of the disinvested portion of 32.28% of the total paid-up share capital is in dematerialised form, transfer of shares in the physical segment was significantly lower during the year and the meetings of the Share Transfer Committee were held as per requirement of the transfer.

## ii. Shareholders/Investors' Grievance Committee

The Company constituted a Shareholders/Investors Grievance Committee on 26<sup>th</sup> July 2001. Company Secretary acts as Secretary to the Committee.

During the year 2003-04, the Committee met three times during the year under review. The details of composition, name of members & the Chairman and attendance of members are as under: -

S. NO.	NAME OF DIRECTOR & POSITION	MEETINGS/ATTENDANCE		
		30.07.2003	05.10.2003	30.03.2004
1.	A.C.Wadhawan (Chairman)	Present	Present	Present
2.	Ishan Shankar (Member upto 29.02.2004)	Present	Present	- N.A. -
3.	C.Srinivasan (Member)	Present	Present	Present
4.	S. K. Jain (Member from 01.03.2004)	- N.A. -	- N.A. -	Present

### ➤ Name and Designation of Compliance Officer:

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

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

As reported by Karvy Computershare Private Limited (RTA) to SEBI; 1706 requests and 397 complaints were received from shareholders during the year under review and all of which were redressed up to March 31, 2004.

### ➤ Number not solved to the satisfaction of shareholders:

Nil

### ➤ Number of pending share transfers:

As on March 31, 2004, no share transfer was pending. Share Transfers have been effected during the year well within the time prescribed by the Stock Exchanges and a certificate to this effect duly signed by a Practicing Company Secretary has been furnished to the Stock Exchanges.

## 6. General Meetings

### ➤ Location and time, where last three AGMs were held:

Particulars	FY 2000-01 (37 <sup>th</sup> AGM)	FY 2001-02 (38 <sup>th</sup> AGM)	FY 2002-03 (39 <sup>th</sup> AGM)
Date & Time	28 <sup>th</sup> September 2001 10.00 a.m.	30 <sup>th</sup> September, 2002 10.00 a.m.	30 <sup>th</sup> September, 2003 10.00 a.m.
Venue	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001	FICCI Auditorium, Barakhamba Road (Tansen Marg) New Delhi-110001



➤ **Whether special resolutions were put through postal ballot last year, details of voting pattern:**

No special resolutions were put through postal ballot last year.

➤ **Person who conducted the postal ballot exercise:**

Not Applicable.

➤ **Whether special resolutions are proposed to be conducted through postal ballot:**

No Special Resolutions are proposed through Postal Ballot.

**7. Disclosures**

➤ **Disclosures on materially significant related party transactions i.e. transactions of the Company of material nature, with its promoters, Directors or the management, their subsidiaries or relatives that may have potential conflict with the interests of Company at large:**

The Company does not have any related party transactions, which may have potential conflict with its interest at large.

➤ **Details of non-compliance by the Company, penalties, strictures imposed on the Company by Stock Exchanges or SEBI or any Statutory Authority, on any matter related to capital markets, during the last three years.**

The Company has complied with all the requirements of the Listing Agreement with Stock Exchanges as well as Regulations and Guidelines prescribed by SEBI. There were no penalties or strictures imposed on the Company by any statutory authorities for non-compliance on any matter related to capital markets, during the last three years.

**8. Means of Communication**

➤ The means of communication between the Company and the shareholders are transparent and investor friendly.

➤ The achievements and important events taking place in the Company like receipt of major orders are announced through press and electronic media and posted on Company's website.

➤ **Half-yearly report to each household of shareholders:**

No separate half-yearly report has been sent to each household of shareholders. However, the Financial Results for the half-year ended September 30, 2003 were published in "The Indian Express", New Delhi dt. 30.10.2003 in English and "Jansatta", New Delhi dt. 30.10.2003 in Hindi and also put up on the website.

➤ **Quarterly Results:**

The Unaudited Quarterly Results along with the Notes were published in the Newspapers as under:

Newspapers	Date of publication of results for the quarter ended				
	31.03.2003	30.06.2003	30.09.2003	31.12.2003	31.03.2004
Indian Express, New Delhi (English)	02.05.2003	31.07.2003	30.10.2003	31.01.2004	28.04.2004
Jansatta, New Delhi (Hindi)	02.05.2003	31.07.2003	30.10.2003	31.01.2004	28.04.2004

➤ **Website where displayed:**

In Company's website <http://www.bhel.com>.

➤ **Whether it also displays official news releases, the presentations made to Institutional Investors or to the Analysts:**

Yes. The Company's official news releases, other press coverage and corporate presentations made to Institutional Investors and Analysts are also available on the website.

➤ **Whether the Management Discussions and Analysis Report is a part of Annual Report or not:**

Yes. Management Discussion and Analysis Report is at Annexure-1 to the Directors' Report.



## 9. General Shareholder Information

- **AGM (Date, Time and Venue)** - 28<sup>th</sup> September, 2004 at 10.00 A.M.  
FICCI Auditorium, Barakhamba Road  
(Tansen Marg), New Delhi-110 001.

- **Financial Calendar for FY 2004-05** -

Particulars	Date
Accounting Period	1 <sup>st</sup> April 2004 to 31 <sup>st</sup> March 2005
First Quarter Results	On July 29, 2004
Second Quarter Results	On or before October 31, 2004
Third Quarter Results	On or before January 31, 2005
Fourth Quarter Results	On or before April 30, 2005
AGM (Next Year)	September 2005 (Tentative)

- **Date of Book Closure** - 8<sup>th</sup> September, 2004 to  
28<sup>th</sup> September, 2004  
(Both days inclusive)
- **Dividend payment date** - On or before 27<sup>th</sup> October 2004.

- **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 31.03.2004 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	Date of Payment	Unclaimed Dividend as on 31.03.2004 (Rs.)	Proposed date for transfer to IEPF
1993-1994	15%	244760000	367140000	30.09.1994	10.11.1994	Already transferred to General Revenue Account of Central Government	
1994-1995	15%	244760000	367140000	28.09.1995	08.11.1995	Already transferred to Investor Education & Protection Fund	
1995-1996	20%	244760000	489520000	30.09.1996	11.11.1996	Already transferred to Investor Education & Protection Fund	
1996-1997	20%	244760000	489520000	29.09.1997	10.11.1997	230765	16.11.2004
1997-1998	25%	244760000	611900000	30.09.1998	11.11.1998	243275	17.11.2005
1998-1999	25%	244760000	611900000	30.09.1999	11.11.1999	286604	17.11.2006
1999-2000 (Interim)	15%	244760000	367140000	19.05.2000*	31.05.2000	785946	06.07.2007
1999-2000 (Final)	15%	244760000	367140000	29.09.2000	10.11.2000	752558	16.11.2007
2000-2001	30%	244760000	734280000	28.09.2001	03.10.2001	569061	03.11.2008
2001-2002	40%	244760000	979040000	30.09.2002	07.10.2002	693930	05.11.2009
2002-2003	40%	244760000	979040000	30.09.2003	06.10.2003	662312	05.11.2010
2003-2004 (Interim)	30%	244760000	734280000	01.03.2004*	22.03.2004	2920084	06.04.2011

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



➤ **Listing on Stock Exchanges**

-

BHEL shares are Listed on Delhi Stock Exchange, the Stock Exchange, Mumbai, the Stock Exchange, Ahmedabad, Calcutta Stock Exchange & Madras Stock Exchange.

BHEL shares have been listed on National Stock Exchange (NSE) w.e.f. 11.11.2003.

**Name & Address of Stock Exchange**

**Stock Code**

1. The Delhi Stock Exchange Association Ltd. DSE House, 3/1 Asaf Ali Road, New Delhi - 110002.	02083
2. The Stock Exchange, Mumbai 1st Floor, Phiroz Jeejeebhoy Towers, Dalal Street, Mumbai- 400001.	500103
3. The Stock Exchange, Ahmedabad Kamdhenu Complex, Opp. Sahajanand College, Panjara Pole, Ahmedabad - 380015.	08580 / BHARAT HEAVY
4. The Calcutta Stock Exchange Assoc. Ltd. 7, Lyons Range, Kolkata - 700001.	12074
5. The Madras Stock Exchange Limited Exchange Building, Post Box No. 183, 11, Second Line Beach, Chennai - 600001.	- N. A. -
6. National Stock Exchange Ltd. Exchange Plaza, Bandra-Kurla Complex Bandra (East) Mumbai – 400051.	BHEL

➤ **International Securities Identification Number (ISIN)**

INE 257 A01018

➤ **Payment of Listing Fees** -

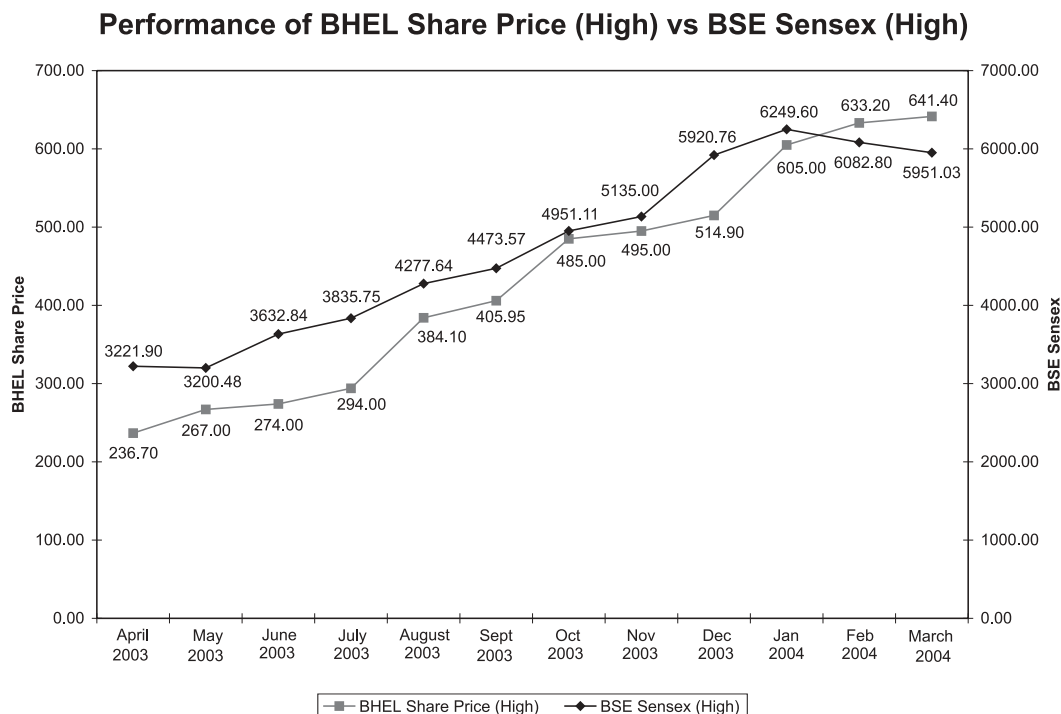
Listing Fee has been paid to all the above Stock Exchanges up to the year 2004-2005.

➤ **Market Price Data**

Monthly high and low quotations of BHEL shares traded on the Stock Exchange, Mumbai (BSE) vis-à-vis BSE Sensex, No. of shares traded and Net turnover for the year ended March 31, 2004 are summarized as under:

Month	BHEL Share Price (Rs.)		BSE Sensex		* No. of shares traded	Net Turnover* (Rs. in Lakhs)
	High	Low	High	Low		
April 2003	236.70	217.40	3,221.90	2,904.44	6214789	14222.59
May 2003	267.00	223.40	3,200.48	2,934.78	3840786	9536.07
June, 2003	274.00	247.05	3,632.84	3,170.38	5018632	13185.66
July, 2003	294.00	251.05	3,835.75	3,534.06	5266265	14384.95
August, 2003	384.10	259.50	4,277.64	3,722.08	7082292	21613.45
Sept., 2003	405.95	328.05	4,473.57	4,097.55	6402101	23222.27
Oct., 2003	485.00	399.00	4,951.11	4,432.93	5566455	23867.02
Nov., 2003	495.00	417.10	5,135.00	4,736.70	4031769	18209.88
Dec., 2003	514.90	440.00	5,920.76	5,082.82	5360498	25056.42
Jan., 2004	605.00	505.10	6,249.60	5,567.68	4702700	26159.50
Feb., 2004	633.20	504.50	6,082.80	5,550.17	5876069	34098.03
March, 2004	641.40	525.00	5,951.03	5,324.78	6951672	40823.77

\* Source: www.bseindia.com



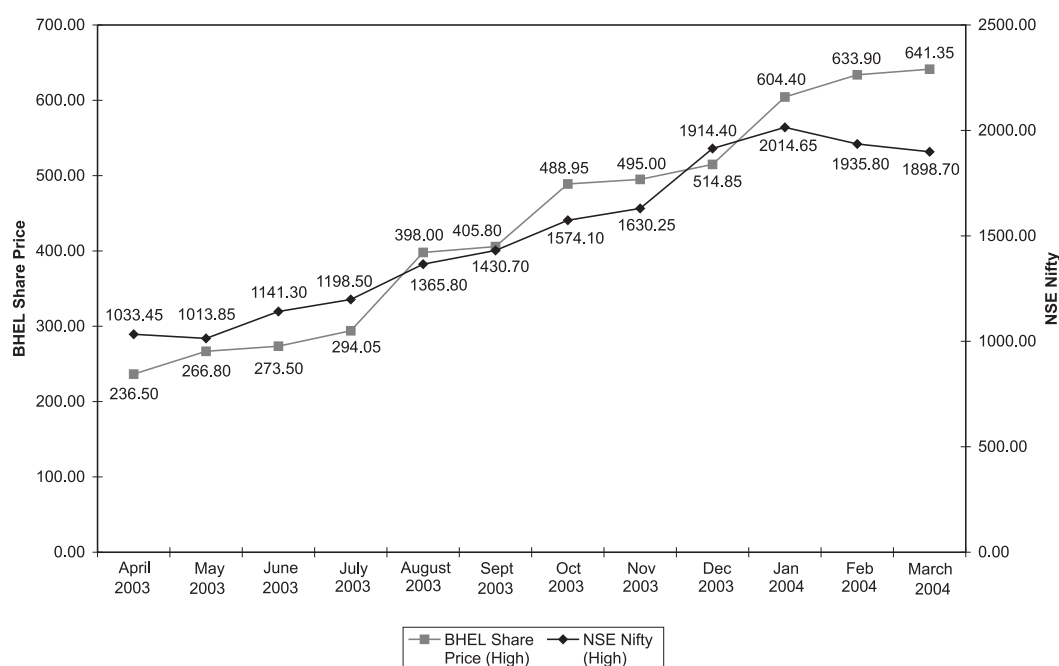


Monthly high and low quotations of BHEL shares traded on the National Stock Exchange (NSE) vis-à-vis NSE Nifty, No. of shares traded and Net turnover for the year ended March 31, 2004 are summarized as under:

Month	BHEL Share Price (Rs.)		NSE Nifty		* No. of shares traded	Net Turnover* (Rs. in Lakhs)
	High	Low	High	Low		
April 2003	236.50	217.05	1033.45	920.00	13840924	31677.72
May 2003	266.80	220.00	1013.85	930.80	11304139	28288.53
June 2003	273.50	247.05	1141.30	1004.70	13972628	36711.02
July 2003	294.05	220.20	1198.50	1089.30	12242145	33387.69
Aug 2003	398.00	260.00	1365.80	1164.75	17113995	52712.93
Sept 2003	405.80	330.00	1430.70	1285.25	17406017	63029.90
Oct 2003	488.95	392.35	1574.10	1407.95	15156910	65228.39
Nov 2003	495.00	416.00	1630.25	1509.15	11375543	51513.29
Dec 2003	514.85	428.00	1914.40	1615.70	17398691	81347.88
Jan 2004	604.40	449.90	2014.65	1756.25	15211963	84349.13
Feb 2004	633.90	503.80	1935.80	1755.65	19502851	11356.30
March 2004	641.35	511.15	1898.70	1669.70	17240152	101536.10

\* Source: www.nseindia.com

**Performance of BHEL Share Price (High) vs NSE Nifty (High)**



➤ **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.

➤ **Registrar & Share Transfer Agent (RTA)**

-

M/s. Karvy Computershare Private Ltd.

Unit : BHEL

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

Phone : 23324401, 23324409

Fax : 011-23730743

Hyderabad : "Karvy House", 46, Avenue 4,  
office Street No. 1, Banjara Hills,  
Hyderabad - 500 034

Phone : 040-23312454/23320751/752/753

Fax : 040-23311968, 23323049

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

➤ **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 despatch of transferred certificates to the respective transferees within the prescribed time as per the Listing Agreement.

➤ **Distribution of Shareholding**

**(i) Distribution of shares according to size, of holding as on 31<sup>st</sup> March, 2004**

No. of equity shares held	No. of shareholders	% of shareholders	No. of shares	% of shareholding
1-5000	19354	94.39	1906936	0.78
5001-10000	454	2.21	359243	0.15
10001-20000	233	1.14	354358	0.15
20001-30000	61	0.30	155380	0.06
30001-40000	42	0.20	152547	0.06
40001-50000	26	0.13	123339	0.05
50001-100000	64	0.31	466137	0.19
100001 and above	271	1.32	241242060	98.56
Total	20505	100.00	244760000	100.00



(ii) Shareholding Pattern as on 31<sup>st</sup> March 2004

Sl. No.	Category	No. of Shares held	%age of Shareholding
<b>A.</b>	<b>PROMOTER'S HOLDING</b>		
<b>1</b>	<b>Promoters</b>		
	-Indian Promoters		
	* (i) President of India	165755000	67.72
	(ii) Nominees of POI	200	0.00
	-Foreign Promoters	0	0.00
<b>2</b>	<b>Persons acting in concert</b> Directors and Relatives	350	0.00
	<b>Sub Total</b>	<b>165755550</b>	<b>67.72</b>
<b>B.</b>	<b>NON-PROMOTERS HOLDING</b>		
<b>3</b>	<b>Institutional Investors</b>		
a.	Mutual Funds and UTI	14686092	6.00
b.	Banks, Financial Institutions, Insurance Companies (Central/State Govt. Institutions/ Non-Govt. Institutions)	8529702	3.48
	* LIC 4010637 (1.64% )		
c.	Foreign Institutional Investors (FIIs)	51389433	21.00
	* Emerging Markets Growth Fund Inc. 7780445 ( 3.18%)		
	* Merrill Lynch Capital Markets Espana S.A.SVB 2647980 (1.08%)		
	* Capital International Emerging Markets Fund 2534100 (1.04%)		
	<b>Sub Total</b>	<b>74605227</b>	<b>30.48</b>
<b>4</b>	<b>OTHERS</b>		
a.	Private Corporate Bodies	1274394	0.52
b.	Indian Public	2353052	0.96
c.	NRIs/OCBs	76249	0.03
d.	Any Other		
	(i) Employees	368840	0.15
	(ii) Trust	3455	0.00
	(iii) Shares in Transit (NSDL/CDSL)	323233	0.13
	<b>Sub Total</b>	<b>4399223</b>	<b>1.80</b>
	<b>GRAND TOTAL</b>	<b>244760000</b>	<b>100.00</b>

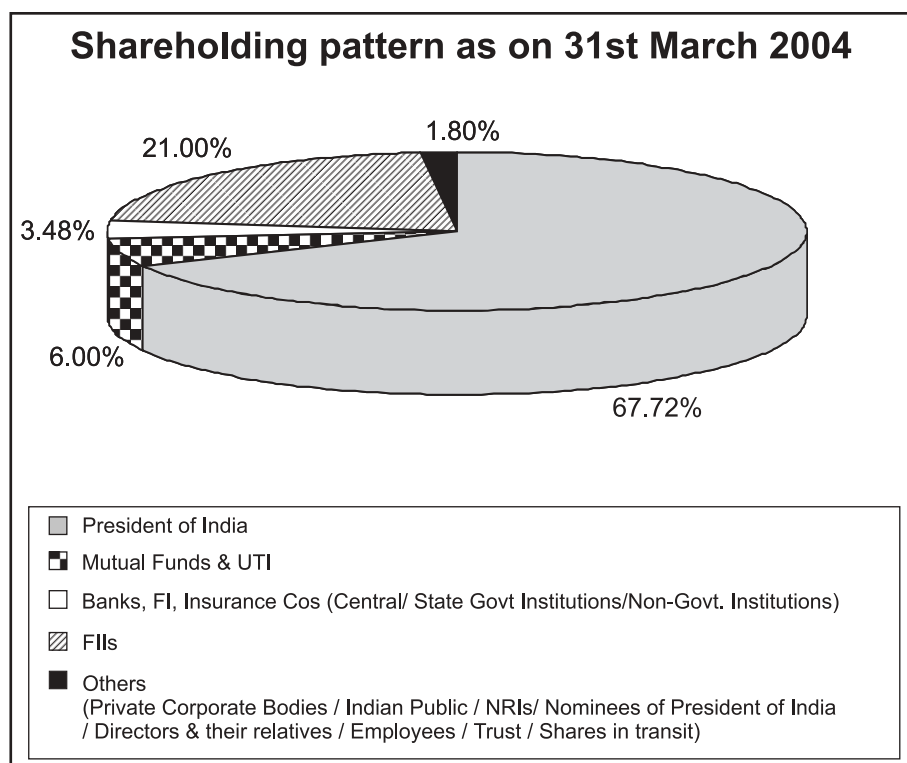


**NOTES: -**

1. \* Name, Number of shares held and %age shareholding of entities/ persons holding more than 1 (One) % of the shares of the company have been given under each head.

