Company Focus

4 March 2008 | 18 pages

Bharat Heavy (BHEL.BO)

Target price change
Estimate change

Time to Rationalize Expectations; Target Price Cut to Rs2,529

- **FY01-07 driven by operating leverage** — BHEL expanded EBIT margins from 0% in FY01 to 18% in FY07. In the interim period the company (1) literally sweated out its assets, (2) right-sized its workforce from 75,000 to 42,000 in 4 successive voluntary retirement schemes (VRS) from 1999 to 2003, (3) cut down operational costs and (4) benefited from operating leverage.
- **...which is largely over** — Further cost reduction efforts are working against (1) raw material pressures, (2) increase in employee count to 50,000 from 42,000, (3) historical wage settlement provisions, (4) wage hikes, (5) higher overheads/depreciation on the Rs32bn capex (FY08E-12E) and (6) lower margins on supercritical orders. EBIT margins will peak in FY08E at 18.5%.
- **Earnings growth will moderate** — BHEL is the best bet on the power generation capex in India. However, one has to be cognizant that the earnings growth trajectory over FY07-12E would moderate to 23% (more or less in-line with the sales growth) vis-à-vis 30% between FY02-07. If this moderation does transpire, the stock could not escape a de-rating in its multiple.
- **Cut target price to Rs2,529** — Therefore, we cut our target price to Rs2,529 (from Rs2,936 earlier) to factor in (1) 4-15% earnings cut over FY08E-10E, (2) reduction in our target P/E multiple to 26x from 28x earlier and (3) rolling forward our target multiple to Dec09 from Sep09 earlier.
- **Maintain Buy (1L)** — Despite the target price reduction we maintain Buy (1L) and BHEL remains our top pick in the India Electric Equipment rated universe.

Buy/Low Risk	1L
Price (04 Mar 08)	Rs2,100.00
Target price	Rs2,529.00
from Rs2,936.00	
Expected share price return	20.4%
Expected dividend yield	0.7%
Expected total return	**21.1%**
Market Cap	Rs1,027,992M
	US$25,518M

Price Performance (RIC: BHEL.BO, BB: BHEL IN)

Figure 1. Statistical Abstract

Year to 31-Mar	Net Profit (Rsmn)	EPS (Rs)	EPS Growth (%)	P/E (x)	EV / EBITDA (x)	P / Book (x)	ROE (%)	Div. Yield (%)
FY2004A	9,370	19.1	59.6%	109.7	96.9	19.5	18.8%	0.1%
FY2005A	10,054	20.5	7.3%	102.3	78.4	17.1	17.8%	0.2%
FY2006A	16,756	34.2	66.7%	61.3	42.8	14.1	25.1%	0.3%
FY2007A	24,544	50.1	46.5%	41.9	29.5	11.7	30.5%	0.6%
FY2008E	31,659	64.7	29.0%	32.5	23.1	9.2	31.7%	0.7%
FY2009E	40,918	83.6	29.2%	25.1	17.7	7.2	32.1%	0.8%
FY2010E	49,835	101.8	21.8%	20.6	14.3	5.6	30.5%	0.9%

Source: Citi Investment Research

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See Appendix A-1 for Analyst Certification and important disclosures.

[1]Citigroup Global Markets India Private Limited

Fiscal year end 31-Mar	2006	2007	2008E	2009E	2010E
Valuation Ratios					
P/E adjusted (x)	61.3	41.9	32.5	25.1	20.6
EV/EBITDA adjusted (x)	43.0	29.8	23.4	17.6	14.2
P/BV (x)	14.1	11.7	9.2	7.2	5.6
Dividend yield (%)	0.3	0.6	0.7	0.8	0.9
Per Share Data (Rs)					
EPS adjusted	34.23	50.14	64.67	83.59	101.80
EPS reported	34.30	49.33	66.64	83.59	101.80
BVPS	149.15	179.53	227.89	292.84	373.67
DPS	7.25	12.25	14.00	16.00	18.00
Profit & Loss (RsM)					
Net sales	132,058	170,180	204,058	275,505	351,269
Operating expenses	-111,332	-140,017	-166,237	-225,145	-287,735
EBIT	**20,727**	**30,163**	**37,822**	**50,360**	**63,534**
Net interest expense	-588	-433	-189	-189	-189
Non-operating/exceptionals	5,469	8,236	11,074	12,779	13,324
Pre-tax profit	**25,608**	**37,966**	**48,706**	**62,951**	**76,669**
Tax	-8,852	-13,422	-17,047	-22,033	-26,834
Extraord./Min.Int./Pref.div.	35	-397	963	0	0
Reported net income	**16,792**	**24,147**	**32,622**	**40,918**	**49,835**
Adjusted earnings	16,756	24,544	31,659	40,918	49,835
Adjusted EBITDA	23,186	32,893	40,867	53,843	67,454
Growth Rates (%)					
Sales	42.1	28.9	19.9	35.0	27.5
EBIT adjusted	95.7	45.5	25.4	33.2	26.2
EBITDA adjusted	81.4	41.9	24.2	31.8	25.3
EPS adjusted	66.7	46.5	29.0	29.2	21.8
Cash Flow (RsM)					
Operating cash flow	**16,121**	**34,690**	**48,935**	**12,831**	**10,622**
Depreciation/amortization	2,459	2,730	3,045	3,483	3,920
Net working capital	-1,575	10,428	14,972	-29,366	-40,449
Investing cash flow	**-2,726**	**-3,974**	**-12,490**	**-13,365**	**-14,240**
Capital expenditure	-2,732	-3,974	-12,490	-13,365	-14,240
Acquisitions/disposals	7	0	0	0	0
Financing cash flow	**-3,834**	**-13,967**	**-8,947**	**-9,125**	**-10,265**
Borrowings	213	-4,689	0	0	0
Dividends paid	-4,047	-6,925	-7,984	-9,125	-10,265
Change in cash	**9,562**	**16,749**	**27,497**	**-9,659**	**-13,883**
Balance Sheet (RsM)					
Total assets	**181,797**	**232,977**	**300,867**	**361,187**	**417,897**
Cash & cash equivalent	41,340	58,089	85,586	75,928	62,045
Accounts receivable	71,681	96,958	117,454	158,562	198,124
Net fixed assets	11,669	12,913	22,358	32,240	42,560
Total liabilities	**108,783**	**145,094**	**189,309**	**217,836**	**234,975**
Accounts payable	28,041	35,390	41,539	56,840	74,076
Total Debt	5,582	893	893	893	893
Shareholders' funds	**73,014**	**87,883**	**111,558**	**143,351**	**182,921**
Profitability/Solvency Ratios (%)					
EBITDA margin adjusted	17.6	19.3	20.0	19.5	19.2
ROE adjusted	25.1	30.5	31.7	32.1	30.5
ROIC adjusted	33.5	49.4	72.4	59.6	38.6
Net debt to equity	-49.0	-65.1	-75.9	-52.3	-33.4
Total debt to capital	7.1	1.0	0.8	0.6	0.5

