## Macquarie Research Equities



## INDIA

### 9 June 2008

BHEL IN		Outperform
Stock price as of 05 Jun 08 12-month target Upside/downside Valuation - PER	Rs Rs % Rs	1,444.80 2,196.00 +52.0 2,196.00
GICS sector	-	capital goods

GICS sector		capital goods
Market cap	Rs m	707,259
30-day avg turnover	US\$m	57.0
Market cap	US\$m	16,598
Number shares on issue	m	489.5

### Investment fundamentals

Year end 31 Mar		2008A	2009E	2010E	2011E
Total revenue EBITDA	bn bn	197.7 37.7	264.9 55.3	351.8 83.2	435.7 104.9
EBITDA growth	%	4.1	46.6	50.4	26.1
Adjusted profit	bn	28.6	40.1	59.7	75.0
EPS adj	Rs	58.41	81.95	121.99	153.20
EPS adj growth	%	18.4	40.3	48.9	25.6
PE adj	х	24.7	17.6	11.8	9.4
Total DPS	Rs	14.17	19.87	29.58	37.15
Total div yield	%	1.0	1.4	2.0	2.6
ROA	%	13.7	16.4	19.4	19.0
ROE	%	29.0	32.2	36.7	35.1
EV/EBITDA	х	16.7	11.4	7.6	6.0
Net debt/equity	%	-69.3	-58.9	-52.4	-54.0
Price/book	х	6.5	5.1	3.8	2.9

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



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

#### Analysts

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# Bharat Heavy Electricals

## Compelling reasons to accumulate

## Event

 We assess our stance on BHEL given the 14% correction last week amid concerns on margins because of new entrants and a slowdown in investments.

## Impact

- **Margin effect due to entry of L&T into super-critical space over-hyped:** The significant difference between BHEL and L&T's (LT IN, Rs2,681, OP, TP: Rs4,286) bid for a 1,600MW turbine order has raised concern on margins for BHEL in the super-critical space. We believe these concerns are overdone.
  - ⇒ L&T has adopted an entry-pricing strategy: L&T is unlikely to maintain these prices for projects in the future, given the huge opportunity in the power-equipment space.
  - ⇒ Insignificant contribution of super-critical projects to revenues: There would be a very marginal effect of super-critical projects on margins as this segment contributes 2% of the order backlog and would not contribute more than 10% to revenues even in FY3/11. We expect margins in the super-critical space to improve with technology indigenisation.
- ⇒ Cost of technology would differ for BHEL and L&T: We believe BHEL would have a higher cost of technology transfer compared with L&T. BHEL's agreement is only for the first 8 units of boilers and turbines, while L&T has given a 49% stake to Mitsubishi in the power-equipment venture, spreading the cost of technology over a longer period.
- Regulated returns in generation sector to protect investments: The bulk
  of the order backlog for BHEL is from government-controlled entities, which
  operate in a regulated-return regime. We do not expect any of these entities
  to roll back the capex schedule as interest costs are pass-through.
- Non-consensus margin-expansion call: We have a non-consensus marginexpansion call on BHEL as a result of the operating leverage, despite a 2.5% hit on gross margins because of input costs.

## **Earnings revision**

No change.

## **Price catalyst**

- 12-month price target: Rs2,196.00 based on a PER methodology.
- Catalyst: Award of super-critical projects and margin expansion.

## Action and recommendation

Stock building no-growth scenario: The stock is trading at a rolling 1-year forward PER multiple of 16.2x, close to 2-year lows, while visibility on business has improved. Given the earnings visibility to FY3/11, we believe the stock is trading at an extremely favourable risk-reward scenario. BHEL is now our top pick in our coverage universe with a 12-month target price of Rs2,196.

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.

## Concerns on margin compression due to competition overdone

Last week, L&T outbid BHEL for the 1,600MW turbine order for Andhra Pradesh State Electricity Board's (APSEB) 1,600MW Krishnapatnam power-project turbine order. The L&T bid was at Rs15bn, much lower than the Rs20bn bid submitted by BHEL. The significant difference in the bids has raised concerns on the long-term competitiveness of BHEL. Moreover, concerns on the macro-environment worsening due to a huge oil subsidy have further dampened sentiment on the stock. We believe the concerns are overdone and already built into the price.