2.

Total Foreign Shareholding	No. of Shares	% Share-holding
Foreign Institutional Investors	51389433	21.00
NRIs	76249	0.03
Overseas Corporate Bodies	0	0.00
ADR & GDR Holding	0	0.00
<b>Total</b>	<b>51465682</b>	<b>21.03</b>



**(ii) Top Five Shareholders**

Top Five Shareholders of BHEL as on 31<sup>st</sup> March 2004:

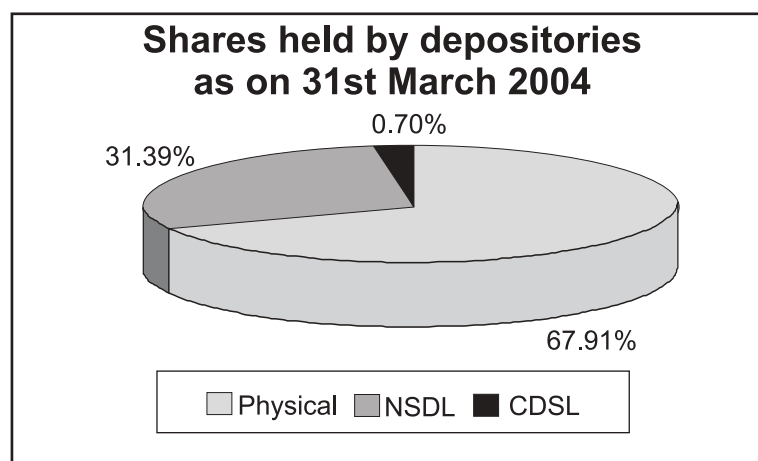
Name	No. of shares	% to Capital
President of India	165755000	67.72
Emerging Markets Growth Fund	7780445	3.18
Life Insurance Corporation of India	4010637	1.64
Merrill Lynch Capital Markets Espana S.A. SVB	2647980	1.08
Capital International Emerging Markets Fund	2534100	1.04
<b>Total</b>	<b>182728162</b>	<b>74.66</b>



➤ **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 agreements 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, 2004, 32.09% of the total equity share capital of BHEL has been dematerialised by the shareholders and held in the name of the NSDL / CDSL. The names and addresses of the depositories are as under:-

- |   |   |
|---|---|
| 1. National Securities Depository Limited | 2. Central Depository Services (India) Ltd. |
| Trade World, 4 <sup>th</sup> Floor        | Phiroz Jeejeebhoy Towers                    |
| Kamala Mills Compound                     | 28 <sup>th</sup> Floor, Dalal Street        |
| Senapathi Bapat Marg, Lower Parel,        | Mumbai – 400 023                            |
| Mumbai – 400 013                          |   |



➤ **Outstanding GDRs/ADRs/Warrants or any convertible instruments, conversion date and likely impact on equity**

- Nil

➤ **Plant locations**

- Heavy Electrical Equipment Plant, Haridwar
- Central Foundry Forge Plant, Haridwar
- Heavy Power Equipment Plant, Hyderabad
- High Pressure Boiler Plant, Trichy
- Heavy Electricals Plant, Bhopal
- Transformer Plant, Jhansi
- Electronics Division, Bangalore
- Boiler Auxiliaries Plant, Ranipet
- Industrial Valves Plant, Goindwal
- Electro-Porcelains Division, Bangalore
- Insulator Plant, Jagdishpur

- **Research & Development**
  - Component Fabrication Plant, Rudrapur
  - Heavy Equipment Repair Plant, Varanasi
  - Oil Sector Business & Electrical Machine Repair Plant, Mumbai
  - Corporate Research & Development Division, Hyderabad
  - Advance Research Projects Division, New Delhi
- **Services**
  - Power Sector Technical Services (HQ), New Delhi
- **Regions**
  - Power Sector, Northern Region, Noida
  - Power Sector, Eastern Region, Kolkata
  - Power Sector, Western Region, Nagpur
  - Power Sector, Southern Region, Chennai
- **Institutes**
  - Human Resource Development Institute, Noida
  - Ceramic Technological Institute, Bangalore
- **Address for correspondence**

Shareholders can send their queries regarding Transfer / Dematerialisation of shares, Non-receipt of dividend, Revalidation of Dividend Warrants and any other correspondence relating to the shares of the Company either to:

**N. K. Sinha**  
**Company Secretary**  
**BHARAT HEAVY ELECTRICALS LIMITED**  
**Regd. Office: BHEL House, Siri Fort**  
**New Delhi – 110 049**

**Phone : 91 11 26001046**  
**Fax : 91 11 26001102**  
**Email : csynks@asiad.bhel.co.in**  
**OR**

**M/s. Karvy Computershare Private Ltd.**  
**Unit : BHEL**

**Delhi office: 105-108, Arunachal Building**  
**19, Barakhamba Road,**  
**New Delhi - 110 001**

**Phone : 23324401, 23324409**  
**Fax : 011-23730743**

**Hyderabad : “Karvy House”, 46, Avenue 4,**  
**office Street No. 1, Banjara Hills,**  
**Hyderabad - 500 034**

**Phone : 040-23312454/23320751/752/753**  
**Fax : 040-23311968, 23323049**

**E-mail : michaelg@karvy.com**  
**madhusudhan@karvy.com**

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



## AUDITOR'S CERTIFICATE ON CORPORATE GOVERNANCE

The Members

**Bharat Heavy Electricals Limited**

BHEL House, Siri Fort,

New Delhi

We have examined the compliance of conditions of corporate governance by Bharat Heavy Electricals Limited, for the year ended on March 31, 2004 as stipulated in clause 49 of the Listing Agreement of the said company with stock exchanges.

The compliance of conditions of corporate governance is the responsibility of the management. Our examination was limited to procedure 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 opinion on the financial statements of the company.

In our opinion and to the best of our information and according to the explanations given to us, we state that:

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. The Company has an optimum combination of executive and non-executive directors being independent on its Board of Directors with effect from 01.03.2004.

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

We further state that no shareholder/investor grievance is pending for a period exceeding one month against the company as per the information furnished by the Registrar and Share Transfer Agent (RTA) of the company and reported to the Shareholders/Investors Grievance committee.

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.

**J.C. Bhalla & Company**  
**Chartered Accountants**

Place : New Delhi  
Date : 23.08.2004

Sd/-  
**(Sudhir Mallick)**  
Partner

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

### **CONSERVATION OF ENERGY**

Energy Conservation is an important Thrust Area in BHEL. The Company has worked out a 5 Years Plan for Energy Conservation and its efficient use aiming at 30% reduction in Energy consumption as related to turnover. This commitment for reduction in Energy Cost, containing cost on a continuous basis, with optimal utilisation of resources is being monitored. The systematic efforts coupled with general awareness of importance of Energy Conservation, improved housekeeping and improved operational practices have yielded very encouraging results.

Awareness and importance about Energy Conservation has been increasing companywide after the formulation of Energy Management Policy by the Company.

Work on formulation of recommendations for Energy Management activities such as Energy Efficient Lighting System, interacting with Energy Auditing Companies and Training module on Energy Conservation has been initiated by the Company in co-ordination with representatives from various Units. This would facilitate adopting a common approach for Energy Management activities throughout BHEL.

Energy Audits in various units are regularly being conducted and the recommendations of the audit are implemented and their benefits have been reaped.

Some of the measures are:

#### **Light Load Reduction**

- Use of daylight by use of translucent fiber sheets on roof tops of various production blocks in units.
- Modification of Lighting System using Energy Efficient Lamps etc.
- Adoption of automatic switching off of lights.
- Introduction of timer switches for controlling day time loading.
- Replacement of High Pressure Mercury Vapour lamps by High Pressure Sodium Vapour lamps.
- De-linking illumination/light load/connection from other loads.
- Phased replacement of old tube-lights with energy efficient T5 lamps.

#### **Energy Loss Reduction**

- Waste heat recovery.
- Reduction in consumption of fuel by providing ceramic linings in furnaces.
- Arrest leakage in compressed air pipings & steam pipings.

#### **New Technology**

- Installation of variable speed drive motors.
- Use of AC/DC drives in place of existing MG sets.
- Use of renewable energy sources such as solar for water heating & lighting.
- Changeover from oil fired to coal fired boiler.

#### **Better Housekeeping**

- Reduction in maximum demand of power by proper load planning.
- Use of alternative energy source such as use of producer gas instead of LPG.

As a result of the above steps, energy cost as a percentage of turnover (net of excise) has improved to 2.62% as against 2.86% in the previous year, despite increase in fuel cost and power tariff during 2003-04.

Through such activities BHEL has contributed to the cause of Energy Conservation in the larger interests of the nation.



## TECHNOLOGY ABSORPTION AND RESEARCH & DEVELOPMENT

### Research & Development

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

### 4. Expenditure on R&D

a) Capital	....	Rs. 141 million
b) Recurring	....	Rs. 900 million
c) Total	....	Rs.1041 million
Expenditure as a percentage of total turnover	....	1.20%



## TECHNOLOGY ABSORPTION AND ADOPTION

Details of technology imported during the last 5 years:

Technology	Year of import	Absorption status
Once-through boilers	1999	Technology as envisaged has been received.
Fabric filters	1999	Technology absorption in progress. Orders under execution.
New generation C&I automation platform	2000	Technology absorption in progress. Orders executed.
Axial Fans	2002	Technology absorption in progress. Orders being executed.

## Foreign Exchange earnings and outgoings

a) Activities relating to export information given in Directors' Report under "International Business".

b) Total foreign exchange used and earned:

		(Rupees in million)
	<b><u>2003-2004</u></b>	<b><u>2002-2003</u></b>
i Foreign exchange used	12577	13185
ii Foreign exchange earned	17637	19231



## SIGNIFICANT ACCOUNTING POLICIES

- 1 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 **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.

- 4 **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.

5. **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 which are billed or unbilled pending formal billing.

- A. For construction contracts entered into on or after 1.4.2003**

Revenue is recognised 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 realisable value, they are considered at 97.5% of the realisable value or in its absence, quoted price. Otherwise, they are considered at actual/estimated factory cost or 97.5% of the realisable value, whichever is lower. The balance 2.5% is recognised as revenue on completion of supplies under the contract.
- (ii) Income from erection and project management services is recognised on work done and billed 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.

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

## 6. **Leases**

### **Finance Lease**

#### **A) i) Assets Given on Lease Prior to 1<sup>st</sup> 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 1<sup>st</sup> 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 1<sup>st</sup> 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.

## 7. **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.
- c) 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.

#### 8 **Terminal Benefits**

- A) Provident Fund and Employees' Family Pension Scheme contributions are accounted for on accrual basis. Liability for gratuity, half pay leave, leave encashable at the time of retirement, 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.
- B) Lump sum payments made under Voluntary Retirement Scheme before 1.4.2003 are treated as Deferred Revenue Expenditure and amortised over the period during which the benefits are expected to be derived by the Company.
- Lump sum payments made under VRS after 1.4.2003 will be charged off in the year of payment on a pro-rata monthly basis.

#### 9 **Depreciation**

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

	<b>Single Shift</b>	<b>Double Shift</b>	<b>Triple Shift</b>
General Plant & Machinery	8%	12%	16%
Automatic/Semi- Automatic Machines	10%	15%	20%
Erection Equipment, Capital Tools & Tackles	20%		
Township Buildings			
–Second Class	2.5%		
–Third Class	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.
- (vii) Where the carrying amount on any fixed assets has undergone a change in accordance with the policy for Foreign Currency Transactions, the depreciation on the unamortised depreciable asset is spread over the residual useful life of the asset.

#### **10 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
- c. 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.
- c. Fixed assets acquired for purposes of research and development are capitalised.

#### **11. Claims by/against the Company**

- (i) 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 subsidy, duty draw back, refund of customs duty and insurance 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.

#### **12 Accounting for Foreign Currency Transactions**

Exchange differences arising out of Foreign Currency Transactions are recognised as income or as expense in the period in which they arise.



Adjustment of exchange differences to the carrying amount of fixed assets are made as under:

- a. For any increase/decrease in the liabilities related to fixed assets acquired in foreign currency due to translation;
- b. On repayment of liabilities incurred for the purpose of acquiring fixed assets.

The effect of past extraordinary and permanent fluctuations in the exchange rate including on devaluation/ revaluation other than those related to fixed assets, are treated as deferred revenue charge and adjusted over the residual period of such liabilities.

**13. Translation of Financial Statements of Foreign Branches**

- (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) Current assets and current liabilities are translated at the closing rate, while fixed assets are translated at the rates in force when the transactions take place.
- (iii) All translation variances except in relation to fixed assets are taken to Profit & Loss Account.

**14. Provision for Warranties**

**i) For construction contracts entered into on or after 01.04.2003:**

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

**ii) For all other contracts:**

Provision for contractual obligations in respect of contracts under warranty at the year end is considered 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 in the year of actual incurrence.

**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, 2004

	SCHEDULE	AS AT 31.3.2004		(Rs. in lakhs) AS AT 31.3.2003	
<b>SOURCES OF FUNDS</b>					
<b>Shareholders' Funds</b>					
Capital	1	24476.00		24476.00	
Reserves & Surplus	2	505118.00	529594.00	455891.01	480367.01
Loans Funds					
Secured Loans	3	50000.00		50000.00	
Unsecured Loans	4	4002.63	54002.63	3422.26	53422.26
			583596.63		533789.27
<b>APPLICATION OF FUNDS</b>					
<b>Fixed Assets</b>					
Gross Block		345960.40		334930.69	
Less: Depreciation/Amortisation to-date		241150.79		223027.97	
		104809.61		111902.72	
Add : Lease Adjustment Account		4604.48		5147.44	
Net Block	5	109414.09		117050.16	
Capital Work-in-Progress	6	10855.74	120269.83	5869.75	122919.91
<b>Investments</b>	7		2898.26		1032.72
<b>Deferred Tax Assets (Refer note no. 17 of Schedule 19)</b>			49851.88		40739.52
<b>Current Assets, Loans and Advances</b>					
Current Assets	8				
Inventories		210388.36		200105.61	
Sundry Debtors		460848.04		407578.21	
Cash & Bank Balances		265963.89		132091.11	
Other current assets		1350.59		99.84	
Loans and advances	9	103919.05		94964.89	
		1042469.93		834839.66	
Less :					
<b>Current Liabilities &amp; Provisions</b>					
Liabilities	10	519691.07		369630.92	
Provisions	11	113994.26		105661.87	
		633685.33		475292.79	
Net current assets			408784.60		359546.87
<b>Miscellaneous expenditure</b>	12		1792.06		9550.25
			583596.63		533789.27
<b>Notes to Accounts</b>	19				
Schedules 1 to 19 & Significant accounting policies form an integral part of the Accounts.					