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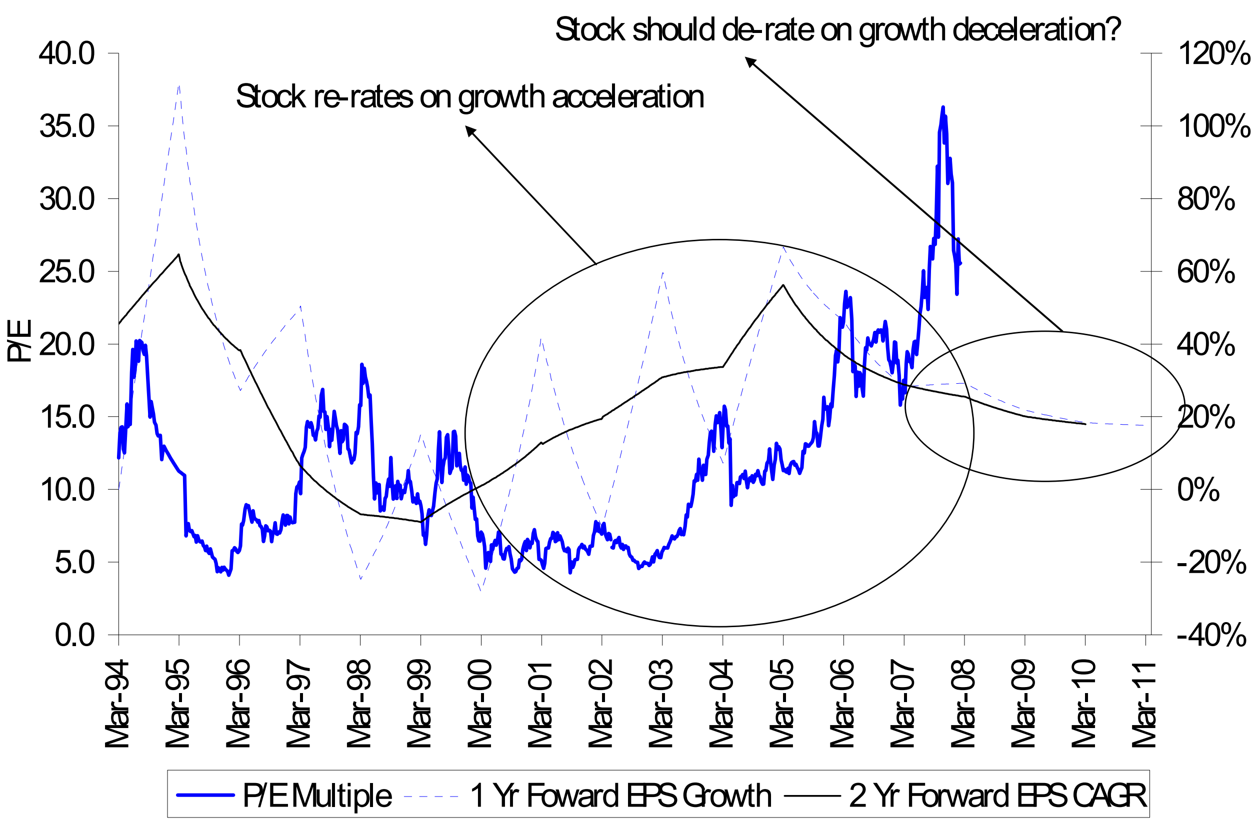
Time to rationalize expectations

If one analyzes any capital goods company, one would see that these companies significantly expand margins when there is spare capacity and sales grow at a rapid pace benefiting from operating leverage. As soon as capacity is utilized and capacity expansion happens, profitability comes off on labor costs, overheads, depreciation and interest costs, as the new capacity is not optimally utilized immediately. We believe that there is great likelihood of BHEL's EBIT margins peaking in FY08E. Once this happens, earnings growth has to largely track sales growth and will not benefit from operating leverage benefits.