**Entry-level pricing used by L&T should not last for long:** We believe L&T has undercut BHEL to get its first order in this space and kick-start its power-equipment business. L&T has a history of using an entry-pricing strategy to enter a new business as it did in the Middle East. L&T's margins for this project could be much lower than BHEL. Moreover, BHEL recently bagged a 1,320MW Barh boiler order at a price of Rs14m/MW against Chinese/Korean competition. So its bid of Rs12.5m for the Krishnapatnam order was not completely off the mark.

**Enough in the offing for BHEL:** Projects for 18,000MW based on super-critical technology are coming up over next 12 months or so. L&T, with initial capacity of 4,000MW, would not be able to take a fraction of the opportunity. BHEL has been assured 3 of the 7 units for 660MW and 2 of the 4 units of 800MW each. With the government pushing for domestic manufacturing to be mandatory in the bidding of these projects, BHEL would have the field practically open.

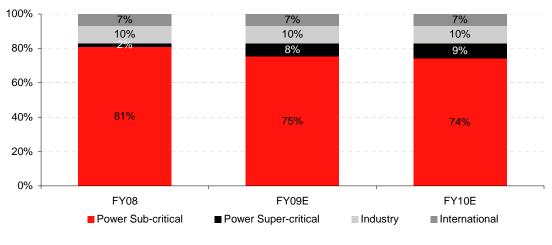
Company	Unit size (MW)	No of units	Location	Total (MW)	BHEL assured (Nos.)	Size assured to BHEL (MW)
NTPC	660	7		4,620	3	1,980
NTPC	800	4	Dharipalli, Orissa	3,200	2	1,600
DVC	800	2	Koderma, Jharkhand	1,600		
TNEB	800	2	Udangudi	1,600	2	1,600
Barh Turbin order	660	2	-	1,320		
Krishnapattnam - UMPP	800	5		4,000		
Krishnapattnam - Boiler order	800	2		1,600		
Total				17,940		5,180
Source: Macquarie Research, J	lune 2008					

## Fig 1 Super-critical projects coming up for bidding

**No major increase in competitive intensity, market share to shift from Chinese to L&T:** We believe that this would not result in any major increase in competitive intensity for BHEL, but implies only a market-share shift from Chinese players to L&T. We now expect a number of orders in which the private sector was looking toward the Chinese players to shift to L&T. There has been a definite increase in discomfort with Chinese players after the West Bengal State Electricity Board project at Sagardighi suffered serious problems just after commissioning. Sterlite also faced similar problems from Chinese equipment.

**BHEL may have a higher upfront technology cost:** One of the possible reasons for the large difference in the bids by BHEL and L&T would be the upfront technology cost each entity has to bear. BHEL-Alstom/Siemens is a pure technology-transfer agreement where components would be imported for the first 8 units of boiler/turbines and that too in a decreasing proportion. After BHEL absorbs the technology, Alstom and Siemens would not have any financial interest left. However, L&T has formed a JV with Mitsubishi Heavy Industries (MHI) and has given it a 49% financial interest in the entity. So L&T would have spread out the cost of technology acquisition, while BHEL may have front-loaded its cost of technology. BHEL and L&T management have not commented on the difference in prices and the reasons for that.

**Insignificant margin effect from super-critical segment:** We believe BHEL's margins are protected to FY3/11 as super-critical forms only 2% of BHEL's order backlog and even at the end of FY3/09 would only be 7–8% of the order backlog. Contribution of super-critical projects to revenues would not be more than 3–4% even in FY3/10. We believe margins for BHEL on the super-critical projects would improve as its dependency on imported equipment would reduce over a period of time.