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

Sd/-  
N K Sinha  
Secretary

Sd/-  
C Srinivasan  
Director (Finance)

Sd/-  
H W Bhatnagar  
Chairman (Committee of Directors)

As per our report of even date  
For J C Bhalla & Company  
Chartered Accountants

Date : 5th August, 2004  
Place : New Delhi

Sd/-  
Sudhir Mallick  
Partner



# PROFIT & LOSS ACCOUNT

For the year ended 31st March 2004

	Schedule		For the year ended 31.03.2004	(Rs. In lakhs) For the year ended 31.03.2003
<b>EARNINGS</b>				
Turnover (Gross)	13A	866246.98		748221.99
Less Excise Duty		64343.78		55191.56
Turnover (Net)			801903.20	693030.43
Other operational income	13B		31270.44	33369.17
Other income	13C		11911.07	9216.41
Interest Income	13D		8095.13	5388.94
Exchange Variation				2109.78
Accretion/Decretion to Work-in-progress & Finished Goods	14		-3062.60	-4699.94
			<u>850117.24</u>	<u>738414.79</u>
<b>OUTGOINGS</b>				
Consumption of raw Material & components			345152.65	296182.80
Consumption of stores & spares			18313.00	19880.24
Erection and Engineering exp.				
- payment to subcontractors			59445.87	44629.00
Employees' remuneration & benefits	15		163950.91	150451.69
Other expenses of manufacture, Administration, selling and distribution	16		108364.15	99372.89
Interest & other borrowing costs	17		6008.05	5478.02
Exchange variation			3629.69	
Depreciation & amortisation	5		19800.11	18535.00
Provisions	18		2084.42	9078.95
Less : Cost of jobs done for internal use			2362.97	1796.47
			<u>724385.88</u>	<u>641812.12</u>
Profit before prior period adjustments and extra-ordinary items			125731.36	96602.67
Less : Extra-ordinary items	18A		22981.24	15378.61
Profit before prior period adjustments			102750.12	81224.06
Add/-less : Prior period Adjustments (Net)	18B		-1274.84	-980.60
<b>Profit before tax :</b>			101475.28	80243.46
Less: Provision for taxation	18C		35660.12	35792.19
<b>Profit after tax</b>			65815.16	44451.27
Add: Balance of profit brought forward from last year			5192.47	1902.24
Foreign project reserve written back			1061.92	680.47
Profit available for appropriation			72069.55	47033.98
<b>Less: Appropriation-</b>				
- Foreign Project Reserve		138.30		116.24
- Bonds Redemption Reserve		10000.00		10000.00
- General Reserve		35000.00		20680.47
- Dividend (incl. Interim Dividend Rs. 7342.80 lakhs, Prev. year Nil)		14685.60		9790.40
- Corporate Dividend tax (incl. Rs. 940.79 lakhs on interim dividend and Rs. 18.82 lakhs Education Cess on Final Dividend)		1900.40	61724.30	1254.40
<b>Balance carried to Balance Sheet</b>			<u>10345.25</u>	<u>5192.47</u>
<b>Basic and Diluted Earning per share (in Rs.)</b>			26.89	18.16
<b>Basic and Diluted Earning per share excluding Extra Ordinary items</b>			36.28	24.44
<b>Notes to Accounts</b>	19			

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

Sd/-  
N K Sinha  
Secretary

Sd/-  
C Srinivasan  
Director (Finance)  
As per our report of even date  
For J C Bhalla & Company  
Chartered Accountants

Sd/-  
H W Bhatnagar  
Chairman (Committee of Directors)

Date : 5th August, 2004  
Place : New Delhi

Sd/-  
Sudhir Mallick  
Partner

## SCHEDULE 1 - SHARE CAPITAL

	AS AT 31.3.2004	(Rs. in lakhs) AS AT 31.3.2003
Authorised Capital		
32,50,00,000 (Previous Year		
32,50,00,000) equity shares of Rs. 10/- each	32500.00	32500.00
Issued,Subscribed & Paid up		
24,47,60,000 (Previous Year 24,47,60,000) Equity	24476.00	24476.00
Shares of Rs. 10/- each fully paid up, of which		
7,41,11,200 (Previous Year 7,41,11,200) shares		
allotted for consideration other than cash	24476.00	24476.00

## SCHEDULE 2 - RESERVES & SURPLUS

Capital Reserve			
Opening Balance	276.98		276.98
Less:Adjusted for sale of asset	2.17	274.81	276.98
Foreign Project Reserve			
Opening Balance	2442.32		3006.55
Add: Transferred from Profit & Loss Account	138.30		116.24
Less: Written back	1061.92		680.47
		1518.70	2442.32
Bonds Redemption Reserve Account			
Opening Balance	20000.00		10000.00
Add: Transferred from Profit & Loss Account	10000.00		10000.00
		30000.00	20000.00
General Reserve			
Opening Balance	427979.24		407298.77
Add: Transferred from Profit & Loss Account	35000.00		20680.47
		462979.24	427979.24
Profit & Loss Account		10345.25	5192.47
		<b>505118.00</b>	<b>455891.01</b>



### SCHEDULE 3 - SECURED LOANS

	AS AT 31.3.2004	(Rs. in lakhs) AS AT 31.3.2003
8.85% Non-convertible, secured, Redeemable Taxable Bonds	50000.00	50000.00
	<u>50000.00</u>	<u>50000.00</u>

### SCHEDULE 4 - UNSECURED LOANS

From financial Institutions (due within one year Rs. 2.80 Lakhs, previous year Rs. 5.60 Lakhs)	2.80	8.40
Post Shipment credit		
--From Exim Bank (Due within one year Rs. 153.64 lakhs, Previous year 307.28 lakhs)	153.64	460.92
Credits for Assets taken on lease (Due within one year Rs. 1055.07 lakhs (Previous year Rs. 856.04 lakhs)	3579.87	2707.01
Interest accrued and due on:		
--State Government Loans	233.29	233.29
--Credits for Assets taken on lease	33.03	12.64
	<u>4002.63</u>	<u>3422.26</u>

## SCHEDULE 5

(Rs. in lakhs)

Fixed Assets	Gross Block			Net Block					
	Cost as at 01.04.2003	Additions/ adjustments during the year	Deductions/ adjustments during the year	Cost As at 31.03.2004	Lease adjustment Account	Depreciation/ Amortisation upto 31.03.2004	As at 31.03.2004	As at 31.03.2003	Depreciation/ Amortisation for the year
<b>Factory/ Office Complex</b>									
Freehold land (including development exp.)	745.75	7.81	11.88	741.68			741.68	745.75	
Leasehold land (including development exp.)	653.86	11.71	1.57	664.00		49.82	614.38	610.22	2.92
Roads, bridges and culverts	850.90	4.79	162.65	693.04		250.93	442.11	500.57	11.32
Buildings	25893.26	1020.32	155.05	26758.53		15428.91	11329.62	11260.40	950.73
Leasehold buildings	308.77			308.77		89.31	219.46	224.59	5.13
Drainage, sewerage and water supply	1243.45	23.33	5.60	1261.18		835.95	425.23	436.71	34.25
Railway siding	764.52			764.52		748.88	15.64	17.44	1.80
Plant & Machinery	191741.49	7321.21	823.06	198239.64		154153.87	44085.77	47537.67	10755.35
Construction equipment	13311.63	426.95	328.73	13409.85		12049.53	1360.32	1886.37	939.92
Electronic data processing equipments	7072.08	642.45	573.71	7140.82		5571.66	1569.16	1925.52	655.05
Electrical installations	7862.65	90.88	7.21	7946.32		5840.44	2105.88	2405.66	386.04
Locomotives and wagons	1600.67			1600.67		1347.52	253.15	294.83	41.68
Vehicles	1751.96	97.02	54.81	1794.17		1321.45	472.72	495.38	105.08
Furniture & fixtures	682.39	54.87	0.14	737.12		399.22	337.90	316.50	33.36
Office & other equipments	5509.71	251.02	55.89	5704.84		4010.55	1694.29	1736.34	283.56
Fixed assets costing upto Rs.10000/-	3710.54	227.96	52.65	3885.85		3885.85	-	-	227.96
Locomotives given on lease	49714.88			49714.88	4604.48	24739.00	29580.36	34100.51	3977.19
Capital expenditure	116.63		72.58	44.05		40.38	3.67	71.67	8.81
EDP Equipment taken on lease	2677.42	1652.60	(440.00)	4770.02		1553.43	3216.59	1982.32	755.66
Office & other equipment taken on lease	660.54	41.41		701.95		193.05	508.90	553.28	85.79
<b>Intangible Assets</b>									
- Internally developed									
- Patents and Trade	0.12		0.12						
- Others									
- Software		494.32		494.32		71.40	422.92		71.40
- Technical Know-how		181.61		181.61		21.75	159.86		21.75
	316873.22	12550.26	1865.65	327557.83	4604.48	232602.70	99559.61	107101.73	19354.75
<b>Township/ Residential</b>									
Freehold land (including development exp.)	215.02			215.02			215.02	215.02	
Leasehold land (including development exp.)	189.53			189.53		41.79	147.74	149.62	1.88
Roads, bridges and culverts	487.52			487.52		227.50	260.02	267.92	7.90
Buildings	11959.78	234.92	1.29	12193.41		4447.30	7746.11	7756.99	241.04
Leasehold buildings	33.17			33.17		17.52	15.65	16.77	1.12
Drainage, sewerage and water supply	1660.98		0.74	1660.24		1097.44	562.80	603.45	40.29
Plant and Machinery	841.97	45.90		887.87		634.95	252.92	258.59	51.57
Electrical installations	1221.78	2.44		1224.22		1165.80	58.42	76.59	20.61
Vehicles	114.71		6.09	108.62		88.27	20.35	25.75	5.40
Furniture & fixtures	5.66	0.88		6.54		3.76	2.78	2.32	0.42
Office & other equipments	1132.11	96.31	0.22	1228.20		655.53	572.67	546.57	70.21
Fixed assets costing upto Rs. 10000/-	163.31	4.92		168.23		168.23	-	-	4.92
Capital expenditure	31.93		31.93					28.84	
	18057.47	385.37	40.27	18402.57		8548.09	9854.48	9948.43	445.36
Total of factory & township	334930.69	12935.63	1905.92	345960.40	4604.48	241150.79	109414.09	117050.16	19800.11
Previous year	318199.63	18428.08	1697.02	334930.69	5147.44	223027.97	117050.16	117656.93	18535.00

Gross Block excludes cost of assets purchased out of grant received from Government of India Rs. 2940.05 lakhs (Prev. Yr Rs. 2845.49 lakhs) 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.

Building includes enabling works at erection/project sites the net block of which is Rs. 738.71 lakhs (previous year Rs. 601.61 lakhs).

Intangible assets have not incurred any impairment loss during the year.



## SCHEDULE 6 CAPITAL WORK- IN- PROGRESS (AT COST)

	AS AT 31.3.2004	(Rs. in lakhs) AS AT 31.3.2003
Construction work-in-progress -Civil	730.52	1022.61
Construction Stores (including in transit)	162.65	201.56
Plant & Machinery and other equipments		
-Under Erection/ Fabrication/awaiting erection	8932.92	3051.73
-In transit	536.59	1593.85
Intangible Assets under development	493.06	
	<b>10855.74</b>	<b>5869.75</b>

## SCHEDULE 7 INVESTMENTS

### LONG TERM

#### Shares :

UNQUOTED (Fully Paid up)

#### TRADE :

360 (previous year 360) Equity shares of Rs.38.95 each (previous year 1000/- each) of Engineering Projects (India) Ltd.\*

728960 (previous year 728960) Equity shares of Rs. 10/- each of AP Gas Power Corporation Ltd.

5000000 (previous year 5000000) Equity shares of Rs 10/- each of Konark Met Coke Ltd.

Shares in Joint Ventures Companies

--1999999 (previous year 1999999) Equity Shares of Rs. 10/- each of Powerplant Performance Improvement Ltd.

Less : Provision for dimunition in value

--2379999 (previous year 2379999) Equity Shares of Rs. 10/- each of BHEL-GE Gas Turbine Services Pvt. Ltd.

#### OTHER THAN TRADE :

3 (previous year 3) Shares of Rs. 100/- each at par of BHEL House Building Cooperative Society Ltd., Hyderabad

### CURRENT

#### UNQUOTED (Fully Paid up)

#### OTHER THAN TRADE

20 (Previous year NIL) Secured Non convertible debentures of Rs. 1 crore each of GE Capital Services India

	0.14	3.60
	91.12	91.12
	500.00	500.00
	<u>591.26</u>	<u>594.72</u>
	200.00	200.00
	<u>131.00</u>	
	69.00	
	238.00	238.00
	<u>307.00</u>	<u>438.00</u>
	**	**
	2000.00	
	<u>2898.26</u>	<u>1032.72</u>

\* The paid up value of equity share of Engineering (Projects) India Limited has been reduced from Rs. 1000/- to Rs. 38.95/- due to restructuring as confirmed by Central Govt. vide order no. 40/1/2003-CL-III Dated 17.11.2003.

\*\* Value less than Rs. 1000/-

#### Details of Investments purchased and sold during the year

175 secured non convertible debentures of Rs. 1 crore each of GE Capital Services India costing Rs. 17500 lakhs.

## SCHEDULE 8 CURRENT ASSETS

	AS AT 31.3.2004	(Rs. in lakhs) AS AT 31.3.2003
<b>Inventories @</b>		
(As certified by the management)		
Stores & Spare parts		
-Production	6168.59	5956.32
-Fuel stores	917.95	630.04
-Miscellaneous	670.94	606.83
	7757.48	7193.19
Raw Material & Components	55711.73	50734.84
Material-in-transit	25146.18	17804.27
Materials with Fabricators/Contractors	4447.93	3281.68
Loose Tools	967.83	891.03
Scrap (at estimated realisable value)	1359.72	1329.97
Finished Goods	19051.84	22846.26
Inter division transfers in transit	4530.63	4437.13
Includes:		
– Rs. 140.25 lakhs (previous year Rs. 417.40 lakhs) towards non-BHEL spares held on behalf of various SEBs /NTPC (pool members) monitored by CEA		
– Rs. 36.24 lakhs (previous year Rs. 265.01 lakhs) Finished Goods in transit.		
	23582.47	27283.39
Work-in-progress	94396.14	93757.82
(including items with sub-contractors)		
	213369.48	202276.19
Less : Provision for non-moving stock	2981.12	2170.58
	210388.36	200105.61
@ Valued as per Significant Accounting Policy Number 7		
<b>Sundry Debtors*</b>		
-Debts outstanding for a period exceeding six months	231832.88	220990.96
-Other debts	297642.30	254343.47
	529475.18	475334.43
Less : Provision for doubtful debts	68627.14	67756.22
	<b>460848.04</b>	<b>407578.21</b>

\* Includes deferred debts Rs. 154118.02 lakhs  
(Previous year Rs.146894.43 lakhs)





## SCHEDULE 9

### LOANS AND ADVANCES

[illegible]



## SCHEDULE 10 CURRENT LIABILITIES

	AS AT 31.3.2004	(Rs. in lakhs) AS AT 31.3.2003
Acceptances	2301.87	1718.98
Sundry Creditors		
-Total outstanding dues of SSI under-takings (incl. interest)	9247.99	7098.27
-Other Sundry Creditors	<u>164549.10</u>	<u>149239.64</u>
Advances received from customers	313302.70	180156.15
Deposits from Contractors	6844.02	5839.39
Investor Education & Protection Fund shall be credited by the following amount:		
-Unclaimed dividend*	71.45	39.39
Other liabilities	21661.40	23829.83
Interest accrued but not due	1712.54	1709.27
	<u><b>519691.07</b></u>	<u><b>369630.92</b></u>

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

## SCHEDULE 11 PROVISIONS

Provision for Taxation (Net of Income Tax payments Rs. 106354.87 lakhs, Previous year Rs. 62505.63 lakhs)	12819.72	10237.90
Dividend	7342.80	9790.40
Corporate Dividend Tax (Incl. Education Cess)	959.61	1254.40
Contractual Obligation	40491.12	44331.21
Retirement benefits	34398.68	25015.58
Others	17982.33	15032.38
	<u><b>113994.26</b></u>	<u><b>105661.87</b></u>

## SCHEDULE 12 MISCELLANEOUS EXPENDITURE

(to the extent not written off or adjusted)  
Lump sum payment under Voluntary Retirement Scheme

1792.06	9550.25
<u><b>1792.06</b></u>	<u><b>9550.25</b></u>

### SCHEDULE 13 A TURNOVER (Gross)

	For the year ended 31.3.2004	(Rs. in lakhs) For the year ended 31.3.2003
Sales less returns (incl. Despatches made to customers Rs 355376.78 lakhs (Previous year Rs. 315518.76 lakhs))	757660.91	657050.95
Income from external erection & other services	102091.72	87025.10
Revenue from Works Contract	6494.35	4145.94
	<b>866246.98</b>	<b>748221.99</b>

### SCHEDULE 13 B OTHER OPERATIONAL INCOME

Export Incentives	10904.08		14700.29
Rental income on leased assets	8608.35	8717.83	
Lease equalisation account	-542.97	-78.31	8639.52
Scrap	6156.38		5399.69
Receipt from sale/transfer of surplus stock	137.07		60.89
Others	6007.53		4568.78
	<b>31270.44</b>		<b>33369.17</b>

### SCHEDULE 13 C OTHER INCOME

Profit from sale of fixed assets	236.65	351.32
Dividend on Investment (Long term-Trade) [(TDS Rs. Nil (Previous year Rs 146.19 lakhs)	654.50	1392.30
Others (including grants of Rs. 2.00 lakhs (previous year Rs. 7.58 lakhs) from Government of India for Research & Development Projects)	11019.92	7472.79
	<b>11911.07</b>	<b>9216.41</b>

### SCHEDULE 13 D INTEREST INCOME\*

From customers	52.10	274.12
From employees	60.54	146.34
From banks	6154.23	1587.03
From Investments (Current- Other than trade)	263.64	
Others	1564.62	3381.45
*(TDS Rs. 1175.53 lakhs (prev year Rs. 339.86 lakhs)	<b>8095.13</b>	<b>5388.94</b>



## SCHEDULE 14 ACCRETION/(DECRETION) TO WORK-IN- PROGRESS & FINISHED GOODS

	(Rs. in lakhs)	
	For the year ended 31.3.2004	For the year ended 31.3.2003
Work -in -progress		
Closing Balance	94396.14	93757.82
Opening Balance	<u>93757.82</u>	<u>107343.21</u>
	638.32	-13585.39
Finished Goods		
Closing Balance	19051.84	22846.26
Opening Balance	<u>22846.26</u>	<u>14523.68</u>
	-3794.42	8322.58
Inter-division transfer in transit	93.50	562.87
	<u><b>-3062.60</b></u>	<u><b>-4699.94</b></u>

## SCHEDULE 15 EMPLOYEES REMUNERATION & BENEFITS

Salaries, Wages, Bonus, Allowances & other benefits	120443.03	114989.61
Contribution to gratuity fund	12193.27	9770.00
Contribution to Provident and other funds	10208.04	10003.43
Group Insurance	156.91	213.25
Staff Welfare Expenses	20949.66	15475.40
	<u><b>163950.91</b></u>	<u><b>150451.69</b></u>

### Directors (including Chairman & Managing Director)\*

-Salaries & Allowances	33.23	29.95
-CPF	3.65	3.42
-Contribution to gratuity Fund	3.78	3.56
-Others	38.00	7.19

\*The above amount includes leave encashment on payment basis and excludes group insurance premium.

