

The threat of
substitute products or
services
environmental
sciences essay



**ASSIGN
BUSTER**

Porter's five forces of Indian power sector. The Indian Power sector registered 9.2 per cent growth in power generation in April-December 2012 as in contradiction of 4.6 per cent growth in the similar period in 2011.

The threat of the entry of new competitors

Highly capital-intensive industry and so demands vast investment Power producers - Behemoth like NTPC, SEBs fundamental about 85 % of whole power generated. Tata, Adani, for Power Grid Corp. of India in Transmission and Distribution Segment. Major plans by large companies like Reliance power, Adani power, Tata power etc. to make an entry into power sector after market opened up for private sector through Electricity Act 2003 and following improvements However procurement regulatory approvals, fuel linkages, land etc. still continues the major blocks.

Hence the threat of new entrant appears to be low

The threat of substitute products or services

Power does not have substitute but it can be generated from different sources of energy. Currently thermal power is dominant in India, coal being the major raw material. Coal availability is limited and therefore power from nuclear, hydro and other renewable resources could be used as substitute for thermal power in future. Agreements with numerous countries for nuclear collaboration will give major motivation to Nuclear power plants Although demand for power outstrips its supply, going forward, thermal power plant businesses have threat from non-thermal power producers.

Hence the threat of substitute products is medium

The bargaining power of customers (buyers) :-

Industrial consumers have massive demand for power. Their bargaining power is low in India as the number of power companies to buy from is limited in number. Hence power businesses are in well place. Retail Customers - Government regulates the power sector to ensure supply of power at rational prices but this rule is limited. Peak shortage is much more in every region and it is about 12 % on all India foundations which allow suppliers to directive terms with the buyers.

Overall, the bargaining power of buyers is Medium.

The bargaining power of suppliers:-

Coal is majorly used as a feed for creating power. The supply of coal in India is limited and hence coal players are in leading position. Power companies are required to import coal if the domestic supply is not sufficient, which proves to be an expensive affair. With companies like Lanco, Adani Power buying coal mines in Indonesia, Australia etc. to import better grade coal than available in India, market governance of Govt. Companies like Coal India will subside gradually.

However looking at the present situation, the power of supplier high.

The intensity of competitive rivalry within the Industry:-

Power producing companies – No competitive competition as demand for power is way above its supply and all the power generated is used up.

However, with government encouragement, private membership is expected

to increase in the coming years to take advantage of huge demand for power. Power equipment market - Market leader like BHEL is facing tough competition from L&T, Alstom, Doosan and most importantly Chinese suppliers. Major orders of Boiler, Turbine and Generator taken by Chinese suppliers from most of the private sector clients.

So overall the intensity of competitive rivalry is medium.

FUTURE OUTLOOK

Proposed Capacity Additions through 11th Plan (2007-12): The 11th Plan endorses creation preparation based on an estimated 9.5% growth in requisite power each year. As a result, a capacity addition of 78,577 MW is optional in the 11th Plan as given below:

Sector	Hydro	Thermal	Nuclear	Total	
(%)	central	9,658	26,800	2,658	36,116
(%)	State	3,605	24,347	-	27,952
(%)	Private	3,265	7,497	-	10,762
(%)	All India	16,553	58,664	3,380	78,577

-

27,962(35.6%)Private3,2657,497

-

10,700(13.7%)All India16,55358,6643,38078,577(100%)

Source: Working Group on Power-11th Plan (2007-12)

Required capacity additions foreseen by the 12th Plan:

The necessary of installed capacity and size adding to get composed the production requisite during the 12th Plan period is given in table below:

Capacity addition required during 12th plan (2012-17): GDP growthGDP/

Electricity ElasticityElectricity GenerationRequired BUPeak

demand(MW)Installed capacityMWCapacity required 12 plan MW8%0.80.91,

4151, 470215, 700224, 600280, 300291, 70070, 80082, 2009%0. 80. 91,
4701, 532224, 600233, 300291, 700303, 70082, 20094, 30010%0. 80. 91,
5251, 597232, 300244, 000302, 300317, 10092, 800107, 500

Source: Working Group on Power-11th Plan (2007-12)

Under numerous growth scenarios, the capacity addition necessary during 12th plan would be in the range of 70, 800 - 107, 500 MW, based on normative parameters. The 11th Plan Working Group mention a capacity adding of 82, 200 MW for the 12th Plan originated on the scenario of 9% GDP growth rate and an suppleness of 0. 8%.

