

Overview

Bharat Heavy Electrical Limited (BHEL) is an integrated power plant equipment manufacturer and one of the largest engineering and manufacturing companies in India. BHEL is engaged in manufacturing, engineering, design, construction, testing and commissioning of wide range of products and services for sectors including power, renewable energy, oil & gas and defence.

The company was established in 1964 and is one of the seven companies with the 'Maharatna' status – along with GAIL, SAIL, COAL INDIA, NTPC, ONGC, and IOCL. The aforementioned status, which was granted to BHEL in February 2013, raises the company's investment ceiling from Rs. 1,000 Cr to Rs. 5,000 Cr. This provides BHEL more operational freedom for carrying out activities in the country as well as overseas.

BHEL employs nearly 50,000 people, has revenues of around Rs. 50,000 Cr. and 60% of power produced in India is using BHEL's power plants. India is the 5th largest power producer in the world with 90,000 MW of power produced as of May 2013.

The company has 15 manufacturing divisions, 2 repair units, 4 regional offices, 8 service centres, 8 overseas offices, 15 regional centres and currently operates at more than 150 project sites across India and abroad.

BHEL can deliver up to 20,000 MW of power equipments per annum; which makes up around 10% of total installed capacity of India (255GW). Hence, BHEL alone can contribute to 10% growth of power generation in India. The concern though is that BHEL installed power equipments of only around 10,000 MW capacities in the financial year 2012-2013.

The company is led by Mr. B. Prasada Rao: B.Tech (Mechanical) from JNTU, Kakinada (Andhra Pradesh). He is also a postgraduate in Industrial Engineering from NITIE, Mumbai. He is serving as the CMD of BHEL since October 2009.

BHEL has several subsidiaries in place such as Bharat Heavy Plate and Vessels Ltd, BHEL Electrical Machines Ltd. They also have several Joint Ventures with companies like GE, NTPC, Siemens and some State Governments.

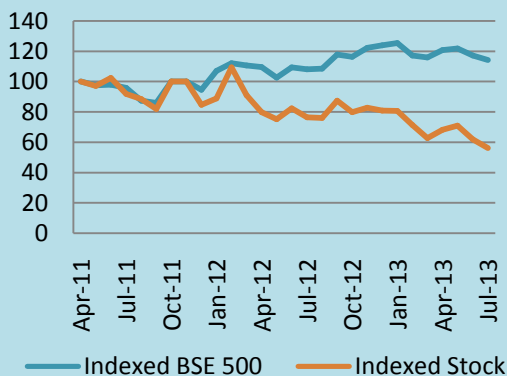
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RATING: BUY

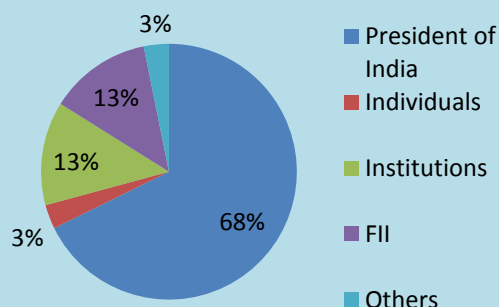
KEY INFORMATION

Company: Bharat Heavy Electricals Limited
Sector: Heavy Electrical Equipments
Ticker Symbol: BHEL
Current Market Price: Rs. 100
Market Cap: Rs. 29,345 Cr
52 Week High/Low: 272/112
Face Value: Rs. 2
Shares Outstanding: 244.76 Cr
P/E: 4.76
P/B: 0.93

Price Movement of Stock v/s BSE 500



Share Holding Pattern



Please refer to the last page for important disclosures.

Major Products & Services:

Power:



BHEL supplies steam turbines, generators, boilers and matching auxiliaries for thermal, nuclear, gas and hydro projects of various sizes such as 660, 700 and 800 MW based on supercritical technology. This super critical technology results in up to 4% saving of fuel by reusing the steam to boil water again and hence resulting in less emission.