### Notes:

The Chairman & Managing Director & 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. 0.81 lakhs (previous year Rs. 0.86 lakhs)

**SCHEDULE 16**  
**OTHER EXPENSES OF MANUFACTURE,**  
**ADMINISTRATION, SELLING & DISTRIBUTION**

	For the year ended 31.3.2004	(Rs. in lakhs) For the year ended 31.3.2003
Resident Consultant's Charges	108.30	346.43
Royalty,technical documentation & other consultancy charges	1498.69	2196.65
Rent(includes Rs. 2253.58 lakhs for residential rent- Previous year Rs. 2202.42 lakhs)	3048.55	3032.07
Excise Duty	21300.04	17656.99
Power & Fuel	19680.71	19200.96
Rates & Taxes	2683.61	1492.01
Insurance	3009.31	2931.22
Repairs:		
Buildings	1475.07	1155.42
Plant & Machinery	1285.14	984.15
Others	3997.43	3172.79
Other expenses in connection with exports	464.08	973.48
Bad debts and amount written off	1598.43	2118.97
Investment written off (long term)	3.46	1.52
Carriage outward	7897.38	8188.87
Travelling & conveyance	11001.70	10444.99
Miscellaneous Expenses	21188.35	21388.22
Cash discount	0.44	53.09
Liquidated damages charged off	8080.11	4027.42
Donations	5.64	0.58
Village development & social expenses	37.71	7.06
	<b>108364.15</b>	<b>99372.89</b>

**Notes:**

Repairs do not include expenditure on departmental maintenance which are as under:

Plant & Machinery	8461.51	7649.22
Buildings	2037.01	1837.35
Others	1467.67	1350.23
	<b>11966.19</b>	<b>10836.80</b>
Agency Commission on exports included in expenses in connection with exports	153.17	1167.57
Expenditure on research & development	9002.17	7324.14



## SCHEDULE 16 (Contd.)

	For the year ended 31.3.2004	(Rs. in lakhs) For the year ended 31.3.2003
Payment to Auditors		
----Fees (includes Rs. 0.56 lakhs (Previous year Rs.1.19 lakhs) to auditors abroad)	19.40	18.15
----Expenses	10.12	17.31
----Income tax matters (includes Rs. 1.36 lakhs (Previous year Rs.0.64 lakhs) to auditors abroad)	6.17	4.07
----Certification work (includes Rs. Nil (Previous year Rs.0.03 lakhs) to auditors abroad)	10.30	2.61
----Other Professional services (includes Rs.Nil (Previous year Rs.0.41 lakhs) to auditors abroad)	0.07	0.53
Payment to Cost Auditors	0.95	0.68
*Expenditure on entertainment	404.98	350.95
*Expenditure on foreign travel (for 541 tours (previous year 562 tours))	898.85	637.75
Expenditure on Publicity and Public relations		
Salaries allowances & other benefits	392.41	348.23
Other expenses	513.69	530.25
Directors' Fees	4.20	3.65
*As certified by the management		

## SCHEDULE 17 INTEREST AND OTHER BORROWING COSTS

Interest on :		
Bonds	4425.00	4425.00
Banks/financial Institutions borrowings	119.83	415.37
Others	1462.13	972.96
Other Borrowing Costs	1.09	1.71
	6008.05	5815.04
Less: Borrowing Cost capitalised		337.02
	<b>6008.05</b>	<b>5478.02</b>

## SCHEDULE 18 PROVISIONS

Doubtful debts, Liquidated Damages and Loans & Advances			
-Created during the year	27872.31	21944.64	
-Less written back during the year	22749.09	15509.67	6434.97
Contractual Obligations			
-Created during the year	10510.52	14361.82	
-Less written back during the year	14291.52	9005.03	5356.79
Others			
-Created during the year*	5403.03	5650.57	
-Less written back during the year	4660.83	8363.38	-2712.81
	<b>2084.42</b>		<b>9078.95</b>

\*Includes Rs. 131 lakh (Previous year Rs. Nil) towards diminution in the value of long term investment



## SCHEDULE 18A EXTRA-ORDINARY ITEMS

	For the year ended 31.3.2004	(Rs. in lakhs) For the year ended 31.3.2003
<b>Expenditure</b>		
Amortisation of Lump sum payment under Voluntary Retirement Scheme	22981.24	15378.61
	<b>22981.24</b>	<b>15378.61</b>

## SCHEDULE 18B PRIOR PERIOD ITEMS

### INCOME

Turnover	-800.08		181.96
Other Operational income			49.30
Other Income	41.69		14.28
Accretion to work in progress and finished goods			46.00
Interest	-52.75	-811.14	291.54

### EXPENDITURE

Consumption of Raw material & components	14.24		-69.31
Employees' Remuneration and benefits	40.61		1228.79
Depreciation	4.21		-2.31
Payment to Sub-contractors	9.51		68.09
Interest	1.12		-30.74
Other expenses	394.01	463.70	77.62
			1272.14
Prior period adjustments (Net)		<b>-1274.84</b>	<b>-980.60</b>

## SCHEDULE 18C PROVISION FOR TAXATION

For Current Year			
-Current Tax	44004.87		34204.76
(incl. wealth tax Rs. 4.87 lakhs (Previous year Rs. 4.76 lakhs))			
-Deferred Tax	-9112.36	34892.51	-5048.57
For earlier years			
-Tax	767.61		11865.15
-Deferred Tax		767.61	-5229.15
		<b>35660.12</b>	<b>35792.19</b>



## SCHEDULE – 19

### NOTES TO ACCOUNTS

1. Estimated amount of contracts, net of advances, remaining to be executed on capital account and not provided for is Rs. 3731.08 lakhs (previous year Rs. 9405.38 lakhs) including Rs. 10.21 Lakhs (previous year NIL) for acquisition of intangible assets.
2. Land and buildings include :
  - a) 13938.660 acres of land (previous year 15126.667 acres), 52 flats (previous year 52 flats) and one building (previous year one building) for which formal transfer/lease deeds have not been executed including for 101.520 acres of land (previous year 101.520 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.
  - b) 79.936 acres of land (previous year 94.936 acres) leased to Ministry of Defence, Government Departments and others.
  - c) 180 acres of land including 100 acres given on licence valid upto 30<sup>th</sup> November, 1990 (previous year 180 acres and 100 acres respectively) being used by the Ministry of Defence and for which further approval of the competent authority for continuance of licensing of this land is awaited.
  - d) 159.507 acres (previous year 209.507 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 :

(Rs. in lakhs)

	2003-2004	2002-2003
100% depreciation on assets upto Rs.10,000/- charged off in the accounting year	354.61	446.35
Normal depreciation on above	127.73	157.79
Excess amount charged off	226.88	288.56

4. Sales and despatches to customers :
  - (a) Includes Rs. 17544.90 lakhs (previous year Rs. 9083.64 lakhs) based on provisional prices.
  - (b) Includes Rs. 23390.65 lakhs (previous year Rs. 20468.77 lakhs) 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. 5404.60 lakhs (previous year Rs. 1873.12 lakhs) held on behalf of customers at their request for which payment has been received by the Company; and
  - (d) Excludes Rs. 1216.56 lakhs (previous year Rs. 612.97 lakhs) 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. 15646.18 lakhs (previous year Rs. 15659.10 lakhs).
    - (ii) Sales Tax demands Rs. 33264.13 lakhs (previous year Rs. 32405.05 lakhs) against which Rs. 7346.72 lakhs (previous year Rs. 7938.64 lakhs) has been paid under protest/court orders and included under the head advances recoverable.

- (iii) Excise Duty demands Rs. 19301.27 lakhs (previous year Rs. 25443.16 lakhs), against which Rs. 1284.58 lakhs (previous year Rs. 1474.07 lakhs) has been paid under protest/court orders and included under the head advances recoverable.
  - (iv) Customs Duty demands Rs.Nil (previous year Rs. 5.82 lakhs).
  - (v) Court / Arbitration cases Rs. 9271.17 lakhs (previous year Rs. 8146.85 lakhs)
  - (vi) Liquidated Damages Rs.4355.21 lakhs (previous year Rs. 4996.05 lakhs).
  - (vii) Counter claim by contractors Rs. 4108.25 lakhs (previous year Rs. 4156.63 lakhs).
  - (viii) Others Rs. 1329.42 lakhs (previous year Rs. 1588.70 lakhs).
  - (b) Bills discounted under IDBI scheme outstanding at the close of the year amounting to Rs. 3498.27 lakhs (previous year Rs. 20336.25 lakhs).
  - (c) Bank Guarantees outstanding at the close of the year amounting to Rs. 377961.28 lakhs (previous year Rs. 274464.62 lakhs).
  - (d) Corporate Guarantees issued on behalf of joint ventures outstanding at the close of the year amounting to Rs. 4169.08 lakhs (previous year Rs. 3220.00 lakhs).
6. Cash Credit limit from banks aggregating Rs.40000 lakhs (previous year Rs.75000 lakhs) , company's bill discounting limit in respect of IDBI Scheme aggregating to Rs 20000 lakhs (previous year Rs 20000 lakhs) and company's counter guarantee/ indemnity obligations in regard to banks guarantee / letter of credit limits aggregating to Rs.850000 lakhs (previous year Rs.750000 lakhs) sanctioned by consortium of 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.
7. 8.85% Non convertible,secured,redeemable taxable Long Term Bonds of face value of Rs. 1 crore each amounting to Rs. 500 crores were issued on 15.11.2001 for a period of 7 years with put/call option at the end of 5 years. These are secured by way of a legal mortgage and charge in favour of trustees on the immovable properties of the company situated at Apartment No. A/T –1 on 3<sup>rd</sup> floor in Shrikrishna Apartments,Nr. Gowan Square,Nagpur,by equitable mortgage by deposit of title deeds in respect of the Company's immovable properties situated at Haridwar and Ramachandrapuram, Hyderabad Units and by hypothecation of the whole of the movable properties of the company of these units including its movable plant & machinery,machinery spares,tools and accessories and other movables,both present and future (except specific assets on which exclusive first charge had already been created and book debts).
8. (a) The Company has filed an appeal in Income Tax Appellate Tribunal contesting the non-acceptance of claim of normal and extra ordinary exchange variation loss of Rs. 37745.00 lakhs (previous year Rs.37745.00 lakhs) on accrual basis relating to the assessment year 1992-93. The demand of Rs. 24974.61 lakhs (previous year Rs.24974.61 lakhs) raised by the income tax department in respect of the said income tax liability has been adjusted by the income tax department against the refunds due to the company and the same is shown as "other deposits" in Schedule 9–Loans and Advances in the balance sheet. Based on the legal decisions, as the demand is likely to be deleted, the same to the extent unprovided is included as contingent liability as in the past in para 5(a)(i) above.
- (b) The assessing officer reduced the amount of interest waived earlier and raised a demand of Rs.1425.07 lakhs for assessment year 1992-93 which had been partly recovered to the extent of Rs.1304.00 lakhs by adjusting the refund due to the company. The company has been legally advised that the demand is based on incorrect interpretation of earlier order of Commissioner of Income Tax granting the waiver and is also time barred. Based on expert advise, no provision has been made for the demand. Further, the company is taking necessary steps to get the demand quashed.



9. Amorphous Silicon Solar Cell Plant (ASSCP), Gurgaon was taken from Ministry of Non-conventional Energy Sources on lease for a period of 30 years. The lease agreement with the Government is yet to be finalised.
10. Other liabilities include a sum of Rs.10051.51 lakhs (previous year Rs. 10051.51 lakhs) 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. Liability due to small scale industrial undertakings shown in Schedule-10 has been determined from database maintained at units/divisions of the company, and updated to the extent responses received from such undertakings as to their SSI status. Name of SSIs to whom company owes sum for more than 30 days are included in Annexure.
12. The details of lumpsum amount paid under Voluntary Retirement Schemes 2000-2001, 2001-2002 and 2003-04 by the company and charging off of the same as per Accounting Policy No.8 is as follows:

(Rs. in Lakhs)

	Total lumpsum amount paid	Charged off upto 2002-2003	Charged off in 2003-2004	Balance amount deferred
	(a)	(b)	(c)	(d)
VRS 2000-2001				
–paid in 2000-2001	4833.84	4431.02	402.82	
–Spillover paid in 2001-2002	561.43	374.29	187.14	
VRS 2001-2002				
–Paid in 2001-2002	21503.55	12543.73	7167.85	1791.97 *
–Paid in 2002-2003	1.11	0.65	0.37	0.09 **
VRS 2003-2004				
–Paid in 2003-2004	15223.06		15223.06	***
Total	42122.99	17349.69	22981.24	1792.06

\* after charging off 1/4th of the total lumpsum amount in 2001-2002, 1/3rd in 2002-2003 and 1/3rd in 2003-04. Balance will be charged to revenue in 2004-05.

\*\* after charging off 7/12th of the total lumpsum amount in 2002-2003 and 1/3rd of the total lumpsum amount in 2003-2004. Balance will be charged to revenue in 2004-2005.

\*\*\* From 2003-04, Lump sum payment is being charged off in the same year.

13. The amount of exchange differences adjusted in the carrying amount of fixed assets during the accounting period is Rs. 34.77 lakhs (Previous year Rs. 94.33 lakhs).
14. 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):

S/Shri K G Ramachandran, Ishan Shankar, H W Bhatnagar, R C Aggarwal,  
C Srinivasan, Virendra Kumar, Ramji Rai, and S K Jain

iii) Details of transactions:

(Rs. in lakhs)

Particulars	Joint Ventures		Key Management Personnel(KMP)		Relatives of KMP	
	2003-04	2002-03	2003-04	2002-03	2003-04	2002-03
Purchase of Goods and Services	280.42	958.00				
Sales of Goods and services	595.07	983.45				
Rendering of Services	69.01					
Receiving of Services	524.85					
Dividend income	654.50	1392.30				
Royalty income	31.16	87.94				
Amounts due to BHEL at end of the year	251.48	328.58	0.50	0.57		
Amounts due from BHEL at end of the year	289.20	508.38				
Provision for Doubtful debts	14.82	12.65				
Guarantees given on behalf of	4369.08	3220.00				
Payment of Salaries			78.86	44.12		
Loans/Advances given			0.16	0.28		

15. Lease:

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

(Rs. in lakhs)

		As on 31-3-2004	As on 31-3-2003
a.	Outstanding balance of Minimum Lease payments		
	–not later than one year	1489.16	1215.14
	–later than one year and not later than five years	3059.60	2466.66
	–later than five years	0.23	0.00
	Total minimum lease payments at the balance sheet date	4548.99	3681.80
b.	Present Value of (a) above		
	–not later than one year	1055.07	856.04
	–later than one year and not later than five years	2524.57	1849.96
	–later than five years	0.22	0.00
	Total minimum lease payments at the balance sheet date	3579.86	2706.00
c.	Finance charges	969.13	975.80

b. The company is in the practice of taking Office & Other Equipment, houses for employees, office buildings and EDP equipment on operating lease both as cancellable and non-cancellable.



c. The future minimum lease payments under non-cancellable operating lease as on 31.3.2004 is :

(Rs. in Lakhs)

– not later than one year	133.96
– later than one year and not later than five years	268.27
– later than five years	3.51

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

(Rs. in lakhs)

<b>Assets</b>	<b>Cost of Assets</b>		<b>Rentals payable over unexpired period of lease</b>	
	<b>2003-2004</b>	<b>2002-2003</b>	<b>2003-2004</b>	<b>2002-2003</b>
Computers & Peripherals	6678.19	7824.99	679.71	1756.13
Land & Buildings	6.05	22.25	1.73	1.96
Office equipments	657.72	933.47	126.33	298.28
Others		11.78		
<b>TOTAL</b>	<b>7341.96</b>	<b>8792.49</b>	<b>807.77</b>	<b>2056.37</b>

16 While calculating the Earning per Share:

- the amount used as numerator in calculating the basic and diluted earning per share is the net profit of Rs. 65815.16 Lakhs (previous year Rs 44451.27 Lakhs) and for calculating the basic and diluted earning per share is the profit before extraordinary items is Rs. 88796.40 Lakhs (previous year Rs 59829.88 Lakhs) as given in the Profit & Loss Account;
- The weighted average number of equity shares used as the denominator in calculating both basic and diluted earnings per share is 2447.60 lakhs.
- Nominal value of share is Rs. 10/-.

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

(Rs. in lakhs)

	As on 31.3.2004	As on 31.3.2003
<b>Deferred Tax Assets</b>		
Provisions	47612.55	47289.14
Deferred Revenue Expenditure of Voluntary Retirement Schemes	7925.50	3389.09
Statutory dues	6556.95	2344.41
Modvat Adjustments	239.72	384.07
Others	1791.60	1791.59
	<b>64126.32</b>	<b>55198.30</b>
<b>Deferred Tax Liabilities</b>		
Depreciation	14274.44	14458.78
<b>Net Deferred Tax Assets</b>	<b>49851.88</b>	<b>40739.52</b>

# 18. SEGMENT INFORMATION

(Rs. in lakhs)

## A. PRIMARY SEGMENT - BUSINESS SEGMENTS

### I. SEGMENT REVENUE

Segment Revenue  
Inter-Segment Revenue  
(considered above)  
Operating Revenue (External)  
(net of Inter Segment Revenue)

For the year ended 31.3.2004			For the year ended 31.3.2003		
Power	Industry	Total	Power	Industry	Total
600941.03	298057.15	898998.18	539447.14	253539.25	792986.39
2482.00	19365.12	21847.12	810.00	29254.11	30064.11
598459.03	278692.03	877151.06	538637.14	224285.14	762922.28

### II. SEGMENT RESULTS

a. Segment Results  
b. Unallocated Expenses (Net of income)  
c. Profit before Interest, DRE & Incometax (a) - (b)  
d. Interest  
e. Deferred Revenue Expenditure Written Off  
f. Net Profit before Income Tax (c) - (d) - (e)  
g. Income Tax  
h. Net Profit after Income Tax

137941.44	28604.63	166546.07	127373.21	23180.12	150553.33
		36081.50			49453.24
		130464.57			101100.09
		6008.05			5478.02
		22981.24			15378.61
		101475.28			80243.46
		35660.12			35792.19
		65815.16			44451.27

### III. ASSETS & LIABILITIES

a. Segment Assets  
b. Unallocated Assets  
c. Total Assets  
d. Segment Liabilities  
e. Unallocated Liabilities  
f. Total Liabilities

517339.40	299931.67	817271.07	475354.44	264159.63	739514.07
		398218.83			260017.74
		1215489.90			999531.81
435210.03	159653.07	594863.10	304097.66	116756.98	420854.64
		84522.45			107860.41
		679385.55			528715.05

### IV. OTHER INFORMATION

a. Cost incurred during the period to  
acquire fixed assets  
b. Depreciation  
c. Non Cash Expenses (other than depreciation)

11393.44	3174.42	15432.39	1645.27
9028.58	5498.08	7553.69	5550.62
8287.24	3066.14	15709.22	4425.96

## B. SECONDARY SEGMENT - GEOGRAPHICAL SEGMENTS

	Within India	Outside India	Total	Within India	Outside India	Total
1 Net Sales / Income from Operations	830218.06	46933.00	877151.06	717521.39	45400.89	762922.28
2 Total Assets	1192333.60	23156.30	1215489.90	977088.99	22442.82	999531.81
3 Cost incurred during the period to acquire Fixed Assets	17241.49	0.60	17242.09	18654.64	132.37	18787.01

### Notes :

- 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.
- Power Sector includes products and services relating to various power generation sets and its auxiliaries.
- Industry sector includes products and services relating to transportation and transmission, electric machines, industrial sets and DG sets, telecommunications and other industrial products and systems.
- Inter segment transfers have been carried out at mutually agreed prices.





19. Disclosures relating to Joint ventures are as follows:

- a) Names of joint ventures
- |  | Country of Incorporation | Proportion of Ownership |
|--|--------------------------|-------------------------|
| Powerplant Performance Improvement Ltd | India}                   | One share less than     |
| BHEL-GE Gas Turbine Services Pvt Ltd   | India}                   | 50%                     |
- b) (i) company's share of the contingent liabilities of the joint ventures themselves is Rs.212.72 lakhs (previous year Rs. 222.96 lakhs)
- (ii) company's share of the capital commitments of the joint ventures themselves is Rs.5.88 lakhs (previous year Rs. 4.15 lakhs)
- (iii) Guarantees given on behalf of joint ventures is Rs.4369.08 lakhs (previous year Rs.3220.00 lakhs)
- (iv) Aggregate amount of company's interests in the joint ventures as per accounts for the year ending 31.3.2004 :

(Rs. in lakhs)

	2003-2004	2002-2003
Fixed Assets	475.66	506.85
Net Current Assets	1219.10	622.10
Misc Expenditure (not written off)	2.68	5.06
Secured loans	83.96	119.05
Deferred Tax Liability	43.28	37.36
Shareholders Funds	1570.18	977.58
Income	13227.23	11676.80
Expenses	11362.00	9868.09

- (v) Information for 2003-04 is based on the unaudited accounts of the Joint Ventures
20. The company invested a sum of Rs. 500 lakhs towards equity shares of Rs. 10/- each (at par) in Konark Metcoke Ltd. (KMCL) Bhubaneswar, to secure orders for equipment being supplied by the company to Konark Metcoke Ltd. (KMCL) and Neelachal Ispat Nigam Ltd. (NINL). Government approval of investment in equity shares of KMCL is awaited. The equity participation in KMCL and NINL is restricted to 7.5% of the value of the orders received from the above companies with a maximum of Rs. 1732 lakhs.
21. (i) The company has revised its accounting policies of revenue recognition, inventory valuation & provision for warranties relating to accounting of Construction contracts in line with Accounting Standard -7 - Construction contracts (Revised). The effect on Profit before tax due to this change is decrease of Rs. 5689.88 lakhs.
- (ii) The company has revised its accounting policy relating to accounting of intangible assets in line with Accounting Standard -26 -Intangible assets. The effect on Profit before tax due to this change is increase of Rs. 1075.84 lakhs.
- (iii) The company has revised its accounting policy relating to amortization of lump sum payment made under Voluntary Retirement Scheme. The effect on Profit before tax due to this change is decrease of Rs. 11417.30 lakhs.
- (iv) The company has revised its accounting practice relating to creation of provision for non moving inventory to make it more objective. The effect on Profit before tax due to this change is decrease of Rs. 1501.49 Lakhs.
- (v) The company has modified the actuarial valuation method used for calculating retirement benefits in accordance with Guidance Note 12 of Actuarial Society of India . The effect on Profit before tax due to this change is decrease of Rs 12129.48 Lakhs.

