

INDIA

## Bharat Heavy Electricals

4 March 2008

**BHEL IN** **Outperform**

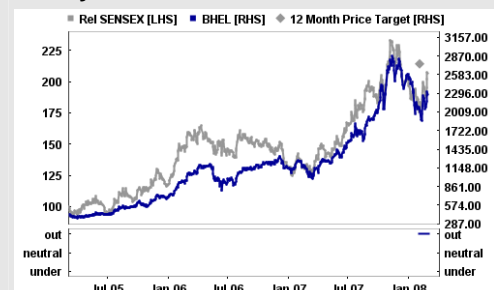
Stock price as of 03 Mar 08	Rs	2,099.45
12-month target	Rs	2,751.00
Upside/downside	%	+31.0
Valuation	Rs	2,751.00
- PER		

GICS sector		capital goods
Market cap	Rs bn	1,028
30-day avg turnover	US\$m	56.8
Market cap	US\$m	25,745
Number shares on issue	m	489.5

### Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	bn	176.1	221.3	287.7	382.1
EBITDA	bn	36.2	46.1	62.1	94.1
EBITDA growth	%	40.2	27.1	34.9	51.5
Recurring profit	bn	37.4	48.7	66.5	101.3
Reported profit	bn	24.1	32.4	44.2	67.3
Adjusted profit	bn	24.1	32.4	44.2	67.3
EPS rep	Rs	49.33	66.13	90.39	137.57
EPS rep growth	%	43.8	34.1	36.7	52.2
EPS adj	Rs	49.33	66.13	90.39	137.57
EPS adj growth	%	43.8	34.1	36.7	52.2
PE rep	x	42.6	31.7	23.2	15.3
PE adj	x	42.6	31.7	23.2	15.3
Total DPS	Rs	14.15	16.04	21.92	33.36
Total div yield	%	0.7	0.8	1.0	1.6
ROA	%	16.2	16.3	17.4	20.6
ROE	%	30.0	32.3	34.3	39.3
EV/EBITDA	x	26.1	20.6	15.3	10.1
Net debt/equity	%	-65.1	-71.3	-78.6	-77.1
Price/book	x	11.7	9.1	7.0	5.2

### BHEL IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, March 2008 (all figures in INR unless noted)

### Analyst

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## Triggers for re-rating in place

### Event

- In light of positive developments on the super-critical technology orders and post a sharp price correction, we believe BHEL is attractively priced at current levels.

### Impact

- Concern over super-critical technology to get addressed:** Competition on the super-critical front was likely the single biggest concern on the stock. We believe this should get addressed over the near term as the company creates the possibility of order inflow from three different sources.
  - ⇒ **Negotiated orders on the super-critical front a distinct possibility:** NTPC has recently written the government asking to extend benefits of the mega power policy to negotiated orders for super-critical technology. This signals willingness of NTPC to award projects on a negotiated basis. We believe this would lead to a sharp re-rating in the stock.
  - ⇒ **BHEL to bag orders for super-critical units through competitive bidding:** In the last couple of quarters, BHEL has emerged as the lowest cost bidder for NTPC and SEB orders for super-critical units even in competitive bidding.
  - ⇒ **BHEL is creating captive order inflow through equity stakes:** BHEL is in discussions with three state governments to pick up equity stakes in power plants based on super-critical technology.
- Strength in order inflow to sustain:** BHEL announced orders worth Rs105bn for 3,295MW in the 4Q FY3/08 to-date. We expect the strength to continue as orders for 15GW of sub-critical units are yet to be placed in the current five year plan period. The massive order backlog provides earnings visibility until FY11.
- BHEL is valued favourably to Chinese equipment manufacturers:** BHEL is valued favourably to Chinese players, given BHEL's superior earnings growth and ROE. We argue for a premium multiple for BHEL as India is set for a secular power capacity addition, while China has been ahead on the capacity addition curve.

### Earnings revision

- No revision.

### Price catalyst

- 12-month price target: Rs2,751.00 based on a PER methodology.
- Catalyst: Order inflow for super-critical units through negotiated or competitive bidding route.

### Action and recommendation

- We believe earnings visibility from a huge order backlog and imminent orders for super-critical units makes the risk-reward on the stock extremely favourable. We recommend Outperform on the stock.

Please refer to the important disclosures and analyst certification on inside back cover of this document, or on our website [www.macquarie.com.au/research/disclosures](http://www.macquarie.com.au/research/disclosures).

