

INDIA-AUSTRALIA ENERGY & MINERALS FORUM

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Investment Opportunities in Indian Power Sector

**Presentation by -
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Strengths of Indian Economy

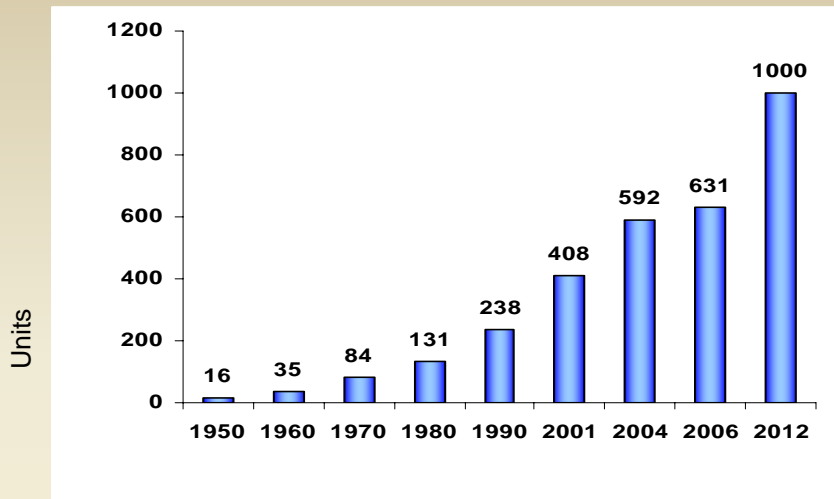
- **Investment climate in India is buoyant, pace of growth has accelerated and macro economic fundamental are sound moving in right direction.**
- **India has been able to achieve economic growth rate of 8.5% per annum during the last 5 years and now poised to achieve double digit growth rate.**
- **Growth of manufacturing sector has been more than 10%.**
- **Gross domestic saving rate has been rising and reached over 30% with phenomenal growth in gross domestic investment.**
- **Foreign exchange reserves are at a very comfortable level of more than US\$ 275 billion.**
- **All these parameters indicate a growing robust economy.**

Strengths of Indian Power Sector

- **The present installed capacity is 159 GW.**
- **During the last 5 years, growth in electricity generation has been around 6%.**
- **Capacity addition expected during the next 2 years is more than 40GW, i.e. with a growth of more than 10%.**
- **To meet the existing shortages and growing demand of power, large capacity additions are required.**
- **In XIIth Plan, i.e. during 2012-2017, capacity addition envisaged is 100 GW.**
- **Additional capacity addition during 2010-2032 is about 600 GW.**

Growth Potential in Indian Power sector

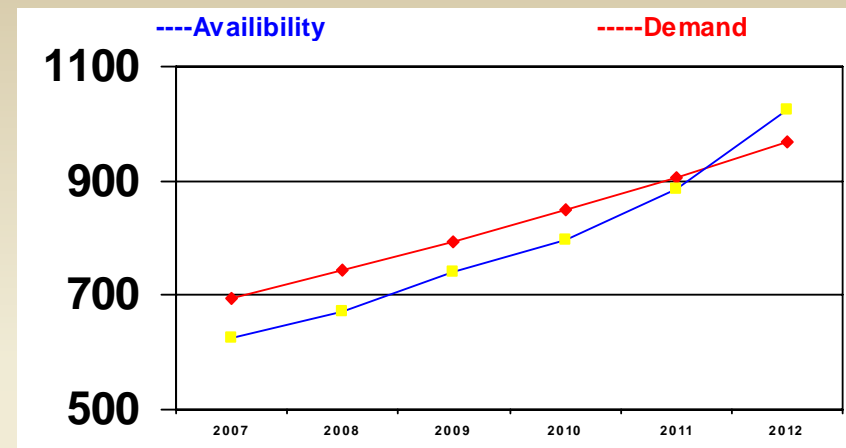
Growth in India's Per Capita consumption



Source: Central Electricity Authority

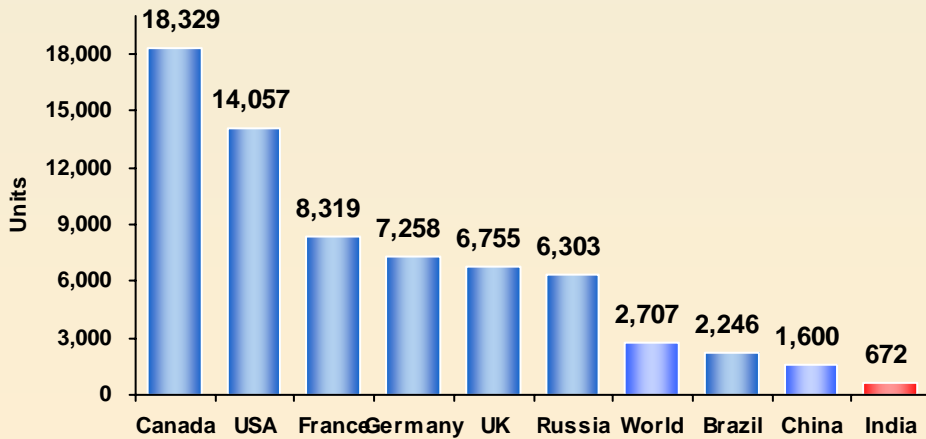
Projected

Demand & Supply of Electricity



Source: Central Electricity Authority

India: Low Per Capita Consumption



Source: U.N. Development Programme, Human Development Indicators 2006

Growth Projections (at 9% GDP)

Particulars	2006	2012	2017	2022	2027
Generation Capacity (GW)	124	216	333	512	790
Per capita consumption (kWh)	631	1000	1300	1900	2800