22. Service Tax relating to Commissioning and Installation including insurance of equipments transported for commissioning and installation have been accounted in accordance with opinion obtained from legal expert and in line with Tribunal judgements; the same will be reviewed as and when clarifications/claims are received from tax authorities. Further, any claims due on this account, under normal contract terms and as confirmed by legal opinion, are recoverable from the customers; hence in the opinion of management this will not have any material impact on the profits of the company.
23. The disclosures relating to Construction Contract received on or after 01.04.2003 as per the requirement of Accounting Standard -7(Revised) are as follows:

	Rs. In lakhs
Contract revenue recognized as per revised AS-7	36305.93
In respect of Contract in progress as on 31.03.2004:	
– Cost incurred and recognised profits (less recognized losses)	39610.69
– Amount of advance received	40106.34
– Amount of retentions (deferred debts)	9563.91
In respect of dues from customers after appropriate netting off	
– Gross amount due from customer for the contract work as an asset	2476.56
– Gross amount due to customer for the contract work as a liability	9500.92
– Contingencies	—

24. Responses to confirmation of outstanding balances and stocks held by sub-contractors/ fabricators were received only in a few cases, some of them seeking details.
25. The Annual Accounts adopted by the Board on 8<sup>th</sup> June, 2004 and reported upon by the auditors on 9<sup>th</sup> June, 2004 have been revised to incorporate the provision for dividend proposed by the Board on 5<sup>th</sup> August, 2004 and applicable taxes thereon.
26. Previous year's figures have been regrouped/reclassified wherever practicable to conform to current year's presentation.



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

### A. Sales, Opening Stocks & Closing Stocks

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
<b>BHOPAL</b>							
<b>SWITCHGEAR, CONTROLGEAR, RECTIFIER, CAPACITORS</b>							
Switchgear-11 kv to 220 kv high speed air blast circuit breakers	Nos	2125.00 (3227.00)	7020.12 (5360.36)	0.00 (71.00)	40.77 (116.24)	140.00 (0.00)	251.98 (40.77)
Control Panels	Nos	342.00 (465.00)	1168.06 (1444.77)	4.00 (2.00)	5.30 (6.24)	6.00 (4.00)	3.50 (5.30)
Industrial controlgear	Nos		557.98 (6.00) (725.43)	0.00 (0.31)			
Traction controlgear for AC, DC & diesel system	Set	175.00 (143.00)	6404.24 (5061.89)	0.00	0.00		205.59
Rectifiers with Electronics	Nos	380.00 (345.00)	15263.47 (4862.24)	0.00	0.00	5.00	15.50
Capacitors	MVAR	2520.00 (2656.00)	1954.08 (1533.38)	144.00 (558.00)	92.42 (289.49)	125.00 (144.00)	185.71 (92.42)
Bushings			828.76 (644.26)	0.00	11.42 0.00		(11.42)
<b>TRANSFORMERS</b>							
Power transformers (upto 400 kv)	MVA/Nos	9202/63 (8827/58)	14503.40 (12321.55)	945/5 (727/9)	1634.22 (775.70)	995/7 (945/5)	1017.72 (1634.22)
Instrument, welding, transformers and reactors	MVA/Nos	0/368 (0/560)	874.04 (1082.37)	0/41 (0/61)	52.78 (55.25)	0/130 (0/41)	168.09 (52.78)
<b>INDUSTRIAL AND TRACTION MACHINES</b>							
Traction Motors for AC,DC & diesel system,main/auxiliary generators	Nos	1719.00 (2952.00)	24921.77 (25493.05)	68.00 (64.00)	641.97 (333.28)	9.00 (68.00)	49.74 (641.97)
Industrial machines, AC motors upto 1000 HP, DC motors & generators of all types	Nos	297.00 (419.00)	3977.76 (5214.12)	0.00	0.00	31.00	267.00
-							
<b>HEAVY ROTATING PLANT &amp; TURBINES</b>							
Large electrical machines above 1000 HP	Nos	109.00 (102.00)	6732.03 (5519.99)	1.00 (1.00)	56.41 (22.70)	6.00 (1.00)	255.36 (56.41)
Water wheel alternators & water turbines & Mini micro turbines & generators	Nos/ MW	8/700 13/955	20390.03 17635.18	0.00	0.00	0.00	49.89 160.46
		(8/T) (1330.00)	(21962.85)	(0.00)	(1142.79)	(0.00)	(0.00)
		(7/G) (1055.00)	(15364.58)	(0.00)	(391.60)		

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

**A. Sales, Opening Stocks & Closing Stocks**

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
Turbo Alternators & Steam turbines & Heat Exchangers	Nos	4.00	6662.05				
	6 H.Ex		3074.22				10.80
			(6982.52)		(162.14)		
			(0.00)		(179.13)		
	(14 H.Ex)		(3271.13)		(0.00)		
Others			5256.31				2.69
			(6862.43)		0.00		
	<b>TOTAL</b>		<b>137223.50</b>		<b>2535.29</b>		<b>2644.03</b>
<b><u>JHANSI</u></b>							
Power transformers and special transformers	Nos	70.00	10085.65	2.00	249.51		
		(89.00)	(9596.84)	0.00	0.00	(2.00)	(249.51)
ESP Transformer	Nos	198.00	1679.53				
		(176.00)	(1505.10)				
ACEMU Transformer	Nos						
		(2.00)	(16.97)				
Freight Loco transformers	Nos	29.00	884.24				
		(32.00)	(735.06)				
Instrument transformers	Nos	1007.00	1498.07	83.00	69.18	7.00	7.10
		(1200.00)	(1260.38)	(2.00)	(1.78)	(83.00)	(69.18)
Bus Duct	Nos/Set		3061.37		19.30		
			(1596.04)		(49.56)		(19.30)
Dry Type Transformer	Nos.	50.00	749.06	8.00	16.02	20.00	147.19
		(65.00)	(732.73)	(15.00)	(66.04)	(8.00)	(16.02)
Diesel Shunters	Nos	0.00	27.58				
		(8.00)	(1391.37)				
Others/Misc.	Nos		1344.38		1.35		33.40
			(856.68)		(11.74)		(1.35)
	<b>TOTAL</b>		<b>19329.88</b>		<b>355.36</b>		<b>187.69</b>
<b><u>HEEP, HARIDWAR</u></b>							
Electrical Machines	MW/Nos	90/76	2505.76	15/44	535.77	15/26	442.56
		(109/104)	(2710.89)	(13/45)	(531.27)	(15/44)	(535.77)
Industrial controls panels	Nos.	12.00	21.90	3.00	19.24	9.00	31.67
			0.00	(15.00)	(44.65)	(3.00)	(19.24)
Turbo Sets	MW/Nos	1710/5	56459.24		205.79		1357.25
		(1945/5)	(55890.89)		(435.84)		(205.79)
Hydro sets	MW/Nos	236/4	7821.07				209.38
		(42/1)	(2680.69)		(5.94)		



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

### A. Sales, Opening Stocks & Closing Stocks

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
Super Rapid Gun Mount	Nos.	2.00 (2.00)	3420.19 (3430.32)		89.15 (89.15)		89.25 (89.15)
Others			24786.30 (17237.35)		81.04 (193.62)		472.99 (81.04)
<b>TOTAL</b>			<b>95014.46</b>		<b>930.99</b>		<b>2603.10</b>
<b>CFFP, HARIDWAR</b>							
Steel Castings	MT	132.64 (154.02)	148.17 (172.10)	53.52 (2.09)	7.60 (3.62)	28.43 (53.52)	79.20 (7.60)
Steel forgings	MT	94.96 (134.01)	195.36 (340.03)	14.46 (24.62)	25.29 (50.90)	(14.46)	(25.29)
NF Casting	MT			0.00 (2.080)	0.00 (3.43)	0.21	0.53
<b>TOTAL</b>			<b>343.53</b>		<b>32.89</b>		<b>79.73</b>
<b>BOILER PLANT &amp; SSTP TRICHY</b>							
Boilers	MT +	149948.00 +(142481)	175654.12 (157812.93)	1294.00 (2569.00)	1016.24 (1177.45)	1749.00 (1294.00)	2341.19 (1016.24)
Valves	Nos *	20500.00 (34108.00)	10485.43 (11736.88)	969.00 (2658.00)	215.73 (123.05)	1441.00@ (969.00)@	402.75 (215.73)
Income from testing & other services			6162.83 (7109.42)				
Seamless steel tubes	MT	2048.00 (2322.00)	852.23 (1002.25)	4.00 ** (21.00)	1.66 ** (12.78)	7.00 ** (4.00)	2.93* (1.66)
<b>TOTAL</b>			<b>193154.61</b>		<b>1233.63</b>		<b>2746.87</b>
<b>BAP, RANIPET</b>							
Boiler auxiliaries	MT	8077.00 (6757.00)	5771.14 (4485.39)	2108.00 (3221.00)	741.84 (1063.67)	2008.00 (2108.00)	1100.15 (741.84)
Wind Mill	MT		31.27 (25.27)				
Income from testing & other services			256.33 (176.67)				
Income from external erection & other services			398.01 (628.48)				
<b>TOTAL</b>			<b>6456.75</b>		<b>741.84</b>		<b>1100.15</b>
<b>HYDERABAD</b>							
60 MW Sets	MW		3880.89				
110/120 MW Sets	MW	1+P (1+P)	556.07 (4746.67)	(1P)	(297.70)		

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

### A. Sales, Opening Stocks & Closing Stocks

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
Small & Medium Sets	MW	7+P (18+P)	18576.09 (21090.60)	1P	374.29 (762.93)	2+P (1P)	525.93 (374.29)
Pumps and heaters	Nos	2+P (5+P)	12082.99 (12402.13)	1P (1P)	12.66 (105.88)	7P (1P)	468.84 (12.66)
Compressors	Nos	4+P (1+P)	23353.25 (3600.31)			1P	368.45
Oil Rigs			6015.06				
Gas Turbine	Nos	3+P (8+P)	30097.55 (29746.34)	3P (1P)	14234.82 (2952.33)	1+P (3P)	5586.66 (14234.82)
Aux.Prodn.Breakers	Nos		1995.53 (97.00)	48 (56.00)	406.95 (280.75)	33 (48.00)	176.60 (406.95)
Bowl Mills		3+P (43+P)	16801.03 (15567.24)				345.71
Heat Exchangers		4+P	200.97 0.00			P	491.35
Erection Income			492.92 (455.56)				
Castings			936.92 (704.51)		291.10 (209.11)		315.92 (291.10)
Others (serv.)			5630.65 (8574.19)				
Breakers Spares			632.16 (425.05)				
Spares Other than breakers			20494.35 (24590.37)		(60.51)		
<b>TOTAL</b>			<b>141746.43</b>		<b>15319.82</b>		<b>8279.46</b>
<b>INDUSTRIAL SYSTEMS GROUP</b>							
Control panels		5.00 (298.00)	103.70 (421.11)				
Motors & spares		36.00 (9.00)	5.93 (9.45)				
Other Equipments			8286.61 (599.00)				
Other services			2656.85 (523.03)				
<b>TOTAL</b>			<b>11053.09</b>		<b>0.00</b>		<b>0.00</b>
<b>ELECTRONICS DIVISION</b>							
Energy meters a/ Single Phase	Nos	211850.00 (341668.00)	1325.28 (2266.98)	2076.00 (26847.00)	13.60 (180.19)	13969.00 (2076.00)	79.19 (13.60)



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

### A. Sales, Opening Stocks & Closing Stocks

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
b/ Poly Phase	Nos	68144.00 (125240.00)	980.69 (1733.97)	7946.00 (32678.00)	76.37 (467.78)	368.00 (7946.00)	3.73 (76.37)
Capacitors-Electrolytic	Nos			7674.00 (7674.00)	0.00 0.00	7674.00 (7674.00)	0.00 0.00
Power devices	Nos	2096.00 (2561.00)	119.29 (135.54)	530.00 (781.00)	16.08 (25.90)	34.00 (530.00)	2.36 (16.08)
Photovoltaics	KWs	1077.00 (989.00)	3796.83 (2014.93)	66.00 (154.00)	437.73 (401.28)	9.00 (66.00)	12.38 (437.73)
Telecommunications	Lines	28445.00 (110971.00)	643.78 (3251.38)				
Simulators (Defence Electronics)	Sets	55.00 (86.00)	131.68 (1060.13)				
Control Equipments	Cubicles	1072.00 (997.00)	35402.21 (26220.73)	2.00 (7.00)	223.11 (12.13)	(2.00)	(223.11)
	<b>TOTAL</b>		<b>42399.76</b>		<b>766.89</b>		<b>97.66</b>
<b><u>ELECTRO PORCELAINS DIVISION</u></b>							
Insulators & bushings	MT	7153.00 (5295.00)	5153.62 (3546.23)	380.00 (431.00)	246.66 (251.75)	535.00 (380.00)	350.77 (246.66)
Ceralin	MT	1467.00 (1697.00)	1364.72 (1775.48)	4.00 (20.00)	4.31 (29.19)	20.00 (4.00)	0.13 (4.31)
Income from testing & other services			43.85 (11.96)				
	<b>TOTAL</b>		<b>6562.19</b>		<b>250.97</b>		<b>350.90</b>
<b><u>POWER GROUP</u></b>							
Income from erection & Other services & spares			141480.16 (110731.51)		435.62 (481.98)		140.25 (435.62)
	<b>TOTAL</b>		<b>141480.16</b>		<b>435.62</b>		<b>140.25</b>
<b><u>OVERSEAS PROJECTS CO-ORDINATION UNIT</u></b>							
Income from sales, erection Other services & spares			44020.67 (38897.45)				
Sales less return			1939.29				
	<b>TOTAL</b>		<b>45959.96</b>		<b>0.00</b>		<b>0.00</b>
<b><u>JAGDISHPUR</u></b>							
Insulators	CMT	6277.21 (5296.34)	4036.20 (3772.46)	318.31 (330.00)	146.30 (207.23)	807.08 (318.31)	693.73 (146.30)
Ceralin	MT	881.62 (700.93)	882.47 (770.69)	8.30	10.69	8.94 (8.30)	9.72 (10.69)
	<b>TOTAL</b>		<b>4918.67</b>		<b>156.99</b>		<b>703.45</b>



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

**A. Sales, Opening Stocks & Closing Stocks**

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
<b><u>IVP GOINDWAL</u></b>							
Industrial Valves	Nos			150.00 (135.00)	31.13 (32.02)	48.00 (150.00)	9.62 (31.13)
		<b>TOTAL</b>	<b>0.00</b>		<b>31.13</b>	<b>-</b>	<b>9.62</b>
<b><u>CENTRE OF TECHNOLOGY TRANSFER, HYDERABAD</u></b>							
MCBG for Railways	Lots	6.00 0.00	37.58 0.00				
12000 RPM,3 Phase 400 HZ 30-40 KVA Alternator	Lots	1P (1P)	65.00 (103.97)				
205 KW 3300 RPM D C Motor	Nos.	0.00 (3P)	0.00 (27.00)				
Income from testing & services			121.73 (159.51)				
Spares for tank truck automation	Lot	0.00 (2.00)	0.00 (0.35)				
Automation of Tank Truck Filling	Set	0.00 (1P)	0.00 (2.55)				
GTO Type West Gate Thyristors	Nos.	0.00 (5.00)	0.00 (3.13)				
Steam & Water Chemistry Diagnostic Software	Lot	1.00 (1.00)	13.57 (13.57)				
Solar Gyesers	Nos.	5.00 (20.00)	0.85 (3.40)				
Microwave Sintering System	Nos.	5.00 (1.00)	9.80 (1.55)				
Cold Plates and Heat Exchangers	Nos.	14.00 (0.00)	83.63 (0.00)				
GPS Synchronisation of Master clock system software	Nos.	1.00 (0.00)	3.85 (0.00)				
8HP Permanent Magnet DC Motors	Nos	2.00 (0.00)	9.57 (0.00)				
Strain Measurement Instrument	Nos.	1.00 (0.00)	3.37 (0.00)				
		<b>TOTAL</b>	<b>348.95</b>		<b>0.00</b>		<b>0.00</b>
<b><u>CFP RUDRAPUR</u></b>							
HAWM	Nos	8.00	0.00 0.00	8.00 (8.00)	0.40 (0.40)	0.00 (8.00)	0.00 (0.40)



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

### A. Sales, Opening Stocks & Closing Stocks

(Rs. in lakhs)

Product	Unit	Sales during the year 2003-2004		Op. Stock of Fin. Goods 1.4.2003		Cl. Stock of Fin. Goods 31.3.2004	
		Qty.	Value	Qty.	Value	Qty.	Value
SWHS	Nos	2389.00 (2842.00)	288.55 (292.79)	71.00 (243.00)	2.45 (12.48)	353.00 (71.00)	18.62 (2.45)
Solar Lantern	Nos.	6354.00 (17153.00)	198.10 (517.50)	168.00 (1190.00)	1.85 (15.72)	1472.00 (168.00)	17.22 (1.85)
		<b>TOTAL</b>	<b>486.65</b>		<b>4.70</b>		<b>35.84</b>
<b><u>HERP/VARANASI</u></b>							
Spares & Repairs for Boiler/ Turbine & Auxiliaries			2263.26 (1762.50)		85.13 (107.41)		81.36 (85.13)
		<b>TOTAL</b>	<b>2263.26</b>		<b>85.13</b>		<b>81.36</b>
<b><u>ADVANCE RESEARCH PROJECT</u></b>							
Others (Services)			128.46 (107.69)				
		<b>TOTAL</b>	<b>128.46</b>		<b>0.00</b>		<b>0.00</b>
<b><u>TPG BHOPAL</u></b>							
Spares(Including Services)			15961.92 (11350.66)		(318.63)		
		<b>TOTAL</b>	<b>15961.92</b>		<b>0.00</b>		<b>0.00</b>
<b><u>OSBG &amp; EMRP</u></b>							
Repair & Project work			1794.70 (1714.19)				
		<b>TOTAL</b>	<b>1794.70</b>				<b>0.00</b>
<b><u>Industry Sector</u></b>							
Income from sales & erection (Revenue recognition Adjustment)			-379.95				
		<b>TOTAL</b>	<b>-379.95</b>				
<b>Adjustment for profit element on inventory</b>					<b>-34.99</b>		<b>-8.27</b>
<b>GRAND TOTAL</b>			<b>866246.98</b>		<b>22846.26</b>		<b>19051.84</b>

Figures in brackets represent previous year's figures

\* Correct weight particulars in terms of tonnage could not be ascertained

@	This excludes closing stock meant for Boiler treated as WIP	Nos. 2048 (4392) 22438 (26432)	Rs. in Lakhs 215.66 (155.68) 3391.01 (3254.89)
	Valves drawn for Boilers		

\*\* This excludes opening stock of 30 MT of Rs. 10.98 lakhs and closing stock of 17 MT of Rs. 3.73 lakhs meant for Boiler Plant treated as WIP.