BHEL is the only Indian company capable of manufacturing large-size gas-based power plant equipment, comprising of advanced-class gas turbines up to 289 MW (ISO) rating for open and combined-cycle operations. It is also one of the few companies involved in development of Integrated Gasification Combined Cycle which would usher in clean coal technology.

BHEL has power equipment manufacturing facilities at Hardwar, Ranipet (Tamil Nadu), Bhopal, Ramachandrapuram (Hyderabad). BHEL is also planning to set up a new plant at Bhandara, Maharashtra with a planned capex of around Rs. 500 Cr by the year 2015.

Industries:



BHEL meets demand of several industries including: metallurgy, cement, mining, paper, and fertilizers by supplying products like centrifugal compressors, drive turbines, heat exchangers, industrial boilers, industrial casting and forging etc.

The Industry business sector of the company is fully geared to execute EPC contracts for captive power plants from concept to commissioning.

Transport:



Most of the trains of Indian Railways are equipped with BHEL traction control and propulsion system. BHEL has also diversified into the area of track maintenance machines and coach building for Indian Railways. India's first underground metro at Kolkata runs on drives and controls supplied by BHEL.

BHEL is planning to set up a plant at Bhilwara manufacturing 400 EMUs annually with revenue roughly around RS. 2000 Cr, expected to be commissioned in 2015, along with existing manufacturing facility at Jhansi.



Renewable Energy:

BHEL has supplied, as well as commissioned, large size standalone and grid interactive power plants and signed an agreement with Abengoa (Spain), a leader in solar project to provide EPC (Engineering, Procurement and Construction) solutions in concentrated solar thermal power area.

BHEL is executing the orders for renovation, operation & maintenance of solar plants (aggregate 2.15 MW) at various Islands of Lakshadweep.



Oil & Gas:

BHEL is supplying onshore drilling rig equipment viz. draw works, rotary-table, travelling block, swivel, mast and sub structure, mud systems and rig electrics, well heads & x-mas tree valves up to 10,000 psi rating for onshore as well as offshore application to ONGC, Oil India Ltd. and private drilling companies.

BHEL has the capability to manufacture conventional on shore deep drilling rigs (which can drill up to a depth of 9,000 meters), mobile rigs (3,000 meters) and well servicing rigs (well depth of 6,100 meters). The company is in the process of manufacturing environment friendly AC-technology based oil rings for on shore applications.



Transmission:

The products manufactured by BHEL in this segment include power transformers, instrument transformers, dry type transformers, shunt reactors, vacuum and SF6 switchgear, gas insulated switchgears, ceramic insulators, etc.

BHEL has successfully designed, manufactured and commissioned India's highest voltage power transformer of 1200 kV 333 MVA rating at the 1200 kV National Experimental Substation of PGCIL.



International Business:

BHEL has an established base in 75 countries across the world. Business there includes almost the entire range of BHEL products and services, covering thermal, hydro and gas-based turnkey power projects, substation projects, rehabilitation projects, besides a wide variety of products like transformers, compressors, valves, oil field equipment, electrostatic precipitators, photovoltaic equipment, insulators, heat exchangers, switchgears, castings and forgings etc.

Overview of the Power Sector

India is the fourth largest consumer of power after US, China and Russia with an installed capacity of around 225 GW. India produces 855 billion units of electricity per annum and even then, more than 7% of the country's villages are not yet electrified.

As shown below, Indian is completely dependent on coal and natural gas for producing power. This dominance is expected to continue for at least 15 – 20 years. Companies like BHEL would be directly impacted by anything that happens in the coal sector. Therefore investors interested in BHEL should keep track of any events or news pertaining to the sector, like the coal block allocation scam.

