

Sector Overview

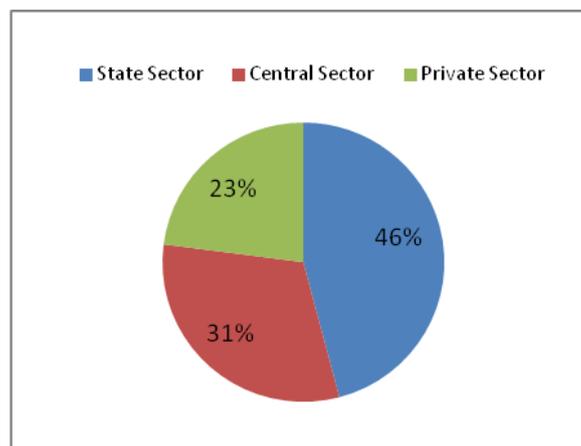
POWER: ELECTRIC THERMAL AND NUCLEAR

India's power sector has witnessed drastic changes in the past decade. The Electricity Act, 2003 (henceforth referred to as 'The Act') paved way for the advent of reforms and competition in the power sector. A slew of policies and regulations followed, to facilitate an accelerated growth in the sector. The process started with the restructuring of power distribution utilities, with some states corporatizing the functional entities for power generation, transmission and distribution. The states of Orissa and Delhi went a step further by privatising the distribution function. While Delhi came to be recognised as a successful model, Orissa could not keep up to expectations.

"Power for All" is still a distant dream for India's power sector. Almost 40 per cent of the country's population today still awaits access to electricity and the per capita electricity consumption is at a little over 730 units (2008-09), which is abysmally low when compared to that of China (2500 units), USA (12,700 units) or the world's average (3000 units).

Through targeted initiatives like the 'Accelerated Power Development and Reforms Programme' or APDRP (now 'Restructured-APDRP') and the 'Rajiv Gandhi Grameen Vidyutikaran Yojana', which are the central government-funded programmes at the state level, the sector is trying to achieve its objectives of arresting system losses and increasing access to electricity. The Act has provided a boost to captive and merchant generation capacities. The 'Ultra Mega Power Projects' have further strengthened the opportunities for investors, in the generation segment.

The generation capacity of the country stands at over 180 MW (as in August, 2011) with a dominant share of the state sector. The private sector, which currently contributes 23% of the generation capacity, is expected to increase its share to 52% by 2017.



The competitive bidding framework has encouraged the private sector to aggressively participate in the power sector. Since 2006, about 42,000 MW of new capacity have been contracted under this framework. Foreign companies have come in, in a big way, for manufacturing of electrical equipments.

FINANCE/ASSISTANCE

The performance of the power sector has a direct bearing on India's economic growth. An 8-9 per cent growth of the economy warrants an equitable growth in the nation's power sector. However, over the past few years, this sector has grown only between 5-6 per cent.

The Ministry of Power has taken a number of initiatives to accelerate the growth of this sector. Some areas however, need some concerted effort.

- Fuel reforms need to be accelerated particularly in the coal sector.
- Logistical arrangements are required for smooth movement of fuels.
- Performance of the state power sectors, especially the distribution segments, is way below the mark and needs immediate actions.
- Availability of 'Balance of Plant' equipments.
- Availability of skilled manpower, particularly in the hydroelectricity sector.

As per the Department of Industrial Policy & Promotion (DIPP), Ministry of Commerce, the year wise FDI inflows in the power sector have gradually increased from 2003-04 to 2009-10. The details are as under:

Amount in INR Crores

Sector/Year	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
Power	131 (28)	241 (53)	386 (87)	713 (157)	3875 (967)	4382 (985)	6908 (1437)

Note: the figures in brackets shows the amount in US \$Million

RESEARCH AND DEVELOPMENT

In its bid to move towards a low carbon footprint in the power sector, the Ministry of Power has been pushing for the adoption of super-critical technologies, which reduce the carbon emissions and are also high on efficiency. There has been a push towards increasing the unit size and adopting cleaner and more efficient technologies.

In recent times, smart grid technologies are finding more and more applications in the power sector. R-APDRP has been supporting utilities' initiatives for adopting IT applications and capacity building through the use of updated technologies. Considering the high level of technical and commercial losses, such intelligent technologies are expected to play a key role in keeping the loss levels under control.

REGULATORY NORMS

The opportunities for investment in India's power sector are huge. The policy and regulatory frameworks are well defined. All the segments be it generation, transmission, distribution, electricity trading or equipment manufacturing, are open to private participation. Several path-breaking regulations such as standard bidding guidelines, open access, multi-year tariff regime and so on, are in place. However, while the regulations are all there, what is lacking is their implementation.

The financial losses being incurred by the distribution sector are capable of affecting the viability of the entire sector. Recent initiatives such as revising retail tariffs and proposed ratings of state utilities for future lending, on a regular basis are steps in the right direction.

CHALLENGES

- High level of technical and commercial losses
- Fuel sector reforms
- Lack of skilled manpower
- Clearances and Linkages

THE FUTURE

India's power sector has a long way to go. India's fast-paced economic growth and its rapid rate of industrialisation and urbanisation have fuelled an increased demand for energy. It is estimated that if India continues to grow at the current rate, the Indian economy would emerge as the second largest in the world, next only to China, by the year 2050. It is therefore expected that, the demand for energy would also rise substantially in the future.