+ This includes 45366 MTs (Previous Year 36587 MTs) of BAP, Ranipet, composite turnover for Fossil Boiler  
19147 MTs of SS tubes transferred to Boiler Plant for captive consumption

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

**B. Licensed Capacity, Installed Capacity and Actual Production**

(Rs. in lakhs)

SL NO	PRODUCT	UNIT	INSTALLED 2003-04	CAPACITY 2002-2003	ACTUAL 2003-04	PRODUCTION 2002-2003
<b>BHOPAL</b>						
1	Turbo Sets					
	-Steam Turbine	Nos.	3	3		0
		MW	360	360		0
	-Marine Turbine	Nos.	2	2		0
		MW	24	24		0
	-Nuclear Turbine	Nos.	1	1		0
		MW	236	236		0
	- Industrial Turbine	Nos.				0
		MW				0
2	Hydro Sets					
	-Hydro Turbine	Nos.	12	12	12	8
		MW	720	720	760	1330
	-Hydro Generator	Nos.	12	12	13	7
		MW	720	720	955	1055
3	Large Electrical Machine	Nos.	100	100	116	102
4	Traction Machines (Incl.TG/AG,Blower Motors,BPRV etc.)	Nos.	2850	2850	1668	3048
5	Power Transformers	Nos.	65	65	65	56
		MVA	12000	12000	9567	9049
6	Instrument Transformer	Nos.	200	200	457	540
7	Electrical Machines	Nos.	550	550	335	427
8	Switchgear	Nos.	3000	3000	2431	3232
9	Capacitor	MVAR	3200	3200	2501	2242
10	Industrial Controlgear	Nos.	250	250		18
11	Traction Controlgear	Set	220	220	175	143
12	Control Equipment	Nos	600	600	604	457
13	Heat Exchangers	Nos.	52	52	6	14
		MT	1100	1100		
14	Control Panels	Nos.	600	600	410	533
15	Cathodic Protection System	Tonne	2700	2700		0
(*) Capacity for Steam Turbine is used for Manufacturing 4 Nos of Hydro Turbine.						

**JHANSI**

1	Power Transformers 33kv/ 132kv	Nos./MVA	65/4000	65/4000	74/4597	95/4713
2	Other Transformer					
	-Special Purpose Transformer (Dry Type Trfr. etc.)	Nos.	180	180	68	63
	-Traction Transformer. (Frt. Loco & ACEMU)	Nos.	140	140	77	129



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

### B. Licensed Capacity, Installed Capacity and Actual Production

(Rs. in lakhs)

SL NO	PRODUCT	UNIT	INSTALLED 2003-04	CAPACITY 2002-2003	ACTUAL 2003-04	PRODUCTION 2002-2003
	-Instrument Transformer	Nos.	1960	1960	1248	1301
	-ESP Transformer	Nos.	*	*	201	200
3	Bus Duct	Set	@	@		
4	Diesel Shunters	Nos.	10	10	1	8
5	AC Locomotives (Upto 6500 HP)	Nos.	30	30	0	—

\* ESP Trfr. are being manufactured by using the installed capacity of instrument Trfs.

@ Bus duct manufacturing is being done within the existing capacity of Transformers.

Actual production for 2003-2004 includes job done for internal use for the following Products

Dry Type Trfr. : 5 Nos.

Diesel Shunter : 1 No.

#### HEEP - HARIDWAR

1	Turbo Sets	MW	3500	3500	1710	1945
2	Hydro Sets	MW	625	625	236	42
3	Electrical Machines	MW	450	450	94	111
4	Gas Turbine @@	MW				150
5	Super Rapid Guns	NOS	3	3	2	2

@@ 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.

#### CFFP HARIDWAR

1	Steel Castings	MT	6000	6000	2870	3502
2	Steel Forging					
	(a) Heavy Forgings	MT	2410	2410	697	581
	(b) Medium Forgings	MT	3000	3000	1970	1903
3	Billets and Blooms	MT	4000	4000	269	131
4	C I Casting	MT		7170		
5	N F Casting	MT	250	250	34	23

#### HYDERABAD

1	Thermal Sets	MW	770	770	77	120
2	Industrial Turbines	MW	65	65	311	442.8
3	Gas Turbine & Accessories	MW			283.78	425.1
4	Compressors	Nos			7	8
5	Drive Turbines	Nos	12	12	11	4
6	Pumps	Nos	137	137	71	61
7	Breakers	Nos	1050	1050	75	89
	132 kv EQU		1035xx	1035xx	311.6	319
8	Bowl Mills	Nos	80	80	36	35

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

**B. Licensed Capacity, Installed Capacity and Actual Production**

(Rs. in lakhs)

SL NO	PRODUCT	UNIT	INSTALLED 2003-04	CAPACITY 2002-2003	ACTUAL 2003-04	PRODUCTION 2002-2003
9	HP Heaters	Nos	20	20	31#	31#
10	De- aerators	Nos			7	7

# Includes LP Heaters, Gas Coolers, Spl. H Ex. manufactured using the capacity of H.P . Heaters

xx 132 kv Equivalent no. of Breakers.

Note: A. Installed Capacity for Sl. No. (3), (4) & (10) can not be stated separately since BHEL Hyderabad had diversified into these products without any additional / with addition of marginal facilities.

1)Sl. No. (3) Gas Turbine & Accessories is manufactured using facilities of Sl.No.(1) & (2).

2)Sl. No. (4) Compressor is manufactured using facilities of Sl.No.(5).

3)Sl. No. (10) De-aerators is manufactured using facilities of Sl.No.(9).

**EDN - BANGALORE**

1	Energy Meters	Nos.	600000	600000	285672	418986
2	Control Equipments	CUBICLE	1200	1200	1201	1099
3	Power Devices	Nos.	30000	30000	6186	7788
4	Photovoltaics	KWS	2000	2000	1155	1038
5	Telecommunications	LINES	275000	275000	28445	110971
6	Simulators (Defence Electronics)	SETS	*	*	55	86

\* Not ascertainable as it varies in quantity depending upon product mix.

**TIRUCHY**

1	Boilers	MT	108000+*	108000+*	108602+*	104619+*
2	Valves	MT	2712*A	2712*A	4115	4769
		Nos			55096	68880
3	Nuclear Steam Generating Equipments	MW	382/500**	382/500**	XX	XXX
4	Seamless Steel Tubes	MT	40000	40000	21995	21038
5	Armoured Recovery Vehicles	Nos.	25	25	0	0

+ 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

XX The capacity was utilised for manufacturing components for Nuclear Projects and other Heat Exchangers, Pressure Vessels, 2 nos. 500 MW Steam Generators, 1 no. evaporator, 2 nos. volume compensator, 9 nos hairpin heat exchangers, 2 nos. Dished ends for reactive pressure vessels were manufactured during 2003-2004.

XXX The capacity was utilised for manufacturing components for nuclear Projects & other Heat Exchangers, Pressure Vessels, 2 nos. 500 MW Nuclear Steam Generators, 4 nos. Standby Coolers and 35 nos. Hairpin heat exchangers manufactured during 2002-2003.



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

**B. Licensed Capacity, Installed Capacity and Actual Production**

(Rs. in lakhs)

SL NO	PRODUCT	UNIT	INSTALLED 2003-04	CAPACITY 2002-2003	ACTUAL 2003-04	PRODUCTION 2002-2003
<b><u>BAP - RANIPET</u></b>						
1	Boiler Auxiliaries	MT	57000	57000	53777	42430
<b><u>I V P GOINDWAL</u></b>						
	Industrial Valves	MT	788	788	682	560
		Nos.			5506	4907
<b><u>EPD - BANGALORE</u></b>						
1	Insulators & Bushings	CMT	6250	6250	5981	5330
2	Assembled Production	MT			8975	7625
3	Ceralin	CMT	745	745	1000	815
4	Ceralin (Assembled)	MT			2115	2328
<b><u>IP - JAGDISHPUR</u></b>						
1	Insulators	CMT	6000	6000	6787	5377
2	Ceralin	MT	330	330	981	769
<b><u>CFP - RUDRAPUR</u></b>						
1	S W H S	Nos.	4000	4000	2679	2680
2	Solar Lanterns	Nos.	4000	4000	7661	16152

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

(Rs. in lakhs)

	For the year ended 31.03.2004	For the year ended 31.03.2003
<b>C. Value of imports</b>		
CIF basis		
Raw materials	52776.00	40700.18
Components and spare parts	62806.05	80187.17
Capital goods	7157.73	7422.13
<b>D. Expenditure in foreign currency</b>		
Royalty	1105.15	1190.97
Know-how, professional consultation fee	760.18	743.33
Interest and others (incl. on foreign sites)	1167.61	1606.06
Dividend :@		
a) number of non-resident shareholders	324	326
b) number of shares held	44069487	38164670
c) gross amount of dividend	1762.78	1526.59
- tax deducted at source		222.47
d) year to which dividend relates	2002-2003	2001-2002
Interim Dividend : @	(Final Dividend)	
a) number of non-resident shareholders	346	
b) number of shares held	52191873	
c) gross amount of dividend	1565.76	
- tax deducted at source		
d) year to which dividend relates	2003-2004	
	(Interim Dividend)	
<p>@ The company has not made any remittance of dividend in foreign currency. The payments have been made to the Bankers/ Power of Attorney holders of non-resident shareholders and as such the exact amount of dividend remitted by them in foreign currency cannot be ascertained.</p>		
<b>E. Value of consumption of raw materials, components, stores &amp; spare parts.</b>		
#Imported (including custom duty)	133427.32	132609.63
Indigenous	230038.33	183453.41
Percentage of total consumption		
Imported	37	42
Indigenous	63	58
<b>F. Earnings in foreign exchange</b>		
Export of goods (FOB basis) **	44844.52	42928.76
Interest	0.34	0.56
Erection & other services **	2086.48	1168.34
Miscellaneous		24.80

\*\* This does not include Rs. 129438.78 lakhs (previous year Rs. 148190.29 lakhs) on account of deemed exports.

# Includes canalised items wherever ascertained.





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

(Rs. in lakhs)

		For the year ended 31.03.2004		For the year ended 31.03.2003		
G. Statement for raw materials and components consumed						
Group of materials	Units	Quantity	Value	Quantity	Value	
Ferrous materials	MT	195185	84808.29	159467	73604.92	
	Meters	4435218		4349266		
	Nos	695654		613240		
	Sq.M	4674		24985		
	Kg.	29841594		29651662		
	Others	273362		44		
Non-ferrous materials	MT	1232	9764.56	99004	7198.13	
	Meters	253530		145706		
	Nos	2937621		169253		
	Sq.M.			1025		
	Kg.	3166607		2999243		
	RL	30906		14580		
	Others	10288		9223		
Insulating materials	Meters	30473538	7946.10	26766467	6017.94	
	MT	4323		62499		
	Nos	106703		108235		
	Sq.M.	339780		350256		
	Kg	808731		769488		
	LT	4231662		2852316		
	RL	128979		133270		
	M2	55326		30193		
	KL	263		1926		
	ST	1939		974		
	Others	87		44896		
	Insulated cables and Magnet wires	Meters		387138		314.17
Nos		350	5511			
Kg		2046	12174			
Others			2			
Components			232745.91		202938.26	
Others			9573.62		6158.62	
			345152.65		296182.80	

## 28. 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	4
---	---

Date Month Year

### ii) Capital raised during the year (Amount in Rs. Lakhs)

Public Issue

Right Issue

NIL

NIL

Bonus Issue

Private Placement

NIL

NIL

### iii) Position of mobilisation and deployment of funds ( Amount in Rs. Lakhs)

Total Liabilities

1	2	1	7	2	8	1	.	9	6
---	---	---	---	---	---	---	---	---	---

Total Assets

1	2	1	7	2	8	1	.	9	6
---	---	---	---	---	---	---	---	---	---

Sources of Funds

Paid Up Capital

2	4	4	7	6	.	0	0
---	---	---	---	---	---	---	---

Reserves & Surplus

5	0	5	1	1	8	.	0	0
---	---	---	---	---	---	---	---	---

Secured Loans

5	0	0	0	0	.	0	0
---	---	---	---	---	---	---	---

Unsecured Loans

4	0	0	2	.	6	3
---	---	---	---	---	---	---

Application of Funds

Net Fixed Assets\*

1	2	0	2	6	9	.	8	3
---	---	---	---	---	---	---	---	---

Investments

2	8	9	8	.	2	6
---	---	---	---	---	---	---

\* It includes Capital WIP Rs. 10855.74 Lakhs

Net Current Assets

4	0	8	7	8	4	.	6	0
---	---	---	---	---	---	---	---	---

Misc. Expenditure (Deferred Revenue Exp.)

1	7	9	2	.	0	6
---	---	---	---	---	---	---

Accumulated Losses

Nil

Deferred Tax Assets

4	9	8	5	1	.	8	8
---	---	---	---	---	---	---	---

### iv) Performance of Company (Amount in Rs. Lakhs)

Turnover \*

8	6	6	2	4	6	.	9	8
---	---	---	---	---	---	---	---	---

Total Expenditure

7	4	8	6	4	1	.	9	6
---	---	---	---	---	---	---	---	---

\* Inclusive of Excise Duty Rs. 64343.78 lakhs

Total earnings including accretion/decretion in inventory, other operational income, other revenue and adjustment of excise duty on turnover for the year is Rs. 850117.24 Lakhs as against total expenditure.

Profit Before Tax

1	0	1	4	7	5	.	2	8
---	---	---	---	---	---	---	---	---

Profit After Tax

6	5	8	1	5	.	1	6
---	---	---	---	---	---	---	---

Earning Per Share in Rs.

2	6	.	8	9
---	---	---	---	---

Dividend rate

6	0	%
---	---	---

\* incl interim dividend 30%.



## 28. Balance Sheet Abstract and Company's General Business Profile (Contd.)

v) Generic names of three principal products/services of Company (as per monetary terms)

1. Item Code No. : 

8	4	0	2	1	0
---	---	---	---	---	---

(ITC Code)

Product Description : Boilers other than parts

2. Item Code No. : 

8	5	0	2	3	9	0	2
---	---	---	---	---	---	---	---

(ITC Code)

Product Description : Complete generating sets including hydro turbines

3. Item Code No. : 

8	4	1	1	8	2	0	6
---	---	---	---	---	---	---	---

(ITC Code)

Product Description : Gas turbine of thrust exceeding 115000 KW.

Sd/-  
N K Sinha  
Secretary

Sd/-  
C Srinivasan  
Director(Finance)

Sd/-  
H W Bhatnagar  
Chairman(Committee of Directors)

As per our report of even date  
For J C Bhalla & Co.

Date: 5.8.2004  
Place: New Delhi

Sd/-  
(Sudhir Mallick)  
Partner

## CASH FLOW STATEMENT FOR THE YEAR ENDED 31.03.2004

(Rs. in Lakhs)

	<u>2003-2004</u>	<u>2002-2003</u>
<b>A. CASH FLOW FROM OPERATING ACTIVITIES</b>		
Net Profit Before Tax as per Profit and Loss Account	<b>101475.28</b>	<b>80243.46</b>
Adjustment for		
Extraordinary items	22981.24	15378.61
Depreciation/Amortisation	19804.32	18532.69
Lease Equalisation	542.97	78.31
Profit on sale of Fixed assets	-236.65	-351.32
Loss on investment	134.46	1.52
Interest paid	6009.17	5447.28
Interest/Dividend Income	-8696.88	-6781.24
Operating Profit before Working Capital changes	<b>142013.91</b>	<b>112549.31</b>
Adjustment for		
Trade & Other Receivables	-63283.52	39467.61
Inventories	-10282.75	-682.74
Trade Payable & Advances	158517.78	-7371.13
Cash generated from operations	<b>226965.42</b>	<b>143963.05</b>
Direct Taxes Paid	-42190.66	-19933.90
Cash flow before Extra-Ordinary items	<b>184774.76</b>	<b>124029.15</b>
Extra-Ordinary Items	-15223.06	-1.11
<b>NET CASH INFLOW FROM OPERATING ACTIVITIES</b>	<b>169551.70</b>	<b>124028.04</b>
<b>B. CASH FROM INVESTING ACTIVITIES</b>		
Purchase of Fixed Assets	-17242.09	-18664.69
Sale and Disposal of Fixed Assets	458.90	652.83
Purchase of Investment	-19500.00	0.11
Sale of Investments	17500.00	
Interest & Dividend Receipts	7826.13	6985.95
<b>NET CASH USED IN INVESTING ACTIVITIES</b>	<b>10957.06</b>	<b>11025.80</b>
<b>C. CASH FLOW FROM FINANCING ACTIVITIES</b>		
Short Term Borrowings	0.00	-27.97
Long Term Borrowings	559.98	-13140.83
Dividend Paid (including tax on dividend)	-19296.33	-9784.76
Interest paid	-5985.51	-5616.49
<b>NET CASH USED IN FINANCING ACTIVITIES</b>	<b>24721.86</b>	<b>28570.05</b>
<b>D. NET INCREASE IN CASH AND CASH EQUIVALENTS</b>	<b>133872.78</b>	<b>84432.19</b>
Opening Balance of Cash and Cash Equivalents	132091.11	47658.92
Closing Balance of Cash and Cash Equivalents	265963.89	132091.11

Sd/-  
N K Sinha  
Secretary

Sd/-  
C Srinivasan  
Director (Finance)

Sd/-  
H W Bhatnagar  
Chairman (Committee of Directors)

As per our report of even date  
For J C Bhalla & Company  
Chartered Accountants

Sd/-  
Sudhir Mallick  
Partner

Date : 5th August, 2004  
Place : New Delhi



# **ANNEXURE TO NOTE NO. 11**

## **NAME OF THE SMALL SCALE INDUSTRIAL UNDERTAKING TO WHOM THE COMPANY OWES FOR MORE THAN 30 DAYS WITHIN THE AGREED TERMS (IN TERMS OF NOTIFICATION NO. G.S.R. 129 (E), DATED 22<sup>ND</sup> FEBRUARY, 1999**