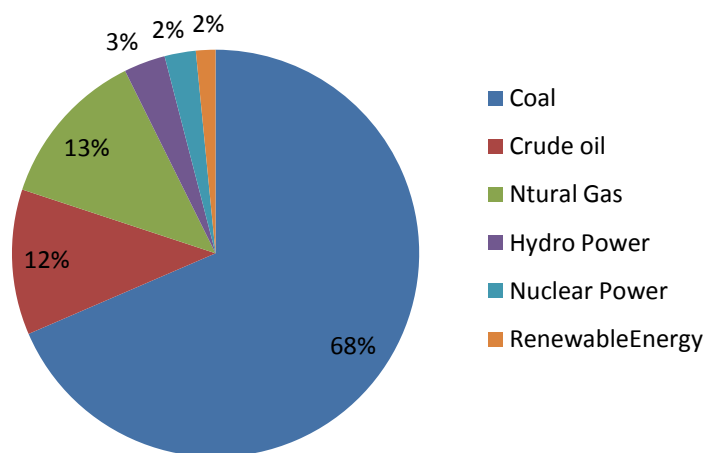
Uncertainty over supply and price of coal (dependent on whether it is domestic or imported), slow land acquisition process, time consuming and uncertain environmental clearance procedure are few of the major issues darkening the outlook for the power sector.

The essence of the coal block scam is that government had authority to go for competitive bidding of coal mines but it chose not to. On 13th June'13 CBI booked JSPL CEO Naveen Jindal for cheating, graft and misconduct in 12th FIR in coal block scam.

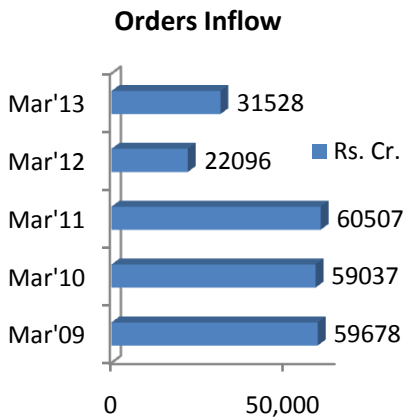
The implications are simple: if power companies get coal at higher prices, several projects become unviable from a financial perspective, and this in-turn has a negative impact on the potential orders that BHEL would receive in the future.

Due to several other issues such as the time consuming and difficult process like land acquisition and environmental clearances, uncertainty over supply of fuel, uncertainty over mining rights etc, power production has become a not-so-lucrative business.

Source of Energy in 2011-12



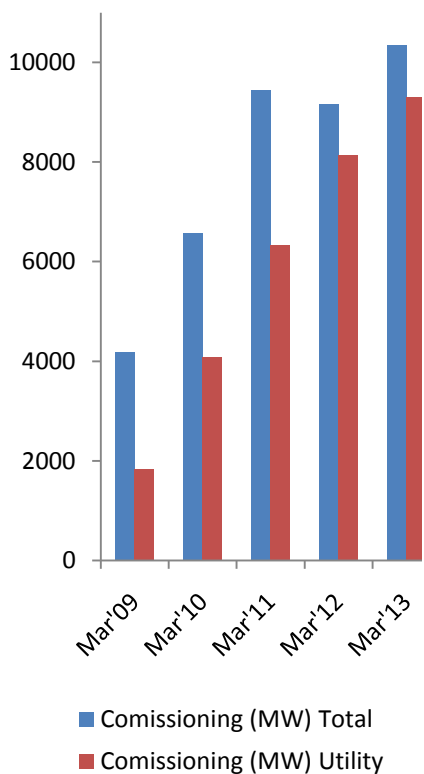
Operation Highlights for FY 12-13:



The company received orders worth Rs. 31,528 Cr in FY-13 from Rs. 22,096 Cr in FY-12, which is an increase of more than 40%. The orders increased from 3934 MW to 9627 MW (or nearly 150%). Even though the orders have increased over the last year, they are still around 50% of the orders BHEL bagged back in FY 2010-2011 (as shown in the figure). This indicates that various issues like coal block scam, mining scam in Bellary, problems in land acquisition, coal supply and other macroeconomics factors are taking their toll on the power sector. There is little sign of these problems being resolved swiftly; which can be a cause of concern for BHEL.

Currently, BHEL has an order book of Rs. 115,000 Cr (out of which 81% is from the power sector alone) – implying a book coverage ratio of nearly 2.30.

Government change at centre might bring solutions to some of the problems, including passing of long delayed Land Acquisition Bill. The caveat here lies in the possibility that a new coalition government may be as handicapped as the current one, thus resulting in the maintenance of status quo.