## Fig 1 Super-critical projects in BHEL's order backlog for FY3/08–10E

Source: Macquarie Research, June 2008

## Planned investment in power to go ahead in the public space

**Bulk of orders from public-sector entities, which are neutral to interest costs:** With the oil subsidy expected to create a significant effect on the fiscal situation of the government, there are concerns that government investments in the infrastructure space may take a hit and interest rates might increase. The case might be slightly different for generation companies/entities as the bulk of the funding would still come from the banking system (projects financed through 80:20 debt equity). The rise in interest costs would not hurt public-sector generation companies/entities as returns for these entities are regulated: Interest costs are pass-through for all of these projects. Moreover, the power-deficit situation is not expected to improve despite a possible slowdown in the economy.

**Private players' projects might be hit:** Most of the power projects taken up by private players have been taken on a bidding basis. The returns on these projects would be sensitive to interest rates. Some of the projects might have issues with funding though we have not come across power projects which have not been able to find debt funding if they have fuel linkages and long-term power-purchase agreements in place. These private players have been leading the switch from BHEL to other private players. So even if these projects are delayed, the near-term effect on BHEL is minimal.

## Non-consensus margin-expansion call

We have a non-consensus margin-expansion call on BHEL as a result of the operating leverage that we are building in for the next 2 years. We arrive at the conclusion on following assumptions:

**Gross margin hit of 2.5%:** This is based on assuming 25% of the projects would have no pass-through, a 20% steel component and a 50% price escalation beyond expected.

**Staff-cost growth at 8% in FY3/09:** This is based on a 15% growth in staff cost after taking out a one-time hit of Rs2bn.

Others at 15% for FY09/10: Others increased by 2% in FY3/08 and we believe our estimates are not aggressive.

**Excise-duty hit being completely ignored:** BHEL booked a 10% excise duty in FY3/08, while the rate has remained constant at 8% for the past many years. We have still built in an 8% excise-duty rate for FY3/09.

	FY3/08	FY3/09	FY3/10
Sales growth	1.00	<b>1.31</b> 31%	<b>1.73</b> 32%
Cost of goods sold	0.57	0.78	1.03
% of sales	57.0%	59.5%	59.5%
Staff cost	0.18	0.19	0.21
growth %		8%	12%
Öthers	0.08	0.09	0.1
growth %		15%	15%
Total costs	0.83	1.06	1.35
EBITDA	0.17	0.25	0.38
EBITDA margin	17.4%	19.0%	22.1%
Source: Macquarie Research, June 2008			

#### BHEL – our reasons to believe that the margins would expand in the next 2 years Fig 2

Our EPS numbers are 4% and 16% higher than consensus for FY3/09E and FY3/10E respectively: We are ahead of the consensus on earnings even as we are slightly lower on the topline estimates. The key difference is on account of margin expansion in FY3/09 and FY3/10. We believe margins would taper off from peak levels of FY3/10 as most of the operating leverage would have already played out by then.

## Fig 3 BHEL – Macquarie vs consensus estimates

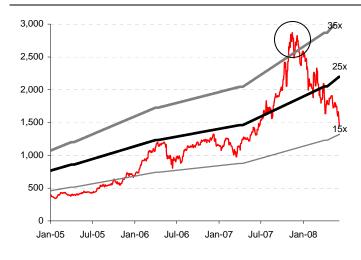
		FY3/09			FY3/10	
	Macquarie Est	Consensus Est	Diff (%)	Macquarie Est	Consensus Est	Diff(%)
Sales	259,710	268,089	-3.1%	344,882	346,318	-0.4%
EBITDA	55,322	53,717	3.0%	83,199	73,904	12.6%
PAT	40,118	38,936	3.0%	59,716	52,266	14.3%
EPS	82.0	78.7	4.1%	122.0	105.1	16.1%
EBITDA margin	21.3%	20.0%	1.3%	24.1%	21.3%	2.8%

ce: Bloomberg, Macquarie Research, June 20

## Valuations – risk reward extremely favourable

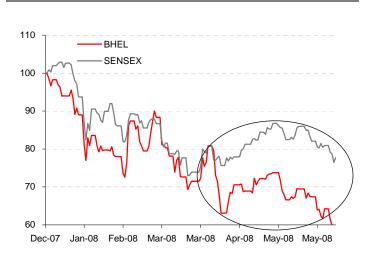
Multiples at 2-year lows after sharp underperformance: The stock has corrected by almost 50% from its peak of Rs2,870 in the past 6 months. The 1-year forward-rolling PER multiple has come down from 39.3x to the current 16.2x. BHEL has underperformed the Sensex by a significant 29% in CY08 with most of the underperformance coming after FY3/08 provisional numbers were declared in April 2008.