2M COMPANY	APPLE REPROGRAPHICS
A N INSTRUMENTS PVT. LTD.	APR ELECTRONICS PVT.LTD.
A S ENGINEERS	APT PNEUMATICS PVT.LTD.
A.B. METAL FORMER (P) LTD.	AQUA ENGINEERING SERVICES
A.F.NOMAN & CO.	ARAMSONS INDUSTRIES,PUDUKKOTTAI
A.N.INDUSTRIES P.LTD	ARAVALI MINERALS
A.V. ENGINEERS	ARMSEL MHE PVT LTD.
ABDUL CUREEM AND SONS	ARUN STRUCTURALS,PUDUKKOTTAI
ACCURA PRODUCTS	ARUNA ALLOY STEELS PVT LTD., MADURAI
ACCURATE ENGINEERING WORK,TIRUCHIRAPALLI	ARUNA ANCILLARY INDUSTRIES
ACCURATE ENGINEERING INDUSTRIES	ARUNODAYA ENGG WORKS
ACCURATE INDUSTRIES,TIRUCHIRAPALLI	ARUNODAYA ENGINEERS PRIVATE LIMITED
ACCUSIZE GAUGES &TOOLS PVT LTD.	ARUNODAYA GEARS & INDUSTRIES
ACCUSPIRALS	ARVIND FOOTWEAR PVT. LTD.
ACME FORGINGS (P) LTD.	ASHOK INDUSTRY
ADARSH ELECTRO PLATING WORK	ASHOKA MACHINE TOOLS CORPORATION
ADARSH FABRICATORS	ASHWIN INDUSTRIES[P] LTD, COIMBATORE
ADITHYA FERRO CAST INDIA	ASIAN ANCILLARY CORPORATION, MUMBAI
ADVANCE SALES AGENCY	ASK ENTERPRISES
ADVANCE VALVES PVT. LTD.	ASKAR MICRONS (P) LTD.
ADVANI-OERLIKON LTD.,	ASP PRIVATE LTD., HOWRAH
AEROSPACE ENGG. (I) (P)	ASSET ENGINEERING
AEROVENT PROJECTS PVT. LTD.	ASSOCIATED AUTOMATS
AFLON ENGINEERING CORPORATION	ASSOCIATED ENGINEERING CORPORATION
AGILE HEAVY ENGG. (P) LTD.	ASSOCIATED ENGINEERS
AGROMORE (P) LIMITED	ASWANI ENGINEERING CO.
AHSAN ALI ENGG. WORKS	ATUL GRAM VIKAS SANSTHAN
AISHU CASTINGS PVT. LTD.	AUROBINDOO BUSINESS & COMPUTER
AJANTHA FABRICATION WORKS	AUTOCAP INDUSTRIES, CHENNAI
AJAY GALVANISING WORKS	AUTOMATIC ELECTRIC LIMITED
AJMER MINERALS	AVAIDS TECHNOVATORS PVT LTD., NEW DELHI
AKILANDESWARI INDUSTRIES, TIRUCHIRAPALLI	AZ ELECTRONICS
ALCO WIRE PRODUCTS(P) LTD.	B B ELECTRO TECHNIC
ALERT ENGINEERING ENTERPRISES,	B FOUR TECH. INDUSTRIES
ALIASONS INDUSTRIES,	B T SOLDERS PVT LTD
ALLIED ELECTRONIC CORPORATION	B.M.ENGINEERING WORKS
ALUCOAT APPLICATORS P LTD.	B.S.ENGINEERING WORKS,COIMBATORE
AMAR ENGINEERING WORKS	B.V.K INDUSTRIES
AMARNATH & SONS	BABU INDUSTRIES, COIMBATORE
AMBA INDUSTRIES	BABY ENGG. (P) LTD.
AMBIGAI ENGINEERING WORKS, TIRUCHIRAPALLI	BABY INDUSTRIES
AMBIKA FORGINGS, BANGALORE	BADRI INDUSTRIES, TIRUCHIRAPALLI
AMCO INDUSTRIES, HARDWAR	BALAJI ENGINEERING ENTERPRISES
AMIRTHALINGAM INDUSTRIES, TIRUCHIRAPALLI	BALAJI ENGINEERING WORKS
AMPCONTROL EQUIPMENTS PVT LTD.	BALAJI INDUSTRIAL PRODUCTS
AMPHENOL INTERCONNECT INDIA PVT LTD	BALIGA LIGHTING EQUIPMENT PVT.
ANAND AUTO ENGG. WORKS, GBD.	BANGALORE MALLEABLE CASTINGS P. LTD.
ANAND ENGG. INDUSTRIES	BANGALORE RUBBER INDUSTRIES
ANBU SONS	BANGALORE SALES & SERVICE ENTERPRISES
ANDAVAR ENGG WORKS,PUDUKKOTTAI	BANGLORE (N) FERRUS
ANDHRA BANK A/C HYDERABAD	BANSAL FABWEL INDUSTRIES
ANDHRA BANK SOMAJIGUDA A/C SOL	BARAKATH INDUSTRIES,TIRUCHIRAPALLI
ANIL ENGG. WORKS	BARODA BUSHING & INSULATORS
ANIL GEARS	BARODA ROLLING WORKS
ANNAI VELANKANNI FABRICATORS	BAU FABS PVT LTD.
ANNAMALAI ASSOCIATES	BDK PROCESS CONTROLS PVT. LTD.
ANNAPURNA ENGINEERING WORKS	BEBLEC (INDIA) PVT. LTD.
ANTI CORROSIVE EQUIPMENT	BELL FABS
ANTONY INDUSTRIES	BEST HEAT TREATMENT SERVI, COIMBATORE
ANTRIEB TECHNIK PVT LTD.,CHENNAI	BEST WOOD PACKERS
ANUBHAV ENTERPRISES	BHAARAT ENGG.SALES AND SERVICE, COIMBATORE
ANUPAM INDUSTRIES	BHANWAR SALES
APEX KNIVES PVT. LTD.	BHARAKATH INDUSTRIES

BHARAKATH METAL BUILDERS  
 BHARAT ENGG ENTERPRISES  
 BHARAT FABRICATORS  
 BHARAT MINERALS  
 BHARAT STAMPING PRODUCTS,  
 BHARAT STEEL WIRE PRODUCTS  
 BHARAT TRADING CO.  
 BHARAT TRADING CO.  
 BHARTIYA ELECMECH CORPORATION  
 BHAVANI AUTOMATS  
 BHURJI ELECTRONIKS PVT., LTD.,  
 BHUVANESSWARI ENGINEERING WORKS, TIRUCHIRAPALLI  
 BINDA METALS PVT. LTD.  
 BINDU ENTERPRISES  
 BISHESHWAR GALVANISERS P. LTD.  
 BISHNOI UDYOG  
 BIT-TUL PVT. LTD.  
 BK ENTERPRISES  
 BLASTERS & CORROSION PREVENTORS  
 BLUE MOUNT MACHINE WORKS, COIMBATORE  
 BLUE SQUARE  
 BNA TECHNOLOGY  
 BOLTMASER (IND) PVT LTD.  
 BOMBAY OIL SEAL CO.  
 BORA BROTHERS  
 BORA BROTHERS INDUSTRIES  
 BOYD SMITHS PVT LTD  
 BOYS TOWN INDUSTRIAL TRAINING  
 BRIGHT INDIA  
 BROWNS HITECH STRUCTURE PVT.  
 BSBK ENGINEERS LTD.  
 BUMBER INDIA (P) LTD.  
 BUNDELKKHAND INDUSTRIES  
 BURJI ELECTROMECH  
 BURJI ENTERPRISES  
 C CUBE SYSTEMS  
 C.S.D TECHNO HYDRO SYSTEM  
 CALBURG ENGINEERING  
 CANARA BANK,BBHAG AC MIKROFLO  
 CANARA METAL WORKS  
 CANARABANK,FATEHNAGR A/C ATLAS  
 CANBANK FACTORS LTD A/C AGNICE  
 CANDS ELECTRICALS PVT LTD  
 CAPRONICS PVT LTD  
 CAPSULE INDS (P) LTD.  
 CAPTAIN GEARS & FANS  
 CARBO ENGG.  
 CARLO DYNATECH INDUSTRIES  
 CAST ALLOYS, CHENNAI  
 CAUVERY ENGINEERING WORKS  
 CAUVERY ENTERPRISES  
 CENLUB INDUSTRIES LTD.,  
 CHABI ELECTRICALS  
 CHAMAN ENG. CORPN.  
 CHAMPAK MINERALS  
 CHAMPION ENGG INDUSTRIES  
 CHAMPION ENGINEERING INDUSTRIES  
 CHANDRA INDUSTRIES,  
 CHAUHAN ENGINEERING & DARSHANI ENTERPRISES  
 CHELLAM ENGG WORKS  
 CHELLIAH ENTERPRISES,CHENNAI  
 CHEMICAL AND INDUSTRIAL E  
 CHEMTROLS ENGG. PVT. LTD.

CHETAN FASTENER MANUFACTURERS  
 CHETNA ENGINEERING CO.  
 CHHABI ELECTRICALS PVT LTD  
 CHITARANJAN INDUSTRIES  
 CHLORO CONTROL EQUIPMENT CO.  
 CHOKSI HERAEUS PVT LTD.  
 CHOLA ELECTRO INDUSTRIES  
 CHUDASMA PRECISION TOOLS  
 CINTHIYA INDUSTRIES,TIRUCHIRAPALLI  
 COIMBATORE SUPER ALLOYS (P) LTD, POGALUR  
 COIMBATORE SUPER ALLOYS (P) LTD.  
 CONNECT WELL INDUSTRIES PVT. LTD  
 CONTINENTAL THERMAL ENGINEERS  
 CONTROL DYNAMICS  
 CONTROLS & SCHEMATICS PVT.LTD.  
 CONVERGENT TECHNOLOGIES  
 CONWELD ENGINEERING SERVICES  
 COPPER METAL CORPORATION  
 COPPER STRIPS PRIVATE LIMITED  
 CO-TECH INDUSTRIES, COIMBATORE  
 CREATIVE ENGINEERING,CREATIVE  
 CREATIVE INSTRUMENTS & CONTROLS  
 CRESCENT VALVES  
 D S M INDUSTRIES,TIRUCHIRAPALLI  
 D.A.M.ENGINEERING WORKS  
 D.B. ENGINEERING PVT. LTD.  
 DALEL ENTERPRISES  
 DASHMESH DEVICE (INDIA)  
 DATA CARE SYSTEMS  
 DATAPRO ELECTRONICS PVT L  
 DATTATRAY ENGG WORKS  
 DEEPA MACHINERY MFG. PVT, COIMBATORE  
 DEEPAK GALVANISING &  
 DEEPAK INDUSTRIAL ENGG.WORKS SIR M.VISV  
 DEEPAM ENGINEERING ENTERPRISES  
 DEEPARTI SILICONS  
 DEFFREE ENGG P LTD, COIMBATORE  
 DELTA CORPORATION  
 DELTA WEAR TECHENGINEERIN,CHENNAI  
 DESIGN AND ASSEMBLIES INC., BANK OF IN  
 DETECTION INSTRUMENTS (I) PVT  
 DETRIV INSTN. & ELEC. LTD.  
 DEVAKI REINFORCED PLASTICS  
 DEVI STRUCTURALS,TIRUCHIRAPALLI  
 DEVIKRIPA ENGINEERING WORK,PUDUKKOTTAI  
 DHANALAKSHMI ENGG WORKS,TIRUCHIRAPALLI  
 DHANALAKSHMI DIE CASTINGS.,  
 DHATHU NIRMAN PVT LTD  
 DHAWAN ENGG. WORKS  
 DIELECTRIC CORPORATION,  
 DIFFUSION ENGINEERS LIMITED  
 DJP INDUSTRIES, PUDUKKOTTAI  
 DO-ALL ENGINEERING PRODUCTS  
 DOLPHIN ENGG. COMPANY  
 DOLPHIN SCREENS  
 DOON GALVANISING  
 DUJODWALA PAPER CHEMICALS LTD.  
 DURANO PROCESS PRIVATE LTD.  
 DYNAMIC PROCESS, CHENNAI  
 DYNASPEDE INTEGRATED SYSTEMS  
 E P PRODUCTS  
 E S C O  
 EASTERN ELECTRICALS



EASTERN MECH INDUSTRIES,  
EASTERN MENERALS  
EBM-NADI INTERNATIONAL PVT LTD  
ECONIX HI-TECH COMPONENTS LTD.  
EFFICIENT FASTENER MANUFACTURE  
ELASTOMERIC ENGINEERS, SALEM  
ELASTOMERIC ENGINEERS  
ELASTOMERIC ENGINEERS,SALEM  
ELECTRO AUTO INDUSTRIES  
ELECTRO FERRO ALLOYS PVT.LTD.,  
ELECTRO SYSTEMS ASSOCIATES P LTD  
ELECTRO TREATMENTS,COIMBATORE  
ELECTRONICA MECHATRONIC SYSTEM  
ELECTRONICS & INDUSTRIAL ANCILIARY  
ELECTROTECHNIK  
ELEGANT SYSTEMS,  
ELEPHENTA ENGINEERING WORKS  
ELKAY TELELINKS PVT. LTD  
ELMECA WORKS  
ELMEX CONTROLS PVT LTD  
EM ELECTRONIX PVT. LIMITED  
EMC ELECTRONICS  
EMCEE ENGG. WORKS  
EMPEE ENGINEERS  
EMPEROR ENGG WORKS, TIRUCHIRAPALLI  
EMPLOYEES STATE INSURANCE CORPN.B'LORE  
ENGG SPECIALILITIES PVT LTD  
ENGINEERING ENTERPRISES  
ENNEM EXCEL ENGINEERING (P)  
ENNEM EXCEL ENGINEERING PVT  
ENTEK IRD INTERNATIONAL (INDIA) LTD  
ENTERPRISING MARKETING ENGINEERS  
EP INDUSTRIAL AGRO  
EPE PROCESS FILTERS &  
EQUIPMENT ENGRS PVT LTD.  
ESS ENN PRODUCTS  
ESS ESS ENGG WORKS,TIRUCHIRAPALLI  
ESS VEE PACKAGING PVT. LTD.  
ESSEN DIENKI  
ESSEN INSTRUMENTATION & ELECTRIC  
ESSKAY PROCESS  
ETC INDUSTRIES LTD.,  
EUREKA INDL.EQUIPMENT PVT. LTD  
EUROFLEX TRANSMISSIONS(INDIA)  
EVEREST ELECTRONICS COMPO P LTD  
EVONNE  
EXCEL CONTAINERS PVT LTD  
EXCEL HYDRO-PNEUMATICS (P)LTD  
EXCEL INDUSTRIES  
EXCEL PAR ELECTRONICS  
EXCEL PRESSINGS  
EXCEL PROCESS (BANGALORE) PVT LTD  
EXCEL RUBBER PRODUCTS  
EXCELSIOR ENGINEERING WORKS  
EXCELSIOR ENTERPRISES  
EXCLUSIVE ALLOYS & TUBES  
EXCLUSIVE DIAMOND PRODUCTS  
FAB TECH  
FANCY PERFORATORS  
FARCOM CABLE SYSTEMS PVT.LTD.  
FARMER ENGINEERS  
FASTENERS & ALLIED PROD (P) LTD.  
FATIMA SMALL SCALE INDUSTRES, BANGALORE

FCG POWER INDUSTRIES  
FCI OEN CONNECTORS LTD.  
FE N FE METALLURGICALS  
FEATHERLITE PRODUCTS (P) LTD.,  
FERMI ELECTRICALS&CONTROLS  
FIBRADITE PRODUCTS PVT LTD STATE BANK  
FIBRE POLY GLASS, STATE BANK  
FIBREGLASS MOULDING CO  
FINE CORE CABLES PRIVATE LTD.  
FITWELL FASTENERS  
FIVE STAR ENGG WORKS  
FIVE STAR INDUSTRIES, PUDUKKOTTAI  
FLASH FORGE PVT LTD  
FLEXIBLE MACHINING CENTRE,CHENNAI  
FLOCON SYSTEMS PVT. LTD.  
FLOW WEL CORPORATION  
FLUDYNE ENGRS PVT LTD  
FLUID-LINE ENGINEERING  
FORBES MARSHALL LTD  
FORTIFORI PLASTICS LTD  
FUSEGEAR ELECTRIC LTD.  
FUTURA AUTOMATION  
G B M MANUFACTURING P LTD.  
G.E.PLASTICS INDIA LTD  
G.K. ENGINEERING CORPORATION  
G.K. & SONS  
G.K.ELECTRICALS  
G.S. ALLOY CASTING LTD.  
G.S. ENGG. WORKS  
G.S.ALLOY CASTINGS LTD.  
G.S.ALLOYS CASTINGS PRIVATE  
G.T.I. ELECTRO PLATING AND  
GAGANDEEP ENGG. WORKS, GOINDWAL  
GAJALAKSHMI ENGG & ENTERPRISES  
GALA GEARS  
GALA SPRINGS  
GALA SPRINGS PVT.LTD.,  
GALAXY CONTROLS LTD.  
GALAXY CONTROLS PRIVATE LTD.  
GANESH ENGINEERING WORKS  
GARGI ENTERPRISES, STATE BANK  
GASKET INDIA PVT. LTD.  
GASKETS (INDIA) PVT LTD, CHENNAI  
GAUGING TECHNIQUES  
GAURI INDUSTRIES  
GAUTAM UDYOG  
GE BAYER SILICONS(INDIA) PVT LTD  
GEA ENERGY SYSTEM (INDIA) LTD  
GEE DEE PACKAGES PVT LTD  
GEERTHANA ENGG WORKS, TIRUCHIRAPALLI  
GEI GODAVARI ENGINEERING LTD.  
GELLILE INDUSTRIES, TIRUCHIRAPALLI  
GEM EQUIPMENTS  
GENERAL ELECTRO MECHANICAL IND  
GENERAL INSTRUMENT CONSORTIUM  
GENIUS ELECTRICAL & ELECTRONICS (P) LTD  
GERB VIBRATION CONTROL SYS. P. LTD.  
GERB VIBRATION CONTROL SYSTEMS  
GERY INDUSTRIES,TIRUCHIRAPALLI  
GESCON PRIVATE LTD. CALCUTTA  
GESTETNER (INDIA) LTD.  
GHAZIABAD ISPAT UDYOG PVT LTD,  
GIRIJA PRESS TOOLS



GLASSFIBRE & ALLIED INDS.  
 GLASTRONIX  
 GLOBE COMPONENTS(P)LTD, CHENNAI  
 GLOBE ENTERPRISES  
 GLOBE STEELS (P) LTD, CHENNAI  
 GO GOAL ENGG. INDUSTRIES  
 GOKUL INDUSTRIES, CHENNAI  
 GOLDEN ENGINEERING, TIRUCHIRAPALLI  
 GOLDEN WORKSHOP  
 GOLIYA ELECTRICALS PVT LTD  
 GOPI KRISHNA INDUSTRIES  
 GOVINDAPURAM WIRE PRODUCTS  
 GOYAL MG GASES PVT.LTD  
 GOYOLENE FIBRES (I) PVT. LTD.  
 GRAND POLYCOATS CO.PVT.LTD.  
 GRANTECH ENGINEERS  
 GREEN FIELD ENGG WORKS  
 GUJARAT INFRAPIPES PVT. LTD.  
 GUJRAT SMELTING & REFINING CO.  
 GULAB CHAND KOCHAR  
 GULTECH FABRICATORS  
 GUPTA ENGINEERING CORPORATION  
 GURU ENGINEERING WORKS  
 GURU MACHINING CENTRE, TIRUCHIRAPALLI  
 GURU NANAK ENGG. WORKS JAWLAPUR  
 GURU NANAK ENGINEERING WORKS  
 GURU NANAK STEEL INDUSTRIES HA  
 GURURAJA PRECITECH INDUSTRIES  
 H GURU INSTRUMENTS  
 H. SARKAR & COMPANY  
 H.GURU INSTRUMENTS (S.I) P.LTD.  
 H.KUMAR &CO.  
 HARI HARA MACHINE TOOLS  
 HARIHAR ALLOY CASTINGS PVT. LTD TRICHY  
 HARITHA INDUSTRIES  
 HAT RUBBERS  
 HBL NIFE POWER SYSTEMS LTD., NOIDA  
 HEAVY ENGINEERING COMPAN, PUDUKKOTTAI  
 HEAVY FAB INDUSTRIES  
 HEAVY METAL & TUBES PVT.LTD.  
 HEMA INDUSTRIES  
 HI - TECH FITTINGS  
 HI-DAMP INDL MOUNTINGS LTD.  
 HIGH PRECISION INDUSTRY, COIMBATORE  
 HILDA INDUSTRIES, TIRUCHIRAPALLI  
 HIMALAYA ELECTRO-PLATING WORKS  
 HIMGIREE ENGG. INDUSTRIES  
 HIMTECH PRESCO BAHADARABAD  
 HIND ELECTRONIC INDUSTRIES  
 HIND PRESS PRODUCTS  
 HINDUSTAN FORGING  
 HINDUSTAN TRADING & ENGINEERING  
 HINDUSTAN UDYOG LIMITED  
 HINDUSTHAN PIPE FITTING CO.  
 HI-TECH FABS  
 HI-TECH RESISTORS PVT LTD  
 HITEK HEAVY EQUIPMENTS PVT.LTD, TIRUCHIRAPALLI  
 HITEN FASTENERS (P) LTD.  
 HITESH SCREW PRODUCTS  
 HI-THERMAL PROCESS, TIRUCHIRAPALLI  
 HMW METAL WORKS (P) LTD,  
 HYBRID METALS PVT LTD  
 HYD AIR ENGG PVT LTD