## Concerns on the super-critical front to decline

### Negotiated orders – a distinct possibility

BHEL and its parent ministry, Ministry of Heavy Industries, have been pushing the government to award orders for 8–10 units of super-critical boilers and turbines on a negotiated basis. The Ministry of Power had publicly voiced its opposition to this demand. However, a recent turn of events suggests that the Ministry of Power has softened its stance on the issue. As per media reports, NTPC has recently written the government asking for modifications in the current mega power policy.

- **Benefits of the mega power policy to be extended to negotiated super-critical orders:** This move clearly suggests that NTPC has reconciled to the fact that it would have to award orders to BHEL on a negotiated basis. It expects to get the benefit of excise duty exemptions on these projects. The government should not have a problem accepting this demand as NTPC would be eligible for the tax waiver if it procures projects through international competitive bidding.
- **Government to suggest mechanism for the award:** NTPC has asked to prescribe the exact mechanism for awards on a negotiated basis.

### About the mega power policy:

The government formulated the mega power policy to focus on the capacity addition program. Key features of this policy are:

- Applicable to thermal plants with capacity above 1,000MW.
- Equipment ordering/awards of the project to be on an international competitive bidding route.
- Equipment purchases are exports and no excise duty is applicable.

### BHEL emerging as the lowest cost bidder in super-critical orders

In the last couple of quarters, BHEL has emerged as the lowest-cost, or the only bidder for NTPC and other SEB projects. We believe the specifications laid out by NTPC and SEBs factor in the local coal quality and require customisation to the standard equipment wiping out much of the cost advantage over BHEL. Even on the technical criteria, projects where BHEL has emerged as the lowest bidder are as follows.

- **1,600MW Krishnapatnam power plant:** The plant is being developed by APSEB (Andhra Pradesh State Electricity Board); BHEL was the only bidder for 800MW x 2 units. The project has been put up for re-bidding in hopes of attracting more players.
- **1,320MW Barh-II project:** In this NTPC-promoted project, BHEL emerged as the lowest-cost bidder for the boiler package valued at Rs26bn. The turbine order is currently open for bidding and the bidding date has been advanced at the request of other players.

### BHEL picking up stake in SEB projects based on super-critical technology

BHEL has proactively started to negotiate with various state governments to set up power plants based on super-critical technology in the respective states. It is currently in active discussions with three state governments for the joint venture. BHEL would pick up 50% stakes in these plants and receive captive orders for power equipment. BHEL has already signed an MOU with the state of Tamil Nadu for a 1,600MW (800MW X 2) plant, in which it would take a 50% stake. Three such JVs would give BHEL orders for six units of super-critical boiler and turbines.

## Strong order inflow provides earnings visibility

### Order inflow in the current quarter has been strong

The company announced orders for Rs105bn in the first two months of 4Q FY3/08 against total order inflow of Rs365bn in the 9M FY08 period. Total projects announced to-date include orders for 1,695MW of gas turbines and 1,600MW of coal-based power plants.

**Fig 1 Order inflow remains robust in 4Q FY3/08**

Project	in MW	in Rs bn
Gas turbine for GSPC power project	700	18.9
Gujarat state electricity board	350	10.8
Libya Gas turbine	300	6.5
Anpara-D thermal power project	1,000	33.9
Tamil Nadu Electricity board project	600	24.8
Reliance Industries Gas turbine	345	8.7
ONGC spares order		2.0
Total	3,295	105.5

Source: Company, Macquarie Research, March 2008

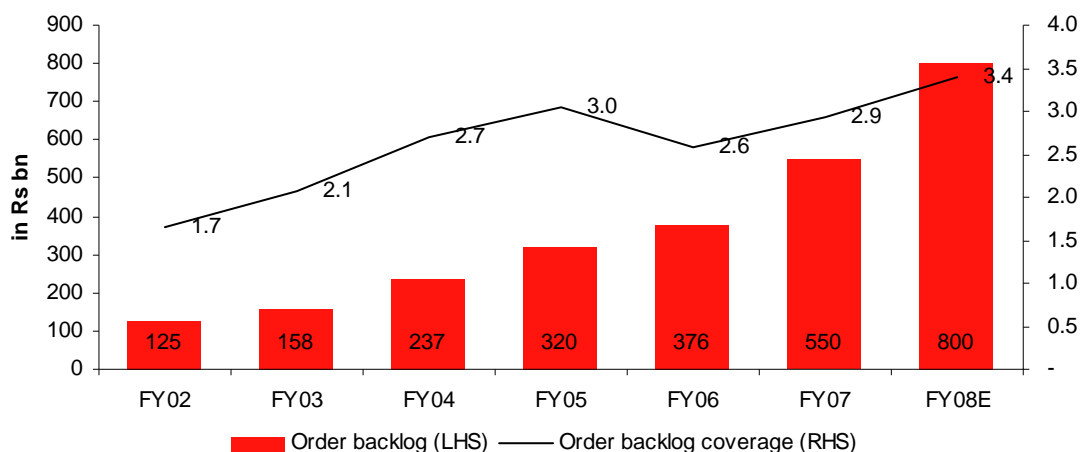
### Outlook on order inflow remains robust