BHEL is the best bet on the power generation capex in India. However, one has to be cognizant that the earnings growth trajectory over FY07-12E would moderate to 23% (more or less in-line with the sales growth) vis-à-vis 30% between FY02-07. If this happens, the P/E multiples will de-rate. As a consequence, we have cut our target multiple to 26x from 28x earlier and maintain the 7% discount to ABB on ABB's superior earnings growth and RoE profile. (We recently cut ABB's target multiple to 28x from 30x.) We have also rolled forward our target multiple to Dec09 (from Sep09 earlier) and as a consequence we cut our target price to Rs2,529 (from Rs2,936 earlier)

Figure 2. BHEL 1 Year Forward Rolling P/E Multiple v/s Rolling EPS CAGR over 1 year/ 2 years forward



Source: Data Central and Citi Investment Research estimates

Earnings revised downwards

We have cut our EPS estimates by 4-15% over FY08E-10E to factor in 2-4% sales estimates cut and the EBIT margins peaking in FY08E at 18.5%.

Figure 3. BHEL Earnings Revision Table

Year End Mar31	FY08E	FY09E	FY10E
Order Inflow (Rsbn)			
Old	415	445	405
New	469	370	357
Chg	13.0%	-16.9%	-11.9%
Net Sales (Rsmn)			
Old	208,593	280,822	365,069
New	204,058	275,505	351,269
Chg	-2.2%	-1.9%	-3.8%
PAT (Rsmn)			
Old	33,106	43,979	58,664
New	31,659	40,918	49,835
Chg	-4.4%	-7.0%	-15.0%
EPS (Rs)			
Old	67.63	89.84	119.84
New	64.67	83.59	101.80
Chg	-4.4%	-7.0%	-15.0%

Source: Citi Investment Research estimates

Order Inflow

- BHEL has booked Rs349bn of orders up 71% YoY in 9mFY08, which was above our expectations. We expect Rs120bn of order inflows in 4QFY08 and as a consequence we increase order inflows for FY08E by 13%.
- As the pace of XIth plan ordering has been faster than expected in FY07A/FY08E and we expect a slowdown in ordering in FY09E, we have cut our order inflow expectations by 17%.
- Prior to the start of FY10E the XIth plan ordering would have practically finished and the XIIth plan ordering would not have started. As a consequence we have cut our FY10E order inflow assumptions by 12%
- We expect order inflows to pick up in FY11E and FY12E when XIth plan advance ordering happens in earnest.

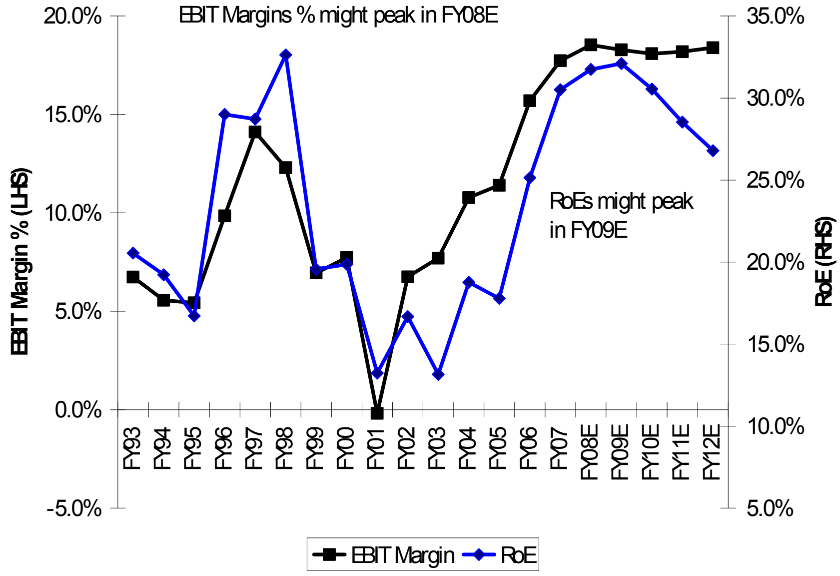
Sales

- Based on slower than expected sales growth in 9mFY08 on capacity constraints we have cut our FY08E sales estimates by 2%
- We have also reduced FY09E and FY10E sales estimates by 2% and 4% on a temporary slowdown of order inflow in the same years.