The multiples have come back to 2-year lows despite order backlog increasing by 128% and orderbacklog coverage increasing from 2.6x to 4.0x during the same period.



#### Fig 4 Stock trading at cheap multiples of 16x 1 yr fwd PE

#### Underperformed Sensex by 29% YTD Fig 5



Source: Macquarie Research, June 2008

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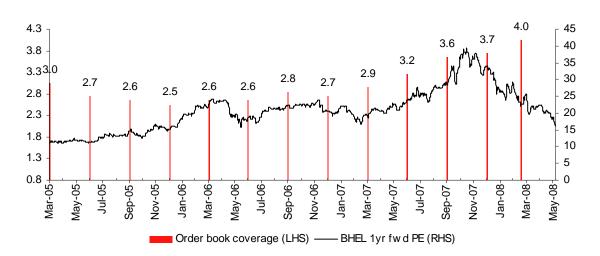


Fig 6 Order-backlog coverage is at an all-time high, while valuations are at a 2-year low

Source: Macquarie Research, June 2008

**Stock trading close to no-growth scenario, BHEL now our top pick in the coverage universe:** BHEL has guided for Rs400–500bn of order inflow in FY3/09. BHEL would end FY3/09 with order backlog of Rs1,028bn, around 4x FY3/09 revenues. This provides visibility of revenues and earnings growth to FY3/11. Assuming a sharp de-acceleration in earnings growth beyond FY3/11 and an exit multiple of 10x 1-year forward PER, the stock would not be trading far from the current price. The current stock price implies a no-growth scenario in order inflow, which is unlikely given the huge demand-supply mismatch. The risk-reward scenario is extremely favourable. BHEL is now our top pick in our coverage universe with a 12-month target price of Rs2,196.

## Triggers in place for re-rating

We believe there are triggers in place for the stock to re-rate from the current levels:

**Award of super-critical orders:** We believe that a sizeable number of super-critical orders would be awarded to BHEL on a negotiated basis in the next 3–6 months. Out of the 18,000MW of projects based on super-critical technology, which are coming up over next 12 months or so, BHEL has been assured 3 of the 7 units for 660MW and 2 of the 4 units of 800MW each.

**Margin expansion from operating leverage:** We believe the Street is discounting the fact that the staff-cost run rate would decrease in FY3/09, which would lead to operating leverage and hence overcompensate for a hit on gross margins. We believe we could start seeing margin expansion as early as 1Q FY3/09.