Source: Planning Commission – Integrated Energy Policy, Aug 2006

Above figures are as on 31st March of the respective Years

Investment Requirements

- o Investment required to meet the required capacity addition during XIth & XIIth Plan would be as given below:

	XI th Plan (2007-12) Bn US \$	XII th Plan (2012-17) Bn US \$
Thermal, Hydro and Nuclear Generation	91	110
Captive and Non- Conventional Energy Sources	25	30
Merchant Power Plants	9	10
R&M	3,5	5
Total Generation	128,5	155
Transmission, Distribution and Rural Electrification	95,5	105
	224	2650

Policy Initiatives to promote investment

- **Comprehensive Electricity Legislation – The Electricity Act, 2003**
- **The Electricity Act, 2003 facilitates investment by creating competitive environment. It has following salient features:**
 - **Entry Barriers removed/reduced.**
 - **Generation delicensed.**
 - **Freedom to captive generation including group captive.**
 - **Recognizing trading as an independent activity**
 - **Open access in transmission already in place.**
 - **Open access to consumers above 1 MW**
 - **Multiple licenses in distribution.**
 - **Regulatory Commissions – to develop market and fix tariff.**
 - **Promoting competition for benefit of the consumers.**
 - **Measures to control theft of power**
 - **Special measures for power in rural areas**

Electricity Policy

- **This is the main instrument through which the legislative provisions under the Electricity Act are administered and implemented. It aims at:**
 - **Access to all**
 - **Eliminating power shortages by year 2012**
 - **Protection of consumer interests**
 - **Financial turnaround of power utilities**
 - **To ensure per capita availability of 1000 units**
 - **Energy efficiency / conservation**

Tariff Policy

- **Another very important policy initiative notified in January, 2006.**
- **This policy aims at :**
 - **Reducing the cost of power through competitive process of capacity addition**
 - **Operationalising Open Access in Transmission & Distribution**
 - **A clear-cut policy on management of subsidy and cross-subsidy**
 - **Encouraging renewable energy generation**
 - **A clear direction on optimum utilisation of captive plant capacity**
 - **In nut-shell, Tariff Policy aims at ensuring that the consumers interests are protected in the best possible manner.**

Tariff Based Competitive Bidding

- **Comprehensive guidelines on competitive bidding for power project development through a transparent process. This was notified in January, 2005.**
- **Main objective of the competitive bidding guidelines is to see that the distribution companies get electricity at best possible price and thereby consumers get electricity at optimal tariff.**
- **Under Tariff Based Bidding, international competitive bids are invited from the project developers for setting up power project and project is awarded based on lowest levelled tariff quoted by the parties.**
- **All necessary initial works such as land acquisition, water consent, fuel linkage environmental clearance etc. are done before the bids are invited to ensure that there are no uncertainties in development of the project.**
- **Similar dispensation in Transmission segment was also extended and comprehensive guidelines were issued in May,2006.**

Other Policy Initiatives

- **Mega Power Policy**
- **Under this Policy, thermal power project above 1000 MW and hydro power projects above 500 MW are allowed special following fiscal benefits:**
 - **No excise duty or custom duty**
 - **Income-tax holiday for 10 years during first 15 years**
 - **Concession in local sales tax etc. by State Govts.**
- **Government of India has allowed 100% FDI in power sector**

Positive Responses

- **Growth in electricity generation during 2000-2005 was 4.1% per annum. During 2005-2010, the growth was 5.7% per annum.**
- **The Plant Load Factor (PLF) is an important measure of operational efficiency of thermal power plants. The PLF of the overall system has improved significantly from 64.6% in 1998-99 to 77.5% now. Thus, implying a steady improvement in efficiency in generation.**
- **Provisions for open access have effectively taken care of concern of developers regarding payment security as it enable them to find alternative consumers across India who would be prepared to pay for the electricity in case of default.**
- **Payment by electricity utilities whether in public / private sector to generation or transmission companies is no longer a concern any more. In last seven years 100% payment of bills is being ensured all over the country. The creditworthiness of Indian power sector has considerably improved.**

- **The distribution reforms have remained the key focus area for quite some time now. A number of measures have been taken to improve financial health of State Utilities. These measures have shown positive results. The gap between cost of supply and revenue is also showing a declining trend.**
- **Electricity market in the country is buoyant. There has been quantum increase in the investment in the power sector. At present projects aggregating over 55,000 MW with total committed investment of over \$65 Billion are under execution. Majority of them would be commissioned in next 2 to 3 years.**
- **Over 30,000 MW of IPPs have achieved financial closure during last 5 years and another 20,000 MW are in the pipeline.**

Ultra Mega Power Project

- **To speed up capacity addition and to have economies of scale, Govt. of India has taken initiative for setting up power projects of 4000 MW capacity each. Initially, nine locations were identified. Four projects have already been awarded through tariff based bidding and development work for other five projects is in process. More projects are being considered under this initiative. Investment requirement for each of this project is about \$4.5billion.**
- **Open Access in transmission has become a reality.**
- **Open Access in distribution is mandated to happen. All regulatory commissions have worked out the rules. Open Access for consumers of 1 MW and above would be a reality in the next 2-3 years' time frame.**
- **Development of Merchant Power plants in the country is being encouraged to provide the additional generating reserves for development of market.**

Power Exchanges

- **Already 2 Nos. of Power Exchanges (Indian Energy Exchange and Power Exchange of India) are already operational. These Exchanges are doing Day ahead trading of power and other instruments such as Week ahead and Month ahead are also being considered.**

Market oriented framework in the power sector and growing economic conditions of India provides an excellent investment opportunity in the Indian Power Sector.

Thank you