In the budget speech, the finance minister clearly spelled out that the capacity addition program for the 11th five-year plan (FY07–FY12) is for 78GW. This should end confusion as some of the planning commission documents had pegged this at 68GW. We believe ordering out for another 15GW of sub-critical projects has yet to happen, giving strong visibility on order inflow for FY09.

Beyond the 11th plan, the CEA (central electricity authority) put out a shelf of projects for 92GW, which are to be awarded in the current plan and commissioned in the next plan period. These projects should be awarded from FY10 onwards.

### FY3/08 order backlog to provide earnings visibility until FY3/11

We expect that BHEL should end FY08 with order backlog of around Rs800bn, which implies order backlog coverage of 3.4x. The huge order backlog should provide earnings visibility over next three years.

**Fig 2 Order backlog provides earnings visibility until FY11**

Source: Macquarie Research, March 2008

## Valuations remain attractive

### BHEL compares well with Chinese equipment manufacturers

BHEL is currently trading at 23x FY3/09E and 15x FY3/10E earnings multiple. The three largest Chinese equipment companies are trading at average earnings multiples of 19x and 16x on CY08 and CY09, respectively. Chinese power equipment has witnessed capacity increases from 130GW in 1992 to 720GW by CY07, an increase of around 6x. On the other hand, India has only doubled its capacity from 70GW to 130GW during the same period.

With India on the verge of the secular capacity addition program for the next 15 years, we expect BHEL to trade at a discount to Chinese players. However, we believe it should trade at a premium, especially with superior ROE.

**Fig 3 BHEL compares well with Chinese players**

	TICKER	PAT 3yr CAGR FY07-10	ROE		EV/EBITDA		Fwd PER	
			FY09E	FY10E	FY09E	FY10E	FY09E	FY10E
BHEL (Rs2,099, OP, TP:Rs2,751)	BHEL IN	40.8%	30.3%	34.2%	14.7	9.3	23.2	15.3
Harbin (HK\$17.7, Not rated)	1133 HK	6.1%	20.4%	16.7%	5.8	6.2	12.9	12.1
Dongfang (Rmb89.2, Not rated)	600875 CH	-5.1%	19.9%	20.1%	NA	NA	24.3	17.6
Shanghai (HK\$5.5, Not rated)	2727 HK	10.0%	15.6%	15.7%	7.2	6.3	18.7	17.4
Average		12.9%	21.5%	21.7%			22.4	17.2

Bloomberg consensus numbers taken for unrated stocks.  
Source: Macquarie Research, March 2008