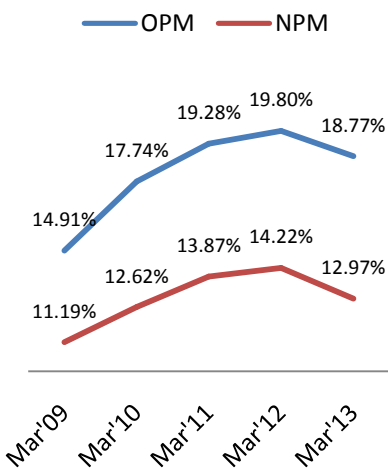
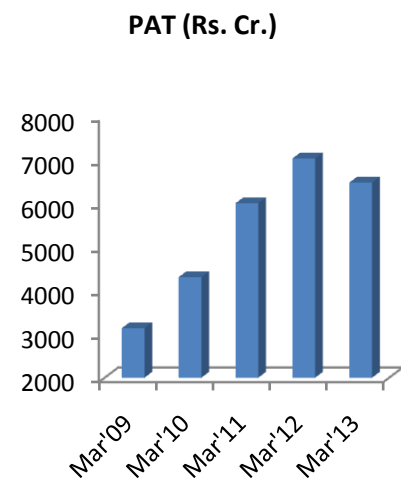
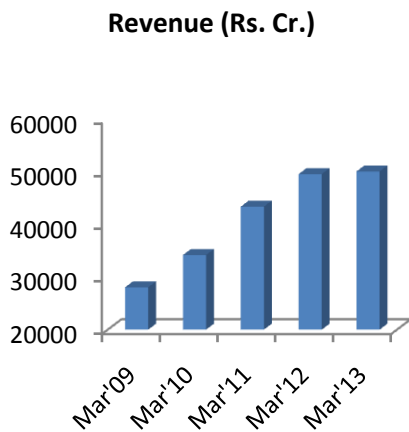
Most of the orders received in Power sector were from NTPC. BHEL’s contribution to NTPC’s total installed capacity is now 70% (or 41,184 MW). The company also received orders in the captive power segment; from companies like NALCO, Aditya Birla Phosphate and Paradeep Phosphate.

In the industrial equipment sector, BHEL secured projects worth Rs. 4086 Cr. In the Oil & Gas segment, BHEL plans to upgrade four oil rigs for ONGC. As far as international business is concerned, BHEL commissioned 10,340 MW in total, including plants in Ethiopia, Tajikistan, Indonesia, Vietnam and Libya during the FY 2012-13.

BHEL’s also filed for 385 patents and copyrights in the FY 2012-13, which is an increase of 10% from last year. BHEL’s intellectual capital stands at a total of 2170 patents.

BHEL has the largest market share in the domestic market as it bagged 67% of the total orders. To be able to continue such dominance, the company is planning to spend around Rs. 1000 Cr during 2013-14 on capital expenditures.

Financial Highlights for FY-13:



	FY-12	FY-13	Change
Revenue	49,510	50,015	1%
EBITDA	9,907	9,384	-6%
PAT	7,040	6,485	-8%
ROE(%)	27.7	21.39	
NPM(%)	14.21	12.96	
MW Commissioned	9,270	10,340	11.5%
Orders Received	22,096	31,528	42.7%
R&D	1,199	1,255	4.1%
Net Worth	25,373	30,015	19.5%
CFO	5,000	-700	-

Turnover increased by 1% from Rs. 49,510 Cr in FY-12 to Rs. 50,015 Cr. in FY-13, while the operating profit fell from Rs. 9907 Cr to Rs. 9384 Cr (a decline of 5.28%). Profit after tax decreased by 8% to Rs. 6485 Cr over the same period.

The decline in the net profit margin was mainly due to an increase in the interest and depreciation expense, which increased by 140% and 20% respectively. Furthermore, there was a write-off of nearly Rs. 280 Cr of receivables, increase in employee benefits costs. Even the fuel costs went up. In a nutshell, there was a disproportionate increase in the expenses as compared to the increase in revenue.