Margins

- Between FY01 and FY07 BHEL has expanded EBIT margins by 18% and RoEs by 17%. In the interim period the company (1) literally sweated out its assets, (2) right-sized its workforce from 75,000 to 42,000 in four successive voluntary retirement schemes (VRS) from 1999 to 2003, (3) cut down operational costs and (4) benefited from operating leverage.
- BHEL has initiated efforts at the plant level to lower costs and improve cycle times by better controlling materials, efficient procurement, design-to-cost operations, better project management, lean manufacturing, strategic outsourcing and maximizing capacity utilization. It intends to reduce delivery times for 500MW units from 36 months to 33 months and ultimately to 30 months. Further costs reductions are also possible through standardization of equipment.
- However, BHEL's efforts to reduce costs are working against (1) upward raw material pressures, (2) increase in employee count to 50,000 from 42,000, (3) historical wage settlement provisions, (4) an impending wage hikes, (5) higher overheads/depreciation on the Rs32bn capex over FY08E-12E and (6) lower margins on execution of supercritical orders.

Figure 4. BHEL EBIT Margins and RoE (FY1993 – FY2012E)



Source: Citi Investment Research estimates

Company Meeting Takeaways

We recently met the BHEL management and the following are the takeaways:

We always believed that BHEL's sales guidance of Rs450bn by FY12E was conservative and as a consequence our FY12E gross sales estimates were ~Rs606bn. We have cut this to Rs550bn now. However, this is still 22% above BHEL's guidance

- **Sales guidance:** BHEL is confident about reaching its sales target of Rs450bn by FY12E translating into gross sales CAGR of 19% over FY07-12E. It is also pertinent to note that these plans were made 1.5-2 years back when BHEL had not expected such a strong demand environment. However, BHEL has not revised its guidance upwards. On whether growth could be higher the company mentioned that (1) capacity expansion is on track, (2) demand has been above expectations and (3) it is quite competitive, however, it will not give formal guidance of higher growth.

- **Margins:** BHEL believes that margins do not have much room to expand further on the subcritical side on the back of (1) material cost pressure and (2) competitive pressures. On the supercritical side margins will dip initially once execution starts and will only improve once BHEL has gained some experience in supercritical technology. The current order backlog has fixed price orders and orders with price variation in the ratio of 1:1.

BHEL's argument that it might not be profitable to operate businesses on an ongoing basis at a lower price might not entirely be correct as there have been instances in China where manufacturers in other industries have operated on losses for years just to make the environment difficult for the competitor

- **Chinese competition:** Chinese equipment might not actually be cheaper than BHEL as (1) the prices being quoted currently are only a strategy to enter the Indian market, and it might not be profitable to operate businesses on an ongoing basis at lower prices; and (2) there is a difference between the "quoted rate" and "evaluated rate" (i.e., what the supplier includes in the quoted price and what it excludes from it). The Chinese suppliers might be leaving out certain components and services while quoting prices.

- **Wage hike and employee strength:** The current employee strength is ~42,000 and will be 50,000 by FY12E. BHEL will hire 18,000–20,000 new employees over the next 5 years, but there will be retirements and attrition. The Sixth Pay Commission report is likely to come in April 2008 and after that PSU pay commission will look into the same and make its recommendations, and only after that the wage negotiations will be settled. The Railways has provisioned for a hike of 25%, which could be an indicative figure. BHEL has been providing Rs820 mn per quarter since Jan 2007 for the wage hike. Currently attrition is less that 1% but in future it will increase as other players such as the L&T-MHI combine set up capacity.

- **Order wins in Russia:** BHEL is discussing with potential clients in Russia and the target is to have 15% of revenues from exports by FY12, but no orders have been won from Russia as of now.

- **Order inflow:** There will be some dip in order inflow growth after XIth plan ordering is completed and till the time XIth plan order inflow picks up. In the XIth plan around 10,000–12,000MW remains to be ordered, of which BHEL expects to get a substantial chunk.

- **XIIth plan targets could be hiked:** Currently XIIth plan capacity addition targets are ~ 82GW, but in government circles talks are on that they could be increased to 100GW.

- **Capacity expansion plan:** BHEL has expanded capacity to 10,000MW in Dec2007, will move to 15,000MW by Dec2009 and 20,000MW in FY12E. The company expects to spend Rs32bn on capex over FY08E-12E.

- **Locomotives:** BHEL has received orders from railways for 50 locomotives and expects orders for 100 more locomotives in the near future, and these will be manufactured at Jhansi.
- **Oil rigs:** BHEL has been supplying parts to ONGC regularly in the past. Discussions are on with ONGC for supplying full onshore rigs, but no major contracts have been won yet.
- **Execution Cycle:** For 250MW and 500 MW BHEL takes 30-36 months and for 660MW and 800MW supercritical orders it takes 48 months.
- **Problems in 3QFY08:** Dispatches of components were weak in 3QFY08, and this will be made up for in 4QFY08. BHEL is also facing site level construction problems because of shortage of contractors and laborers.

Developments in Ordering and Competition

SUBCRITICAL ORDERS

Undisputed leader in the < 500MW subcritical a space

The last big de-rating in the BHEL stock happened after the Sasan and Mundra UMPP bids in 4QFY07 when investors extrapolated the UMPP losses to a scenario that BHEL's order wins would slow down leading to sales deceleration and a consequent steep deceleration in earnings growth. FY07 order wins Rs356bn up 88% YoY and 9mFY08 order wins of Rs349bn up 71% YoY have more or less established BHEL as the undisputed leader in the sub-critical order arena in India.