**Bharat Heavy Electricals (BHEL IN, Outperform, Target price: Rs2,751.00)**

Quarterly Results					Profit & Loss						
	3Q/08A	4Q/08E	1Q/09E	2Q/09E		2007A	2008E	2009E	2010E		
Revenue	m	55,322	55,322	71,918	71,918	Revenue	m	176,143	221,287	287,674	382,142
Gross Profit	m	15,958	15,958	20,814	20,814	Gross Profit	m	51,012	63,830	83,255	119,577
Cost of Goods Sold	m	39,364	39,364	51,105	51,105	Cost of Goods Sold	m	125,131	157,457	204,419	262,565
EBITDA	m	11,514	11,514	15,531	15,531	EBITDA	m	36,248	46,058	62,123	94,126
Depreciation	m	770	770	881	881	Depreciation	m	2,730	3,078	3,525	4,039
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	10,745	10,745	14,649	14,649	EBIT	m	33,518	42,980	58,598	90,086
Net Interest Income	m	1,082	1,082	1,491	1,491	Net Interest Income	m	2,748	4,330	5,966	8,186
Associates	m	0	0	0	0	Associates	m	0	0	0	0
Exceptionals	m	0	0	0	0	Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	342	342	493	493	Other Pre-Tax Income	m	1,094	1,370	1,972	2,994
Pre-Tax Profit	m	12,170	12,170	16,634	16,634	Pre-Tax Profit	m	37,361	48,679	66,536	101,267
Tax Expense	m	-4,077	-4,077	-5,572	-5,572	Tax Expense	m	-13,214	-16,308	-22,290	-33,924
Net Profit	m	8,093	8,093	11,062	11,062	Net Profit	m	24,147	32,372	44,246	67,342
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Reported Earnings	m	8,093	8,093	11,062	11,062	Reported Earnings	m	24,147	32,372	44,246	67,342
Adjusted Earnings	m	8,093	8,093	11,062	11,062	Adjusted Earnings	m	24,147	32,372	44,246	67,342
EPS (rep)		16.53	16.53	22.60	22.60	EPS (rep)		49.33	66.13	90.39	137.57
EPS (adj)		16.53	16.53	22.60	22.60	EPS (adj)		49.33	66.13	90.39	137.57
EPS Growth yoy (adj)	%	34.1	34.1	36.7	36.7	EPS Growth (adj)	%	43.8	34.1	36.7	52.2
						PE (rep)	x	42.6	31.7	23.2	15.3
						PE (adj)	x	42.6	31.7	23.2	15.3
EBITDA Margin	%	20.8	20.8	21.6	21.6	Total DPS		14.15	16.04	21.92	33.36
EBIT Margin	%	19.4	19.4	20.4	20.4	Total Div Yield	%	0.7	0.8	1.0	1.6
Earnings Split	%	25.0	25.0	25.0	25.0	Weighted Average Shares	m	490	490	490	490
Revenue Growth	%	25.6	25.6	30.0	30.0	Period End Shares	m	490	490	490	490
EBIT Growth	%	28.2	28.2	36.3	36.3						
Profit and Loss Ratios					Cashflow Analysis						
	2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E		
Revenue Growth	%	29.0	25.6	30.0	32.8	EBITDA	m	36,248	46,058	62,123	94,126
EBITDA Growth	%	40.2	27.1	34.9	51.5	Tax Paid	m	-13,214	-16,308	-22,290	-33,924
EBIT Growth	%	43.2	28.2	36.3	53.7	Chgs in Working Cap	m	7,814	615	3,484	-8,950
Gross Profit Margin	%	29.0	28.8	28.9	31.3	Net Interest Paid	m	2,748	4,330	5,966	8,186
EBITDA Margin	%	20.6	20.8	21.6	24.6	Other	m	-82	0	0	0
EBIT Margin	%	19.0	19.4	20.4	23.6	Operating Cashflow	m	33,514	34,695	49,283	59,437
Net Profit Margin	%	13.7	14.6	15.4	17.6	Acquisitions	m	0	0	0	0
Payout Ratio	%	28.7	24.3	24.3	24.3	Capex	m	-3,887	-5,293	-6,000	-9,000
EV/EBITDA	x	26.1	20.6	15.3	10.1	Asset Sales	m	0	0	0	0
EV/EBIT	x	28.3	22.0	16.2	10.5	Other	m	1,094	1,370	1,972	2,994
Balance Sheet Ratios					Investing Cashflow	m	-2,793	-3,923	-4,028	-6,006	
ROE	%	30.0	32.3	34.3	39.3	Dividend (Ordinary)	m	-6,925	-7,850	-10,730	-16,331
ROA	%	16.2	16.3	17.4	20.6	Equity Raised	m	0	0	0	0
ROIC	%	58.1	93.1	120.7	191.5	Debt Movements	m	-4,689	1,000	0	0
Net Debt/Equity	%	-65.1	-71.3	-78.6	-77.1	Other	m	-2,353	-0	0	-0
Interest Cover	x	nmf	nmf	nmf	nmf	Financing Cashflow	m	-13,967	-6,850	-10,730	-16,331
Price/Book	x	11.7	9.1	7.0	5.2	Net Chg in Cash/Debt	m	16,749	23,922	34,525	37,100
Book Value per Share		179.5	229.6	298.1	402.3						
					Balance Sheet						
		2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E	
Cash	m	58,089	82,011	116,536	153,636	Cash	m	58,089	82,011	116,536	153,636
Receivables	m	96,958	121,910	154,387	205,086	Receivables	m	96,958	121,910	154,387	205,086
Inventories	m	42,177	53,031	68,940	91,579	Inventories	m	42,177	53,031	68,940	91,579
Investments	m	83	83	83	83	Investments	m	83	83	83	83
Fixed Assets	m	12,913	15,127	17,602	22,563	Fixed Assets	m	12,913	15,127	17,602	22,563
Intangibles	m	0	0	0	0	Intangibles	m	0	0	0	0
Other Assets	m	22,757	22,757	22,757	22,757	Other Assets	m	22,757	22,757	22,757	22,757
Total Assets	m	232,977	294,920	380,306	495,704	Total Assets	m	232,977	294,920	380,306	495,704
Payables	m	35,390	71,811	123,681	188,068	Payables	m	35,390	71,811	123,681	188,068
Short Term Debt	m	0	0	0	0	Short Term Debt	m	0	0	0	0
Long Term Debt	m	893	1,893	1,893	1,893	Long Term Debt	m	893	1,893	1,893	1,893
Provisions	m	25,222	25,222	25,222	25,222	Provisions	m	25,222	25,222	25,222	25,222
Other Liabilities	m	83,589	83,589	83,589	83,589	Other Liabilities	m	83,589	83,589	83,589	83,589
Total Liabilities	m	145,094	182,516	234,386	298,773	Total Liabilities	m	145,094	182,516	234,386	298,773
Shareholders' Funds	m	87,883	112,404	145,920	196,931	Shareholders' Funds	m	87,883	112,404	145,920	196,931
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Other	m	0	0	0	0	Other	m	0	0	0	0
Total S/H Equity	m	87,883	112,404	145,920	196,931	Total S/H Equity	m	87,883	112,404	145,920	196,931
Total Liab & S/H Funds	m	232,977	294,920	380,306	495,704	Total Liab & S/H Funds	m	232,977	294,920	380,306	495,704