The company's cash flow from operations has improved dramatically over the last year, when they had a negative cash flow: mainly due to the huge increase in accounts receivables. This year, BHEL has done better in terms of generating cash, but it is still less than the net income.

The CMD of the company, Mr. B.Prasad Rao stated in a conference call that top line was under pressure, as company deliberately stopped dispatch of certain orders, to put pressure on the customers having pending bills. He assured this was a positive sign in long term as this will force some customers to organizing their finances for early payments.

Total receivables of the company currently stand at Rs. 39,000 Cr; out of which around Rs. 19,000 Cr are due collectables and Rs. 20,000 Cr are deferred bills. In the past, BHEL allowed customers a grace period for payment against equipment orders. This is set to change as the CMD expects to recover most of the pending dues by July.

SWOT Analysis:

Strengths:

BHEL is the market leader and has total dominance in the domestic market. Long term customer NTPC is almost guaranteed to keep the business flowing in the company.

- BHEL has a long history and enjoys a great reputation in the industry. It also has a stable relationship with its clients.
- The main client of the company is NTPC. Since that customer is backed by the government, which in-turn is motivated to increase the power production capacity of the country, it will keep BHEL's business running.
- Employee quality is superior as the selection criteria of BHEL are stringent. This implies that a few of the best minds are at work with BHEL, hence it has better R&D, and more optimized processes.
- It is the largest company in the power equipment sector (in terms of revenue, PAT, market cap, and market share).
- BHEL is nearly a debt free company. This is a good sign, since the company can borrow easily for future expansions and is at a lesser risk of bankruptcy at times of recessions.
- The company offers a variety of services including turnkey projects, EPC (Engineering Procurement and construction), distribution and transmission of power.

Weakness:

The revenues of the company are highly dependent on the Power Sector. Even though the government has an ambitious plan for adding power plants, private players are shying away from the same due to several issues within the sector.

- Being a public sector enterprise (PSE), BHEL faces several constraints, as the political and bureaucratic interventions in decision making cannot be ruled out completely.
- BHEL faces rising input cost: prices of steel and coal are cause for concern for the company.
- The revenues of the company are highly dependent on one sector: Power. They are working on diversification plans, however.
- The company makes less cash than profits, mainly due to the delayed payments. These delayed payments sometimes results in write-offs as receivables turn bad.
- The company is facing a problem in fulfilling its commitments on time, which may have implications in the future.

There is a tremendous demand for power in India and insufficient supply. It is expected that for that gap to be filled, continuous power capacity addition is required – creating huge opportunities for BHEL.

Chinese imports pose the greatest threat to BHEL, as they turn out to be cheaper and the parts are delivered on time.

Opportunities:

- There is a considerable supply gap of power in India. The country needs power to fuel its economy; power, which is currently insufficient. This is good news for BHEL as it is expected that a lot more power plants will be built in the future.
- The government's 5-year plans for increasing power production are ambitious and they have allocated a significant share to NTPC, which in turn gets its work done by BHEL.
- Aging power plants would also provide more scope for services and spares.
- Government has decided to provide more autonomy to profit making PSEs, BHEL being among them.
- BHEL can collaborate with other international leaders through JVs and acquire superior technology from them.
- Increasing power demands of African and CIS countries provides opportunity for BHEL, especially when BHEL already has presence in many countries of these regions.

Threats:

- BHEL faces increasing competition from domestic as well as international players. Chinese imports are a serious threat to BHEL, as highlighted in the next section.
- There are various local problems ranging from acquisition of coal, steel and land, which are both time consuming and expensive for the power producers.
- BHEL faces obsolescence as the world moves towards greener technology.
- Rising steel prices has put another constraints on BHEL's margin.
- India is expected to add power generating capacity of about 900,000 MW by 2050, according to International Energy Agency. This might sound like an opportunity but if we look into numbers, the above amounts to 25,000 MW of capacity addition per year on average. Currently, BHEL alone has 20,000 MW addition capacity. With private players adding 30,000 MW and an increasing trend towards Chinese and African imports, there is a sign of saturation in the Power equipment sector.