Countering the 300/600MW subcritical threat

The Chinese have been making inroads in India with their 300/600MW sets. BHEL has historically manufactured 250/500MW sets. Earlier, the state electricity boards (SEBs) had this prequalification criteria that companies must have executed 300/600MW sets to bid for the same and experience in 250/500MW sets would not count, despite BHEL adding 270/600MW sets to its product portfolio. This has been taken care of, resulting in BHEL winning its first 600MW subcritical set from TNEB.

RELE–SEPCO combine faces problems in Haryana

According to the *Hindustan Times*, the Haryana government has imposed damages to the tune of Rs2bn on Reliance Energy for its failure to meet the deadline in making operational a 600MW plant at Yamunanagar. The first unit 300MW was to start generation by Nov19, 2007. Further the second unit was due to start generation by Feb 15, 2008. RELE had defaulted on both the units, despite full cooperation from the state government. RELE might have to pay Rs50m/week; upto a maximum of Rs2bn based on 10% of the project cost of Rs20bn RELE has admitted to "a slight delay" in making the plant operational, but denies having received any communication for payment of damages yet.

BHEL vs. RELE–SEPCO face–offs in the recent past

1200MW Raghunathpur project: RELE, the sole bidder for DVC's 1200MW/Rs37.25bn Raghunathpur project, won the project at a bid rate of Rs31mn/MW after DVC asked RELE to bring down its bid from Rs40mn/MW. The price reduction was to bring it in-line with RELE's bid for the 2x600MW Haryana Power Generation (HPGCO) project. Despite DVC giving a 15-day extension for BHEL during pre-bid discussion, the company did not bid. The other interested parties who did not bid included CMEC and Dongfang.

1200MW Hisar project: RELE outbid BHEL for the 1200M/Rs38bn Hisar project quoting Rs31.7mn/MW vis-à-vis BHEL's bid of Rs34.9mn/MW.

600MW Yamunagar project: RELE won the 600MW/Rs20.97bn Yamunagar project bidding Rs34.9mn/MW.

CMEC faces problems in Chhatisgarh

According to *Business Standard*, CSEB has decided to award the 2 X 300MW Korba project to BHEL, after disqualifying CMEC who failed to implement the order. CMEC had outbid BHEL quoting Rs36.1/MW earlier. A committee has also been constituted to look into the possible actions that can be taken against the Chinese firm, which delayed the project for 2 years and 2 months, leading to a notional loss of about Rs7bn for CSEB. CSEB had invoked the bank guarantee of Rs350mn deposited as bid money by CMEC, which did not start work on the project even after receiving a letter of intent citing high steel prices. Further CSEB is also contemplating blacklisting the firm from taking part in bidding processes for projects in future.

SUPERCRITICAL ORDERS

We believe that this issue is near closure and something would be decided in the next 4–5 months. BHEL on its part expects orders to start flowing in from 2HCY09 and is currently working on employee training and documentation work. BHEL expects to import parts for first 2-3 sets and is confident it will achieve 90% indigenization of supercritical technology by the time it supplies the tenth 800MW unit by FY12.

We also believe that the Committee on Infrastructure (CoI) will also promote Larsen & Toubro (L&T)–Mitsubishi Heavy Industries (MHI) combine as a BHEL–II and award it some sets on a nomination basis to encourage competion.

Negotiated supercritical orders might be near closure

According to the Central Electricity Authority it is considered prudent that with the introduction of 800-1000 MW supercritical units, simultaneous development of indigenous manufacturing capacity shall also take place along with technology transfer and availability of service and spares for the whole life of the plant. The government of India constituted a committee headed by the chairperson (CEA) to examine various alternatives of technology transfer for supercritical units: (1) negotiated contract with BHEL and (2) International Competitive Bidding (ICB) with mandatory requirement of setting up a manufacturing base in India.

The Committee had concluded that the option of ICB with mandatory condition of setting up of manufacturing base in India would be the preferred option because of transparency, satisfying the condition of mega power project guidelines and assurance of regulator's consent and it could also result in one more manufacturer of power equipment in the country if a foreign manufacturer turns out to be the successful bidder.

Availability of two manufacturers in the country would generate competition within the country and also support the capacity addition program envisaged in the next decade and beyond.

This option did not get adequate response from international manufacturers and as a consequence the option of negotiated contract with BHEL was recommended. The committee also suggested methodology for price benchmarking for 800 MW bulk ordering on negotiated route based on the price of competitively bid projects with supercritical technology of 660 MW size with appropriate adjustments.

BHEL sought bulk orders from NTPC for 8–10 super critical sets on a nomination basis. It had also asked for tax concessions reserved for projects awarded through the ICB route. The advantages of securing orders through the nomination basis are that it would allow BHEL to determine the order volume and allocate costs accordingly.

Although BHEL had indicated that it will achieve 90% indigenization of supercritical technology by the time it supplies the tenth 800MW unit by FY12 the power ministry is concerned the slow indigenization would delay implementation during the plan.

BHEL's first supercritical order win

BHEL had its first supercritical order win through the negotiated route with TNEB for 2 x 800MW sets. The total project cost would be Rs85bn, which would be executed in an 80: 20 debt: equity mix. Out of the Rs17bn of equity BHEL would be contributing 26% or Rs4.42bn. The JV with TNEB will complete the financial closure in 1 year and the order will be given to BHEL either on an

EPC or a BTG basis. BHEL has no long-term plans to own power assets and will exit its stake by selling it to either TNEB or financial investors as soon as the project gets commissioned. On a simplistic basis we see that using the BHEL's FY07 cash balance of Rs58bn, BHEL can finance 21GW of supercritical capacity through a similar mechanism.