HYDAX HYDRAULICS P. LTD.  
 HYDERABAD CASTING LTD.  
 HYDERABAD HEAVY MACHINING INDUSTRIES  
 HYDERABAD PATTERN & FOUNDRY  
 HYDERABAD ENGG WORKS  
 HYDERABAD HEAVY ENGINEERING  
 HYDERABAD MET CHEM PVT LTD.  
 HYDERABAD POLLUTION CONTROLS  
 HYDERABAD POWER SERVICES &  
 HYDERABAD REPROGRAPHICS (P)  
 HYDRAULIC ENGINEERING CORPORATION  
 HYDROPACK (INDIA) PVT LTD.  
 HYDROPACK INDUSTRIES  
 I E E ENGINEERING ENTER  
 I M P POWER LTD.,  
 I MAX  
 I.E.C. DUSTERLOH PVT LTD.  
 I.S. ENGINEERING WORKS  
 I.T.M. PVT. LTD.  
 IA ENGINEERING WORKS  
 IBEX ENGINEERING PVT. LTD., KARNATAKA  
 ICEM ENGINEERING CO. PVT. LTD.  
 IFTIKHAR TIMBER  
 IGP ENGINEERS PRIVATE LIMITED, CHENNAI  
 IMPACT SAFETY GLASS WORKS P LTD  
 IMPEX INSULATION PVT LTD  
 INAPURI ANCILLARY INDUSTRIES  
 INDE ENTERPRISES  
 INDEX AUTO COMPONENTS PVT, CHENNAI  
 INDIA ELECTRICALS SYNDICATE  
 INDIAID ENGRS. PVT LTD  
 INDIAN CORE OILS PVT LTD.  
 INDIAN ENGINEERING CO.,  
 INDIAN METALS & ALLOYS MFG CO.  
 INDIAN RUBBER PRODUCT  
 INDIAN TIMBER PRODUCTS (P) LTD.  
 INDIRA DAMPER INDUSTRIES  
 INDIRA INDUSTRIES  
 INDO ARYA CENTRAL TRANSPORT LTD.  
 INDO ENGINEERING ENTERPRISES  
 INDO FAB  
 INDUSTRIAL COMPONENT MFR.  
 INDUSTRIAL CONTROL & DRIVES  
 INDUSTRIAL ELECTRONICS CORPORATION  
 INDUSTRIAL FASTENERS  
 INDUSTRIAL INSTRUMENTATION, SBM BHEL B  
 INDUSTRIALS HEATERS  
 INFOCONTROL SYSTEMS INC  
 INNOVATIONS, KARNATAKA  
 INNOVATORS  
 INSTRANS ENGG MFG PVT LTD, CANBANK FA  
 INSTRANS ENGINEERING MANU  
 INSULATION HOUSE  
 INTEGRAL SYSTEMS & COMPONENTS PVT LTD  
 INTEGRATED ELECTRO TECH PVT LTD  
 INTELTEK AUTOMATION PVT. LTD.,  
 INTERKLIN INDUSTRIES  
 INTERNATIONAL INDUSTRIES SPRING  
 INTERNATIONAL ENGINEERING PLANT  
 INTERNATIONAL INDUSTRIAL SPRING  
 INTRA VIDYUT LTD.,  
 ISHWAR PACKAGING  
 IYAPPAN ENGG INDUSTRIES PVT, LTD CHENNAI

J C INDUSTRIES  
 J.D.M. ENTERPRISES  
 J.K.MINERALS  
 J.M.S. ENGINEERING PVT. LTD.  
 J.V.ELECTRONICS PVT LIMITED  
 JADON ENGINEERING INDUSTRIES  
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 KUMARA ENGG WORKS  
 KUMARAN INDUSTRIES  
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 KUNDAN INDUSTRIES LIMITED  
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 S.S. RUBBERS PRIVATE LIMITED  
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SRI LAKSHMI KRISHNA ENGG WORKS  
SRI LAKSHMI SAI ENGG WORKS  
SRI LAXMI VITREOUS  
SRI LINGESHWARAR ENGINEERS  
SRI LINGESHWARAR FABRICATORS  
SRI M INDUSTRIES  
SRI MAHALAKSHMI ENGG WORK,TIRUCHIRAPALLI  
SRI RAJU & RAJU PRESSTRONICS  
SRI RAM FILTERATION  
SRI RAMA ENGINEERING IND.  
SRI RAMANA INDUSTRIES  
SRI RATHNA FABRICATORS  
SRI SABARI STRUCTURAL  
SRI SAI ENGINEERS &  
SRI SAKTHI INDUSTRIES  
SRI SARAVANA ENGG. WORKS.  
SRI SASTHA ENGG WORKS, TIRUCHIRAPALLI  
SRI SRI ENGG.WORKS  
SRI SUJAY ENGG PRODUCTS  
SRI VENKATESWARA GEAR WHEELS

SRI VENKATESWARA INDUSTRIES, PUDUKKOTTAI  
 SRI VENKATESWARA MECH.& ELEC.  
 SRI VIJAYA LAXMI ENGINEERING  
 SRI VINAYAGA INDUSTRIES,TIRUCHIRAPALLI  
 SRI VISHNU TOOL TECH.PVT.LTD.  
 SRINIVASA ENGG CO.  
 SRINIVASA INDUSTRIAL CHEMICALS  
 SRINIVASA INDUSTRIES,  
 SRINIVASA PRODUCTS  
 SRINIVASA RECONDITIONING WORKS  
 SRI-TECH INDUSTRIES,TIRUCHIRAPALLI  
 SRUJANA FABRICATORS &  
 SRUJANA INDL MKTG ASSOCIATES  
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 STAR PACKAGING  
 STARDRIVE BUSDUCTS PRIVATE LTD  
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 SUDHA ENGINEERING WORKS  
 SUDHINDRA ENTERPRISES  
 SUGAVANESWARA ENGG WORKS, TIRUCHIRAPALLI  
 SUGO INDUSTRIES  
 SUJATHA ENGINEERING INDUSTRIES  
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 SUKEJAY ASSOCIATES  
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 SUMICA HARDWAR  
 SUMUKA INDUSTRIES  
 SUNDARAM PAINTS (P) LTD.  
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 SUPER DIAMOND TOOLS  
 SUPER ENGG. COMPANY  
 SUPER FORGINGS & STEELS LTD.  
 SUPER GALVANIZING INDUSTRIES  
 SUPER GASKET INDUSTRIES  
 SUPER INDUSTRIAL COMPONENTS  
 SUPER QUALITY SERVICES,TIRUCHIRAPALLI  
 SUPER WAUDITE JOINTINGS PVT LTD.  
 SUPERIOR ELECTRIC MACHINES P LTD  
 SUPPLIERNA  
 SURENDRA ENGINEERING WORKS  
 SURESH ANAND TOOLS AND ACCESSORIES  
 SUSAN ENGG COMPANY,CHENNAI  
 SUSHAR FASTENERS  
 SUSHEEL ENGINEERING CORPN.  
 SWAMY ENGG WORKS,TIRUCHIRAPALLI  
 SWAROOP INDUSTRIES  
 SWARUPA INDUSTRIAL PRODUCTS  
 SWASTK INDUSTRES,

SWITZER INSTRUMENTS LIMITED  
 SYNCHRON MACHINE TOOLS PVT.  
 SYSTEMS AIDS  
 T.A.HYDRAULICS PVT.LTD.  
 TAMILNADU CHERAN INDUSTRI,TIRUCHIRAPALLI  
 TAMILNADU MACHINE TOOLS  
 TAMM ELECTRICALS  
 TASKA FIBRES PRIVATE LIMITED  
 TAURUS POLYMERS PVT. LTD.,  
 TAURUS THERMOTECH PVT. LTD.  
 TCL MONITORS (P) LTD.,  
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 TEC-FAB  
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 TECHNICAL CONSULTANCY & SERVICE  
 TECHNIKEN  
 TECHNO ENTERPRISES  
 TECHNO LINE  
 TECHNO POLYMERS PVT. LTD.,  
 TECHNO TOOL ENGINEERING,COIMBATORE  
 TECHNOFAB ENGINEERING LIMITED  
 TECHNOLOGY PRODUCTS  
 TECHNOMATIC (INDIA) PRIVATE  
 TECHNOMET  
 TELECOMMUNICATION CABLE &  
 CONDUCTOR MFG CO  
 TELETERM INSTRUMENT CO P LTD  
 TEXPLAS (INDIA) PVT LTD  
 THAIYALNAYAKI INDUSTRIES, TIRUCHIRAPALLI  
 THAPSONS CHEMICALS  
 THE HYDERABAD HEAVY ENGG.  
 THE ISHWAR MINING  
 THE MMTC  
 THE NASA PUMP FACTORY  
 THE PERFECT EQUIPMENT,COIMBATORE  
 THE TAMILNADU CHERAN INDUSTRIES  
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 THERMOPADS PVT LTD  
 THERMOWEL INSULATION & PACKAGING PVT LTD  
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 THILLAI ENGINEERING WORKS  
 THIRUMAGAL INDUSTRIES,TIRUCHIRAPALLI  
 TIDE STEEL COMPANY  
 TIRUMALA INDUSTRIES  
 TOOK FAB  
 TOOLS & COMPONENTS INDUSTRIES  
 TOSHNIWAL CABLES PVT. LTD  
 TR ENTERPRISES  
 TRANSFORMER MFG.INDUSTRIES  
 TRANSPOWER INDUSTRIES STATE BANK  
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 TRIBOLOGY INDIA LIMITED, CHENNAI  
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 TRIVENI HYDROLICK  
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 TUF-PACK INDUSTRIES  
 TURBO JET ENGG INDIA PVT LTD  
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 TURBOMACHINERY ENGINEERING  
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 TUSHACO PUMPS PVT LIMITED  
 TV ENGINEERING  
 TWILIGHT PLASTIC INDUSTRIES





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UNITED ENGG INDUSTRIES  
UNITED ENGINEERS  
UNITED METAL COINERS, INDIAN BAN  
UNITED METALS (INDIA)  
UNITED PLASTIC COMPANY  
UNITED RUBBER INDUSTRIES  
UNITEK NITRIDING, TIRUCHIRAPALLI  
UNIVERSAL INDUSTRIES  
UNIVERSAL ENGG WORKS  
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UNIVERSAL INDUSTRIES  
UNIVERSAL POWER TRANSFORMER PVT LTD  
UNIVERSAL REPROGRAPHICS  
UNIVERSAL TRANSFORMERS  
UPPAL FERROCAST PVT LTD  
UPPER INDIA SPECIAL CASTINGS LTD.  
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UT PUMPS & SYSTEMS LTD.  
UTSAV ELECTRO-MECH PVT. LTD.  
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VAJRA RUBBER PRODUCTS LTD, THRISSUR  
VAKOSEALS,  
VALFLO PVT. LTD.  
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VALQUA PRODUCTS  
VALQUA PRODUCTS  
VALUE TREK ENGINEERS  
VANGUARD INDUSTRIES,TIRUCHIRAPALLI  
VANITHA MOULDING WORKS, TIRUCHIRAPALLI  
VANJAX SALES (P) LTD  
VANKOS & COMPANY  
VARDHMAN CASTER INDUSTRIES,  
VARIETY FIBRES  
VARIETY INSULATORS,  
VARSHA CABLES PVT. LTD.  
VARTECH ENGINEERS (P) LTD.  
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VASAN INDUSTRIES  
VASANTHALAKSHMI ENGG WORKS  
VASANTHI HEAVY MACHINING P. LTD.  
VASUDHA ENGG WORKS,TIRUCHIRAPALLI  
VAYUBODHAN UPKARAN PVT LTD.  
VEESONS  
VEEYES ALLOYS PRIVATE LIMITED, COIMBATORE  
VEL INDIA STRUCTURALS

VELLORE ELECTR SERV  
VELMURUGAN INDUSTRIES,TIRUCHIRAPALLI  
VENKATESHWARA ENGINEERING WORKS  
VENKATESWARA INDUSTRIES  
VENUS ENGG, TIRUCHIRAPALLI  
VENUS ENGINEERING  
VENUS ENGINEERING WORKS,TIRUCHIRAPALLI  
VENUS PUMP  
VERSABYTE DATA SYSTEMS PVT LTDBANK OF BA  
VESTOS HOSE DIVISION PVT. LTD.  
VETRI VEL ENGG ENTERPRISE, TIRUCHIRAPALLI  
VIDMAS  
VIJAINAAG INDUSTRIES  
VIJAY ENGINEERING  
VIJAY ENGINEERING INDUSTRIES  
VIJAY INDUSTRIAL CORPORATION  
VIJAY POWER & SPARES  
VIJAYA ENGG WORKS, TIRUCHIRAPALLI  
VIJJAAY COY INDUSTRIE,TIRUCHIRAPALLI  
VIJYANT ENGG.  
VIKAS MACHINO FABS (P) LTD.  
VINIR ENGINEERING PVT LTD, BANGALORE  
VINIR ENGINEERING PVT. LTD.  
VIPIN INDUSTRIES  
VISHAL ENGINEERS  
VISHNU FORGE INDUSTRIES LTD.  
VISHNU FORGE INDUSTRIES LTD STATE BANK  
VISHWAKARMA REFACTORIES  
VIVEK ENGINEERING CORPORATION  
VIVEKANANDA ENGG WORKS, PUDUKKOTTAI  
VKAN SHOT BLASTING INDUSTIRES  
V-MEGH INDUSTRIES  
VMX PRECISION ENGINEERING, ARANTHANGI  
VULCAN ENGINEERS LTD.  
VYJAYANTH ENGINEERING PVT.  
WAAREE INSTRUMENTS LIMITED  
WADWHA BROTHERS ENGG,CHENNAI  
WELD FABRICATORS  
WELD-VEL ENGINEERS PVT LTD.  
WELFLEX POLYMERS PVT. LTD.,  
WESTERN EXTRUSION INDUSTRIES  
WESTERN HIVOLTS EQUIPMENT  
WESTERN INDIA FORGINGS LTD PUNE  
WIN CRAFT  
WIRE FLATTENERS  
WISDOM ENTERPRISES, TIRUCHIRAPALLI  
WOOD & INSULATION PRODUCTS  
WOOLLEN AND FELT INDUSTRIES  
XIMAX TECHNOLOGIES  
XL ENGINEERING, TIRUCHIRAPALLI  
YASHMUN ENGINEERS LTD.,  
YEMEE TOOLINGS  
YOGASHRI HEAVY ENGINEERING (P)  
YOGESHWAR ALLOY CASTING PVT. LTD  
YOGYA ENTERPRISES  
YUKEN INDIA  
Y-WAY INDUSTRIES  
ZEBRA WEBLIFT PVT LTD.  
ZENTRONIC SYSTEM

# PRODUCT PROFILE

## **THERMAL POWER PLANTS**

- Steam turbines, boilers and generators of up to 500 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 660 MW unit size. Facilities available for 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.

## **GAS-BASED POWER PLANTS**

- Gas turbines of up to 260 MW (ISO) rating.
- Gas turbine-based co-generation and combined-cycle systems for industry and utility applications.

## **HYDRO POWER PLANTS**

- Custom-built conventional hydro turbines of Kaplan, Francis and Pelton types with matching generators, pump turbines with matching motor-generators.
- 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 260 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 500 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 600m<sup>3</sup>/s and pressure up to 700m 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 600m<sup>3</sup>/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 deslagers, 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/cm<sup>2</sup> pressure and 540°C temperature.
  - High-capacity safety valves and automatic electrically operated pressure relief valves for set pressure up to 200 kg/cm<sup>2</sup> and temperature up to 550°C.
  - Safety relief valves for applications in power, process and other industries for set pressure up to 175 kg/cm<sup>2</sup> and temperature up to 565°C.
- Ceramic-lined PF bends.

### **PIPING SYSTEMS**

- Constant load hangers, clamp and hanger components, variable spring hangers for power stations up to 850 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 660 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).
- SF<sub>6</sub> circuit breakers (132 kV - 400 kV).
- Vacuum circuit breakers (3.3 kV - 33 kV).
- Gas insulated switchgears (36 kV).

### **BUS DUCTS**

- Busducts with associated equipment to suit generator power output of utilities of up to 500 MW capacity.

### **TRANSFORMERS**

- Power transformers for voltage up to 400 kV.
- HVDC transformers and reactors up to ± 500 kV rating.
- Series and shunt reactors of up to 400 kV rating.
- 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 300 kN electro-mechanical 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, SF<sub>6</sub> circuit breakers.
  - Solid core porcelain insulators for 25 kV Railway Traction.
  - Composite Insulators for 25 kV Railway Traction and up to 400 kV transmission lines.
  - Disc insulators for 800 kV AC and  $\pm$  500 kV HVDC transmission lines (BHEL is the first Indian manufacturer to supply such insulators).

## **CAPACITORS**

- Power capacitors for industrial and power systems of up to 250 kVAR 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.

## **ENERGY METERS**

- Single-phase, poly-phase and special-purpose electro-mechanical and electronic meters.

## **ELECTRICAL MACHINES**

AC squirrel cage, slipring, synchronous motors, industrial alternators and DC machines are manufactured as per range summarised below. Special-purpose 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                 | 2000 kVA to                   |
| and diesel engine driven                     | 60,000 kVA                    |
| • Voltage & Enclosure                        |                               |
| — Voltage                                    | AC-415 V to 13800 V           |
|  | DC - up to 1200 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/cm<sup>2</sup> and capacity upto 350,000 Nm<sup>3</sup>/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 sub-stations.

- 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 shunting locomotives.
- Diesel hydraulic shunting locomotives.
- OHE recording-cum-test car.
- Electric traction equipment (for diesel/electric locos, electric multiple units, diesel multiple units and urban transportation systems).
- Traction motors.
- Inductors.
- 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.
- Traction control gear.
- Vessel Traffic Management system.
- Battery-powered road vehicle.
- Ceramic catalytic converter for pollution control.

### **OIL FIELD EQUIPMENT**

- Oil Rigs –  
A variety of on-shore rigs, work-over rigs, mobile rigs, heli-rigs, 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.

### **NON-CONVENTIONAL ENERGY SYSTEMS**

- Wind electric generator of up to 250 kW rating.
- Solar PV systems and power plants.
- Solar water heating system.
- Solar lanterns.
- Battery-powered road vehicle.

### **TELECOMMUNICATION**

- Switching equipment - RAX, MAX-L, MAX-XL

### **AVIATION**

- Light aircraft.

### **SYSTEMS AND SERVICES**

- Power Generation Systems.
    - Turnkey power stations.
    - Combined-cycle power plants.
    - Cogeneration systems.
    - Modernisation and Rehabilitation of power stations.
  - Transmission systems
    - Sub-stations/switchyards.
    - HVDC transmission systems.
    - Shunt and Series compensation systems.
    - Power system analysis.
  - 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.