## Bharat Heavy Electricals (BHEL IN, Outperform, Target price: Rs2,196.00)

Quarterly Results	icais (	4Q/08A	1Q/09E	2Q/09E	3Q/09E	Profit & Loss		2008A	2009E	2010E	2011E
Revenue	m	49,431	66,226	66,226	66,226	Revenue	m	197,724	264,904	351,780	435,740
Gross Profit	m	13,239	18,206	18,206	18,206	Gross Profit	m	52,957	72,825	103,677	128,467
Cost of Goods Sold	m	36,192	48,020	48,020	48,020	Cost of Goods Sold	m	144,767	192,079	248,103	307,273
EBITDA	m	9,434	13,831	13,831	13,831	EBITDA	m	37,737	55,322	83,199	104,917
Depreciation	m	743	872	872	872	Depreciation	m	2,972	3,490	3,920	5,405
Amortisation of Goodwill	m	0	0	0	0	Amortisation of Goodwill	m	_,•• _	0	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	8,691	12,958	12,958	12,958	EBIT	m	34,765	51,832	79,279	99,512
Net Interest Income	m	1,464	1,805	1,805	1,805	Net Interest Income	m	5,856	7,219	8,168	10,358
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	921	410	410	410	Other Pre-Tax Income	m	3,683	1,641	2,759	3,418
Pre-Tax Profit	m	11,076	15,173	15,173	15,173	Pre-Tax Profit	m	44,304	60,693	90,206	113,287
Tax Expense	m	-3,928	-5,144	-5,144	-5,144	Tax Expense	m	-15,711	-20,575	-30,490	-38,291
Net Profit Minority Interests	m m	<b>7,148</b> 0	<b>10,030</b> 0	<b>10,030</b> 0	<b>10,030</b> 0	Net Profit Minority Interests	m m	<b>28,593</b> 0	<b>40,118</b> 0	<b>59,716</b> 0	<b>74,996</b> 0
Reported Earnings Adjusted Earnings	m m	7,148 7,148	10,030 10,030	10,030 10,030	10,030 10,030	Reported Earnings Adjusted Earnings	m m	28,593 28,593	40,118 40,118	59,716 59,716	74,996 74,996
		14.60	20.40	20.49	20.49	EPS (rep)		EQ 44	81.95	101.00	153.20
EPS (rep) EPS (adj)		14.60	20.49 20.49	20.49	20.49 20.49	EPS (lep) EPS (adj)		58.41 58.41	81.95 81.95	121.99 121.99	153.20
EPS Growth yoy (adj)	%	14.00	40.3	40.3	40.3	EPS (auj) EPS Growth (adj)	%	18.4	40.3	48.9	25.6
	70	10.4	40.5	40.5	40.5	PE (rep)	X	24.7	17.6	11.8	9.4
						PE (adj)	x	24.7	17.6	11.8	9.4
EBITDA Margin	%	19.1	20.9	20.9	20.9	Total DPS		14.17	19.87	29.58	37.15
EBIT Margin	%	17.6	19.6	19.6	19.6	Total Div Yield	%	1.0	1.4	2.0	2.6
Earnings Split	%	25.0	25.0	25.0	25.0	Weighted Average Shares	m	490	490	490	490
Revenue Growth	%	12.3	34.0	34.0	34.0	Period End Shares	m	490	490	490	490
EBIT Growth	%	3.7	49.1	49.1	49.1						
Profit and Loss Ratios		2008A	2009E	2010E	2011E	Cashflow Analysis		2008A	2009E	2010E	2011E
		10.0	04.0	00.0	00.0			o <del>-</del>	FF 000		404.047
Revenue Growth	%	12.3	34.0	32.8	23.9	EBITDA	m	37,737	55,322	83,199	104,917
EBITDA Growth	%	4.1	46.6	50.4 53.0	26.1	Tax Paid	m	-15,711	-20,575	-30,490	-38,291
EBIT Growth	%	3.7	49.1		25.5	Chgs in Working Cap Net Interest Paid	m	1,879	-7,333	-14,557	-8,685
Gross Profit Margin EBITDA Margin	% %	26.8 19.1	27.5 20.9	29.5 23.7	29.5 24.1	Other	m m	5,856 0	7,219 0	8,168 0	10,358 0
EBIT Margin	%	17.6	19.6	22.5	22.8	Operating Cashflow	m	29,761	34,634	46,320	68,299
Net Profit Margin	%	14.5	15.1	17.0	17.2	Acquisitions	m	23,701	04,004	40,320	00,200
Payout Ratio	%	24.3	24.3	24.3	24.3	Capex	m	-7,793	-20,000	-20,000	-20,000
EV/EBITDA	x	16.7	11.4	7.6	6.0	Asset Sales	m	0	20,000	20,000	20,000
EV/EBIT	x	18.2	12.2	8.0	6.3	Other	m	3,683	1,641	2,759	3,418
						Investing Cashflow	m	-4,110	-18,359	-17,241	-16,582
Balance Sheet Ratios						Dividend (Ordinary)	m	-6,934	-9,729	-14,482	-18,187
ROE	%	29.0	32.2	36.7	35.1	Equity Raised	m	0	0	0	0
ROA	%	13.7	16.4	19.4	19.0	Debt Movements	m	1,000	-1,893	0	0
ROIC	%	73.1	101.9	91.3	74.8	Other	m	-0	0	0	0
Net Debt/Equity	%	-69.3	-58.9	-52.4	-54.0	Financing Cashflow	m	-5,934	-11,622	-14,482	-18,187
Interest Cover Price/Book	x x	nmf 6.5	nmf 5.1	nmf 3.8	nmf 2.9	Net Chg in Cash/Debt	m	19,717	4,653	14,597	33,529
Book Value per Share	X	223.8	285.9	378.3	494.3	Net Chg in Cash/Debt	m	19,717	4,055	14,597	33,529
						Balance Sheet		2008A	2009E	2010E	2011E
						Cash	m	77,806	82,459	97,056	130,585
						Receivables	m	108,928	146,083	193,990	240,291
						Inventories	m	47,383	63,546	84,386	104,526
						Investments	m	83	83	83	83
						Fixed Assets	m	17,733	34,244	50,324	64,919
						Intangibles	m	0	0	0	0
						Other Assets	m	24,412	29,549	36,173	42,575
						Total Assets	m	276,346	355,963	462,012	582,979
						Payables	m	56,099	107,221	168,035	232,193
						Short Term Debt	m	0	0	0	0
						Long Term Debt	m	1,893	0	0	0
						Provisions	m	25,222	25,222	25,222	25,222
						Other Liabilities	m	83,589	83,589	83,589	83,589
						Total Liabilities	m	166,804	216,032	276,847	341,005
						Shareholders' Funds	m	109,542	139,931	185,166	241,974
						Minority Interests Other	m	0 0	0	0	0
						Total S/H Equity	m <b>m</b>	109,542	139,931	185,166	241,974
						Total Liab & S/H Funds	m	276,346	355,963	462,012	582,979
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All figures in INR unless noted Source: Macquarie Research.		08									