Sole bidder for Barh–II

BHEL is the sole bidder for the 2 X 660MW Barh–II project and further on Feb 29, 2008 NTPC Board has approved the project at a cost of Rs73.4bn implying that the ordering might happen at the earliest.

APGENCO goes for re–bidding

APGENCO has cancelled the tendering process for the implementation of its 2 X 800MW supercritical Krishnapatnam power project and has decided to call for fresh bidding. APGENCO preferred to go for re-tendering instead of opening the received bid on the ground that it might end up paying a higher price to the sole bidder BHEL. Further, this time three separate tenders for supply of the boiler, turbine and balance-of-the plant (BoP) packages would be issued vis-à-vis the earlier turnkey contract to a single vendor. BHEL would be participating in the re-tendering process.

Talks on with other state utilities for negotiated orders

We also have strong reasons to believe BHEL is also negotiating 2 more supercritical order wins for (1) Obra – C, UP (1,600MW) and (2) Koradi, Maharashtra (1,600MW).

Is their more to the NTPC–BHEL EPC JV?

- NTPC's 50: 50 JV with BHEL would focus on engineering, procurement and construction (EPC) of power plants for NTPC and other utilities. The company might not enter into production of boiler, turbine and generator (BTG) but could get balance-of-plant (BOP) work, which will help BHEL in accelerating delivery.

- One has to definitely wonder if most of NTPC's future supercritical orders would go to this EPC JV and BHEL.

Figure 5. India's Super Critical Technology Trail

Project	Agency	Type	Unit Size	MW	Remark	Equipment Supplier
Sipat Stage - II	NTPC	Sub Critical	3 X 500	1,500	Revised downwards to subcritical	BHEL
Kahalgaon	NTPC	Sub Critical	3 X 500	1,500	Revised downwards to subcritical	BHEL
NTPC's supercritical projects downsized to subcritical				**3,000**		
Sipat Stage - I	NTPC	Super Critical	3 x 660	1,980	First project to be awarded	Doosan/Power Machines
Barh - I	NTPC	Super Critical	3 x 660	1,980	Second project to be awarded	Power Machines
North Karanpura	NTPC	Super Critical	3 x 660	1,980	FY08/FY09 Ordering	BHEL/Doosan/Hitachi
Barh - II	NTPC	Super Critical	2 X 660	1,320	FY08/FY09 Ordering	BHEL is the sole bidder
Darlipalli, Orissa	NTPC	Super Critical	4 X 800	3,200	Planning and investigation stage	NA
Lara, Chattisgarh	NTPC	Super Critical	5 X 800	4,000	Planning and investigation stage	NA
New Nabinagar, Bihar	NTPC	Super Critical	3 X 660	1,980	Planning and investigation stage	NA
Cheyyur, Tamil Nadu	NTPC	Super Critical	3 X 800	2,400	MoP wants to set up UMPP here	NA
Marakanam, TN	NTPC	Super Critical	4 X 800	3,200	Planning and investigation stage	NA
Tanda, UP	NTPC	Super Critical	2 X 660	1,320	Planning and investigation stage	NA
Meja, UP	NTPC - UPRVUNL	Super Critical	2 X 660	1,320	Planning and investigation stage	NA
NTPC Total				**24,680**		
Mundra UMPP	Tata Power	Super Critical	5 X 800	4,000	Construction process	Doosan
Sasan UMPP	Reliance Power	Super Critical	6 X 660	3,960	Equipment supplier being finalized	NA
Krishnapatnam UMPP	Reliance Power	Super Critical	NA	4,000	Equipment supplier being finalized	NA
Tilaiya UMPP	Yet to be awarded	Super Critical	NA	4,000	Bidding process for developer initiated	NA
Tadri UMPP	Yet to be awarded	Super Critical	NA	4,000	Alternative location is Bhavnagar	NA
Girye UMPP	Yet to be awarded	Super Critical	NA	4,000	Alternative location is Dighe	NA
Cheyyur UMPP	Yet to be awarded	Super Critical	NA	4,000	NTPC claims it has selected this land	NA
Akaltara UMPP	Yet to be awarded	Super Critical	NA	4,000	Stalled as state asking for 12% free power	NA
Sundergarh UMPP	Yet to be awarded	Super Critical	NA	4,000	Project site yet to be finalized	NA
UMPP Total				**35,960**		
Udangudi	TNEB - BHEL JV	Super Critical	2 X 800	1,600	MoU signed between BHEL and TNEB	BHEL
UP - Obra C	UPRVUNL	Super Critical	2 X 800	1,600	Talks on between BHEL and UPRVUNL	-
Koradi	Mahagenco	Super Critical	2 X 800	1,600	Talk on between BHEL and Mahagenco	-
Krishnapatnam	APGENCO	Super Critical	2 X 800	1,600	FY08 Ordering	BHEL was sole bidder. Rebidding underway
State Utilities				**6,400**		
Grand Total				**67,040**		

Source: CEA, Powerline and Citi Investment Research estimates

GAS TURBINE ORDERS

In the recent past BHEL has won 3 big gas turbine orders, stamping its authority in the space. It has thus removed any doubts if it has capabilities to win gas orders if there is a spurt of gas-based ordering led by India's finds.