All figures in INR unless noted.

Source: Macquarie Research, March 2008

## Important disclosures:

Recommendation definitions	Volatility index definition*	Financial definitions			
<p><b>Macquarie - Australia/New Zealand</b>            Outperform – return &gt;5% in excess of benchmark return (&gt;2.5% in excess for listed property trusts)            Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)            Underperform – return &gt;5% below benchmark return (&gt;2.5% below for listed property trusts)</p> <p><b>Macquarie - Asia</b>            Outperform – expected return &gt;+10%            Neutral – expected return from -10% to +10%            Underperform – expected return &lt;-10%</p> <p><b>Macquarie First South - South Africa</b>            Outperform – expected return &gt;+10%            Neutral – expected return from -10% to +10%            Underperform – expected return &lt;-10%</p> <p><b>Macquarie - Canada</b>            Outperform – return &gt;5% in excess of benchmark return            Neutral – return within 5% of benchmark return            Underperform – return &gt;5% below benchmark return</p> <p><b>Macquarie - USA</b>            Outperform – return &gt;5% in excess of benchmark return            Neutral – return within 5% of benchmark return            Underperform – return &gt;5% below benchmark return</p> <p><b>Recommendations</b> – 12 months</p> <p><b>Note:</b> Quant recommendations may differ from Fundamental Analyst recommendations</p>	<p><b>Volatility index definition*</b>            This is calculated from the volatility of historic price movements.</p> <p><b>Very high–highest risk</b> – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.</p> <p><b>High</b> – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.</p> <p><b>Medium</b> – stock should be expected to move up or down at least 30–40% in a year.</p> <p><b>Low–medium</b> – stock should be expected to move up or down at least 25–30% in a year.</p> <p><b>Low</b> – stock should be expected to move up or down at least 15–25% in a year.            * Applicable to Australian/NZ stocks only</p>	<p><b>Financial definitions</b>            All "Adjusted" data items have had the following adjustments made:            Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives &amp; hedging, IFRS impairments &amp; IFRS interest expense            Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends &amp; minority interests</p> <p><b>EPS</b> = adjusted net profit / epowa*  <b>ROA</b> = adjusted ebit / average total assets  <b>ROA Banks/Insurance</b> = adjusted net profit / average total assets  <b>ROE</b> = adjusted net profit / average shareholders funds  <b>Gross cashflow</b> = adjusted net profit + depreciation            *equivalent fully paid ordinary weighted average number of shares</p> <p>All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).</p>			
<b>Recommendation proportions – For quarter ending 31 December 2007</b>					
	<b>AU/NZ</b>	<b>Asia</b>	<b>RSA</b>	<b>USA</b>	<b>CA</b>
Outperform	46.39%	67.98%	73.08%	47.06%	70.00%
Neutral	41.24%	16.78%	21.15%	41.18%	26.92%
Underperform	12.37%	15.24%	5.77%	11.76%	3.08%

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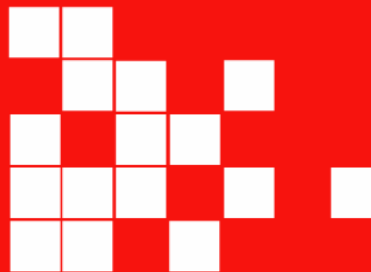
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