All figures in INR unless noted. Source: Macquarie Research, June 2008

#### **Recommendation definitions**

#### Macquarie - Australia/New Zealand

Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts) Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts) Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)

#### Macquarie - Asia

Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%

#### Macquarie First South - South Africa

Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%

#### Macquarie - Canada

Outperform – return >5% in excess of benchmark return Neutral – return within 5% of benchmark return Underperform – return >5% below benchmark return

#### Macquarie - USA

Outperform (Buy) - return >5% in excess of benchmark return

Neutral (Hold) – return within 5% of benchmark return Underperform (Sell)– return >5% below benchmark return

#### Recommendations - 12 months

**Note:** Quant recommendations may differ from Fundamental Analyst recommendations

#### Recommendation proportions – For quarter ending 31 March 2008

	AU/NZ	Asia	RSA	USA	CA
Outperform	38.95%	70.56%	64.52%	50.00%	69.72%
Neutral	47.37%	16.32%	27.42%	39.47%	26.06%
Underperform	13.68%	13.12%	8.06%	10.53%	4.22%

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Volatility index definition\*

movements.

speculative.

This is calculated from the volatility of historic price

expected to move up or down 60-100% in a year -

Very high-highest risk - Stock should be

investors should be aware this stock is highly

High - stock should be expected to move up or

be aware this stock could be speculative.

up or down at least 25-30% in a year.

Applicable to Australian/NZ stocks only

down at least 30-40% in a year.

down at least 15-25% in a year.

down at least 40-60% in a year - investors should

Medium - stock should be expected to move up or

Low-medium - stock should be expected to move

Low - stock should be expected to move up or

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EPS = adjusted net profit / efpowa\*

ROA = adjusted ebit / average total assets ROA Banks/Insurance = adjusted net profit /average total assets

**ROE** = adjusted net profit / average shareholders funds **Gross cashflow** = adjusted net profit + depreciation \*equivalent fully paid ordinary weighted average number of shares

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