Figure 6. BHEL Recent Gas Turbine Wins

Date	Rsmn	- Client	Remark
22-Jan-08	8,660	- RIL	345 MW Gas Turbine based CCPP
26-Feb-08	10,750	- Gujarat State Energy Generation	350 MW Gas Turbine based CCPP
29-Feb-08	18,930	- GSPC Pipavav Power	2x350 MW Gas Turbine based CCPP
Total	**38,340**		

Source: Company and Citi Investment Research

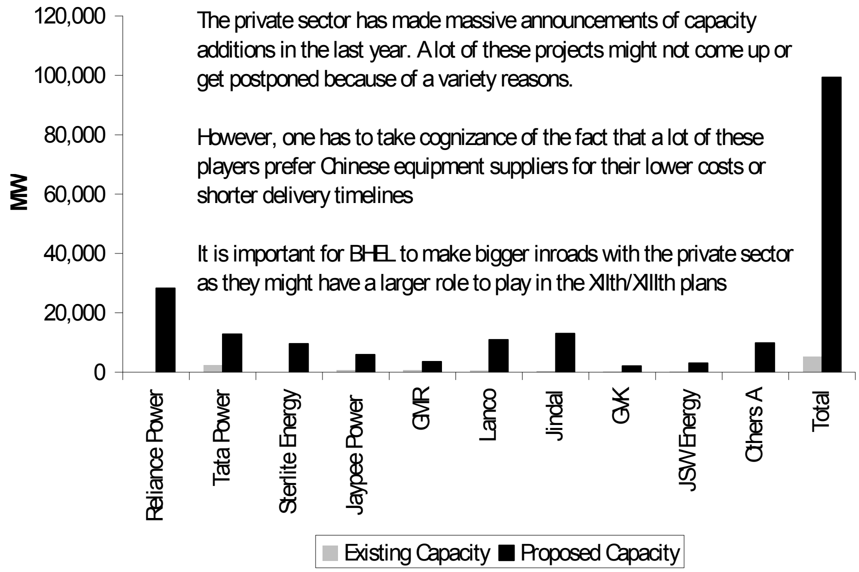
OIL RIGS AND EMUs

BHEL is once again looking into strengthening its presence in locomotives and oil and gas rigs and other related equipment. In the past it had built rigs for ONGC, and now ONGC has approached it again to build new rigs and refurbish the old ones. BHEL is the only supplier of electric multiple units (EMU) for the Indian Railways and is looking to shore up its presence here.

Private Sector Concerns

Tata Power is evaluating Chinese vendors for the 2,400MW Coastal Maharashtra and 1,300MW Bhaiyathan project, if it wins it. This comes as a negative surprise as Tata Power has been wary of using Chinese equipment in the past. Tata Power wants to use standard Chinese equipment without any modifications to bring down the capital cost of equipment.

Figure 7. Private Sector Capacity Addition Announcements



Source: Citi Investment Research estimates

Bharat Heavy

Company description

BHEL is the largest engineering company in India, manufacturing equipment for the power and industrial segments. It is the largest manufacturer of power plant equipment in India. The industrial equipment division primarily caters to process industries, transportation (including leasing of locomotives to Indian Railways), transmission, defense and diesel generating sets (DG).

Investment strategy

We rate BHEL shares Buy / Low Risk (1L) with a 12-month target price of Rs2,529. Progress on power sector reforms, export initiatives and the ongoing investment cycle in process industries all augur well for future order flows and stock sentiment. The order backlog of Rs780bn represents nearly three years of sales, based on our forecasts. The robust order book provides good visibility of earnings over the medium term. The reform measures initiated should lead to an improvement in investments across the power sector over the medium term leading to higher growth rates for electrical equipment manufacturers. As the market leader with significant cost advantages, BHEL should be a key beneficiary of increased investments in the sector. The reforms should result in more robust growth rates over the medium to long term for the company. BHEL's operations should also benefit from: a) the export initiatives leveraging off the low cost base, and b) an improvement in order flows for the industrial equipment division given signs of a revival in the investment cycle.

Valuation

With Rs660bn of order wins in the last 19 months, advance class gas turbine wins and three supercritical order wins and more wins in the pipeline BHEL has more less answered most of the questions on competition and technology. Most importantly the supercritical orders wins imply that BHEL's growth is not a flash in pan and it is an envious position of bagging a significant number of the orders in the XIIth plan also. India's power capex will be stronger for longer and BHEL's fortunes would not be any different. As a consequence we value BHEL using a target P/E multiple to 26x December 2009E earnings, which is at a 7% discount to that of ABB. We believe ABB deserves to trade at a premium to BHEL given superior forecast earnings growth over the next three years.

Risks

We rate BHEL shares Low Risk. The rating differs from the Medium Risk rating suggested by our quantitative risk rating system, which tracks 260-day historical share price volatility. We believe BHEL's current order book of Rs780bn represents nearly three years' sales and provides very good earnings visibility over the medium term.