Long term demand of Power:

The Ministry of Power has set a goal - Mission 2012:

Power for All. Based on the 17th EPS, the total energy promise in India will rise to 968, 659 GWh by fiscal year 2012, 1, 392, 066 GWh by fiscal year 2017 and to 1, 914, 508 GWh by fiscal year 2022. This would prime to an yearly Electric Peak load of 152, 746 MW in fiscal year 2012, 218, 209 MW in financial year 2017 and 298, 253 MW in fiscal year 2022. The northern region is estimated to contribute 30. 1% and the western area donates 28. 4% of the overall annual Electric Peak load in fiscal year 2022. The Government has projected the total asset potential of the sector at Rs. 9, 000 billion for a exacting period up to fiscal year 2011. This signifies a main chance for capacity growth and growth chance for power generation companies, both in the public and the private sector

Current outlook of generation capacity addition:

In line with the obstinate objective set by the government, a whole Blueprint for Power Sector growth has been ready nearby an included plan with following objectives: Enough power to attain GDP rising rate of 8%; Reliability of power; Improved quality of power; Best power cost to make sure ease of use at wise prices; and profitable sustainability of power industry to make it good-looking for private sector role. The Government, through the Ministry of Power, has laid out the following broad strategies to achieve the objectives:

Power Generation Strategy: focus on low cost creation, optimization of ability use, controlling input costs, optimization of fuel mix, technology upgrading and use of non-conventional power sources; **Transmission Strategy:** focusing on developing the National Grid, including through way relations, Technology upgrade and optimization of transmission cost. **Distribution Strategy:** achieving sharing reforms by focus on system upgrades, loss reduction, theft control, and customer service orientation, quality power source commercialization, dispersed distributed and supply for rural regions.

Regulation Strategy: protecting consumer welfares and creation the sector commercially viable; **Financing Strategy:** to generate resources for necessary enlargement of the power sector; **Conservation Strategy:** to improve the use of electricity with a attention on demand side management, load administration and technology upgrades to provide energy proficient equipment; and **Communication Strategy:** starting political agreement with the media support to improve public awareness.

Increasing importance of the private sector:

India has emerged as one of the fastest growing economies in the world. Its present economic presence reflects a strong trend based on better consumption asset and exports. Over the next five years, this growth is predictable to continue. A key risk to the continuous development of the Indian economy is insufficient substructure. Infrastructure investment in India is on the rise, but growth may be forced without further developments. The Government of India has identified the power sector as a key sector of focus to endorse continuous industrial growth. It has boarded on an powerful mission -" Power for All by 2012"- and has expected many reforms to make the power sector more attractive to private sector investment.

Long term demand and supply outlook

As per the Ministry of Power, to deliver a continued GDP growth of 8 per cent till FY31-32, India's generation capacity has to grow to 962, 210 MW, more than 6 times the present generation capacity. This implies a CAGR of 8. 6 per cent over 22 years and an average capacity adding of over 36, 000 MW every year, nearly 4 times the capacity addition rate in the current 5 Year Plan till date (41, 297 MW added in 4 years). The GDP growth of India in the last few years has been meaningfully higher than the power sector growth thus putting more heaviness on the sector. In the period 2011, while the GDP has been rising at an average of over 8 per cent, the power generation capacity has been rising at a CAGR of 7. 0 per cent (from 132, 329 MW in FY07 to 173, 626 MW in FY11).

RELIANCE POWER INDUSTRY INFORMATION:-

Reliance Power Limited is a share of the Reliance Group, one of India's biggest business companies. The group purposes worldwide numerous sectors, including telecommunications, financial services, media and entertaining, structure and energy. The energy sector company includes Reliance Infrastructure and Reliance Power. Reliance Power has been known to develop, concept and function Power plants both in India as well as globally. The Business on its own and over its companies has a collection of over 35, 000 MW of power generation capacity, both in operation as well as capacity under growth. The power projects are operation to be various in circumstances of geographical locality, fuel type, fuel source and off-take, and all projects is on purpose to be advantageously situated near an obtainable fuel source or load centre. The reliance company has 1, 540 MW of in use power production property. The projects under growth include seven coal-fired projects to be fueled by funds from captive mines and supplies from India and in another place; two gas-fired Projects; and twelve hydroelectric projects, six of them in Arunachal Pradesh, five in Himachal Pradesh and one in Uttarakhand. Initiative to collaborate with power unit companies to set up 4, 000 MW projects to ease the country's power deficit situation. Besides these, Reliance Power is also emerging coal bed methane (CBM) blocks to fuel gas based power generation. The company is registering projects with the clean development Mechanism executive board for issuance of Certified Emission Reduction (CER) certificates to augment its revenues.

PRODUCT PROFILE

Thermal power: - In India, bulk of Power is created from thermal resources where the chief raw material used is coal. About 83% of thermal power is produced using coal as a raw material while 16% of thermal power is produced with the help of Gas and 1% of thermal power is varies over help of oil. **Hydro Power:** - Hydroelectric power or hydroelectricity is electrical power which is produced over the energy of falling water. India has hydro power generation potential worth 1, 50, 000 MW, of which only 25 % has been harnessed till date. **Nuclear Power:** - A Nuclear Power Plant is a thermal power station in which the heat source is one or more nuclear reactors. A nuclear reactor is expedient to start and control a sustained nuclear chain reaction. In the process, heat is generated which is then used to generate electricity. **Renewable Energy Power:** - The energy got from renewable sources like sun, wind; biomass can be transformed into power. Renewable energy bases have great potential to contribute to improving energy security of India and reducing green-house gas releases. India is among the five main wind power generators in the world.