Under constant pressure from BHEL and L&T, government proposed a new customs rate on power equipments in June 2013. The structure is:

	>1GW	<1GW
Import Duty	5%	5%
CVD*	10%	10%
SAD**	4%	4%
Excise Duty	-	2%

* CVD: Counter Veiling Duty

** SAD: Special Additional Duty

Doosan Engineering Private Limited and Gammon Alsando (Italy) also present competition to BHEL.

Foreign Threat:

Not only is BHEL facing problems due to decreasing orders (from Rs. 60,000 Cr couple of years back to around Rs. 30,000 Cr in FY-12) explained by hindrances in coal mines allocation, environment clearances, problems in acquiring land etc. It is also facing stiff competition from foreign entrants, particularly from China.

In the domestic market, many private players have set up joint ventures with foreign players. Their combined capacity is 30,000 MW as compared to BHEL's 20,000 MW. India currently has installed capacity of nearly 230,000 MW, and 25,000 MW of power was added last year:

Joint Ventures	Capacity (MW)	Location	Manufacturing Facility
JSW –Toshiba (Japan)	1000	Chennai	Turbines, Boiler
L&T-Mitsubishi	4000	Hazira	Boilers
Bharat Forge Alstom (France)	4000	-	Turbines
Thermax Babcock	3000	Pune	Boilers
BGR Energy – Hitachi Power	5000	Tamil Nadu	Boilers, Turbines, Generators

Furthermore, Shanghai Electrical (Chinese giant) has opened an office in India and is even planning to set up a manufacturing facility.

Companies like JSW, Adani, Reliance Power and Lanco have placed orders for turbines from China. One of the reasons for this is the reduced import duties on imports from China (w.e.f. the year 2011).

The government levied extra import duty of 5% on import of power equipments, taking total taxes to 19%. This would impact Chinese companies like DongFang, Shandong Electric Power Construction, Shanghai Electric and Harbin Power. The policy is proposed to be implementing only after the year 2017, and until then, present rates are applicable.

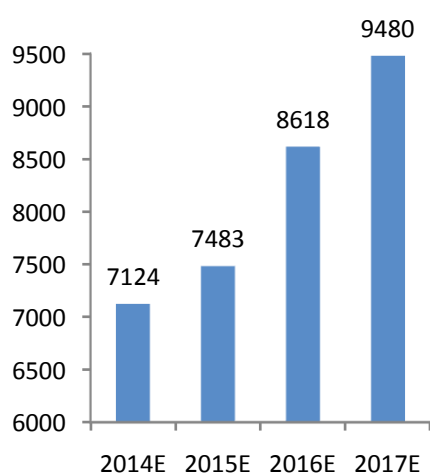
The fact that foreign companies have started building manufacturing facilities in India may be a blessing in disguise for BHEL. Because of the competition BHEL has decided to decrease its dependency on coal/gas based power and diversify its operations in the field of nuclear power, defence, water desalination and railway locomotives manufacturing.

Valuation:

We have considered two scenarios for valuation purposes:

1. Optimistic (Power sector will do well in the coming years),
2. Pessimistic (Problems related to power sector will persist).

Projected PAT



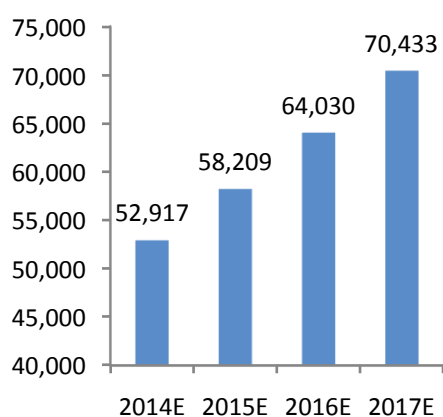
Optimistic scenario

We assume revenue growth of 10% in near future and 5% in perpetuity. This, according to us, is reasonable as the company grew at an average of 20% during last 5 years. It was only last year i.e. FY-13 that sales grew by 1%. Considering past performance and order to book ratio of BHEL we can safely assume that on an average company can grow at 10% in next 4-5 years and then at 5% forever. Hence even in the optimistic scenario we chose to stay conservative with our assumptions.