Key risk factors include:

Delay in power-sector reforms could affect order flows and earnings. The sector could also be subject to regulatory uncertainties, which could affect sentiment and valuations on the stock. Competitive pressures from global majors are also a concern; particularly as technology upgrades are affected. We believe it is imperative that BHEL demonstrate the ability to upgrade technology at reasonable costs for valuation ratings to sustain at current levels over the medium term. Over the short-term, investor progress on order flows does influence sentiment and delays herein could dampen sentiment.

If any of these risk factors has a greater impact than we anticipate, BHEL's share price will likely have difficulty attaining our target price.

ABB (India) (ABB.BO - Rs1,108.90; 2L)

Valuation

Our Rs1,260 target price for ABB is based on 28x CY09E EPS, in line with our target multiple for close comparable BHEL. ABB has traded at an average premium of ~50%+ to BHEL for the past three years, a premium that actually narrowed in CY03-06, compared with CY99-CY03, as BHEL re-rated significantly. ABB has also traded at an average premium of 85%+ to the BSE

Sensex over the past three years. Our target multiple is supported by an EPS CAGR of 36% over CY07-10E with RoE of 32-36%.

Risks

Our quantitative risk-rating system, which tracks 260-day historical share price volatility, assigns a Medium Risk rating to ABB India. However, we believe a Low Risk rating is more appropriate given that strong power and industrial capex in India provides ABB with significant visibility on order inflows and ABB is India's market leader in the power and automation space. Our Low Risk rating is also in line with that of BHEL. The key upside risks to our target price include: 1) Better than expected order wins; and 2) Better than expected order execution. The key downside risks to our target price include: 1) Increased competition; 2) Slowdown in investments in generation, transmission and distribution; 3) Slowdown in the industrial capex cycle; 4) Substantial increase in input prices; and 5) Employee retention.

Appendix A-1

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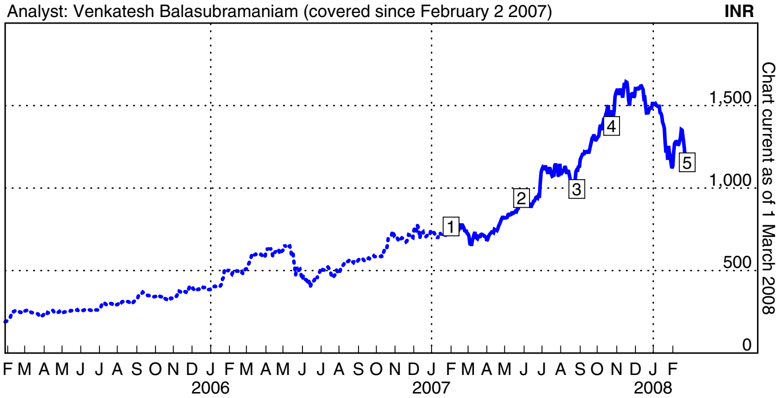
IMPORTANT DISCLOSURES

ABB (India) (ABB.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Venkatesh Balasubramaniam (covered since February 2 2007) INR



Covered
Not covered

Rating/target price changes above reflect Eastern Standard Time

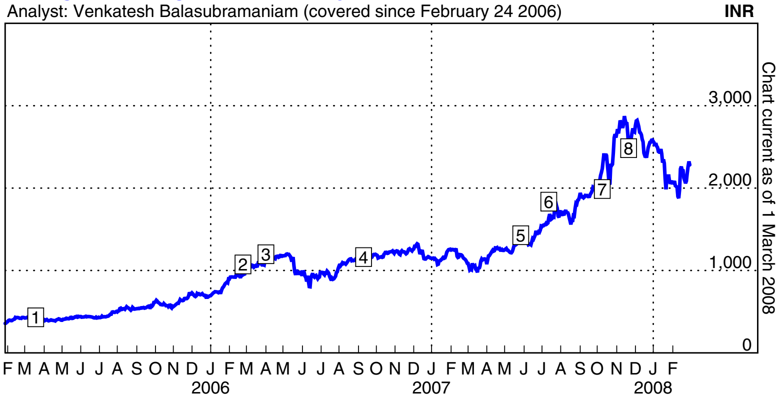
#	Date	Rating	Target Price	Closing Price
1:	1 Feb 07	1L	880.00	760.55
2:	29 May 07	1L	*1,103.20	914.98
3:	28 Aug 07	1L	*1,266.00	1,110.95
4:	24 Oct 07	*2L	*1,595.00	1,453.80
5:	26 Feb 08	2L	*1,260.00	1,197.75

*Indicates change.

Bharat Heavy (BHEL.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Venkatesh Balasubramaniam (covered since February 24 2006) INR



Covered
Not covered

Rating/target price changes above reflect Eastern Standard Time

#	Date	Rating	Target Price	Closing Price
1:	18 Mar 05	1L	*472.50	394.95
2:	23 Feb 06	1L	*1,128.00	946.92
3:	3 Apr 06	1L	*1,321.50	1,149.03
4:	10 Sep 06	1L	*1,382.00	1,127.30
5:	28 May 07	1L	*1,672.00	1,361.88
6:	12 Jul 07	1L	*1,923.00	1,641.35
7:	9 Oct 07	1L	*2,542.00	2,236.75
8:	21 Nov 07	1L	*2,936.00	2,486.10

*Indicates change.

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