Year	2014E	2015E	2016E	2017E
Sales	52,917	58,209	64,030	70,433
PAT	7,122	7,384	8,618	9,480
FCFE	6,029	6,631	7,295	8,024
Intrinsic Value	296			

We have projected PAT using the average NPM in last 5 years of 13.5%. Since we are expecting company to do well in this particular scenario we expect BHEL profits to be 13.5% of sales. Besides, it is expected that subsidiaries of BHEL which are currently not making profits, will start doing so in near future.

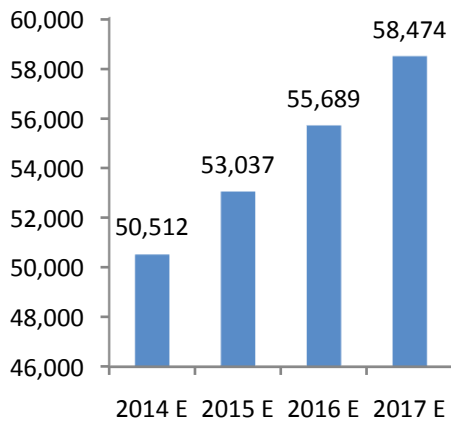
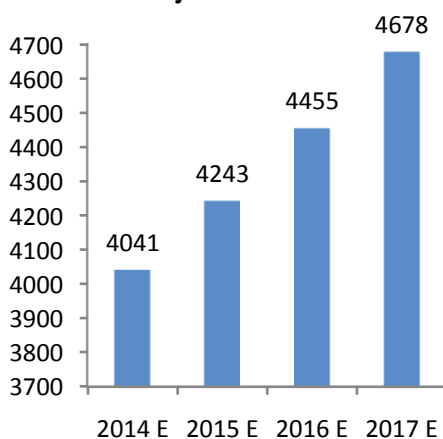
Projected Sales



Revenues are projected on basis of 'Net Sales' – which excludes the 'Other Income' from the equation. Hence, projections are made on the base value of Rs. 48,206 Cr and not the total income, which is Rs. 50,015 Cr.

BHEL has a track record of maintaining negative working capital, and we do not expect this trend to change significantly. However, as we prefer staying conservative, Change in working capital is projected as 5% of change in sales.

It is assumed that the company will continue to stay debt free. So finally we have PV of the entire future cash flows equal to Rs. 97,453 Cr. With 244.76 cr shares outstanding, that comes out to be an intrinsic value of Rs. 296 per share.

Projected Sales**Projected PAT**

Investors stand to gain more than 100% if growth picks up in the country and outlook for the power sector is improved.

Pessimistic scenario:

If power sector does not live up to the expectations, and political and social problems remain unsorted in near future, BHEL might not do well in the near future.

In this scenario, we have assumed a sales growth of 1% in 2014, 5% for next 3 years and then 5% in perpetuity, which can safely be taken as 'bad performance' since the company has had a growth rate of 20% on average, in last 5 years.

Furthermore, we assume that margins of company will drop to 8% as compared to 13.5% (average values over last 4 year). We know this is being too conservative, but we want to present a worst case scenario to the investor.

Going by the same calculations approach as we did while analyzing the optimistic scenario, we project the FCFE. However, in this case we assume that as growth will be moderate, capex by company will also be less, as they will find less need to expand.

Year	2014E	2015E	2016E	2017E
Sales	50,512	53,037	55,089	58,474
PAT	4,041	4,243	4,455	4,678
FCFE	3,231	3,392	3,562	3,740
Intrinsic Value	140			

Conclusion:

Based on our valuations, we believe that even in the worst case scenario, value of BHEL is Rs. 140 per share and around Rs. 300 in an optimistic scenario.

Considering the current market price of Rs. 100, we have reason to believe that the company is undervalued and investors stand to gain more than 100% if outlook for the power sector changes (driven by the change at the centre and possible following reforms).

There is a high margin of safety and the risk-return ratio looks rather lucrative. We recommend a BUY rating on the stock.

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