

ENERGY CHALLENGES FACED IN INDIA

Vanshika Tushir
University of Delhi

The concept of energy is ubiquitous. It plays a vital role in the socio-economic development of a country. India is the 4th largest consumer of energy worldwide. Overpopulation and economic growth are key contributors to increasing the demand for energy. It is indeed a tough task to meet the never-ending demand with minimum environmental risk. As India enters a new decade of the energy transition, it is an incredible opportunity to reassess where it is in terms of meeting its objectives and identifying the significant problems that will be encountered throughout this shift. Major energy challenges faced by India are :

- Rising oil imports – India, which is almost accelerating as it faces increasing urbanization and a growing middle class, is highly dependent on imports to meet its oil demand and is the world's fourth-largest oil importer. Oil India Limited (OIL) and Oil and Natural Gas Corporation (ONGC), have long dominated the upstream and downstream sectors. However, reforms in the past decade have intensified competition and show potential signs of increased foreign investment in sectors long dominated by domestic firms. According to IEA Energy Statistics, India's oil consumption has surged sixfold in the previous 25 years, and present oil accounts for over one-third of India's energy consumption. To fulfil the rising demand, India imported 95.86 million tonnes of crude oil, accounting for 75% of the total supply. Oil demand has compelled India to reach agreements with nations such as Sudan, Syria, and Iran. Such significant import vulnerability is connected with the possibility of supply interruption due to huge crude oil imports, which can have major economic consequences.
- Inefficient electric system – India meets its electricity demands with 65 percent use of non-renewables, 19 percent of that demand is met with hydropower, 12 percent from renewables, and 2 percent from nuclear power. Demand is far outpacing supply in meeting the rapidly growing electricity needs of the country. Electricity shortages have resulted in the loss of profits for many companies, loss in productivity as plants and businesses have been forced to shut down for a few days a month or slow down manufacturing, and added operational costs as some businesses have been forced to pay for power backup units. While growing demand is part of the problem, poor infrastructure equally contributes to electricity shortfalls that have hindered recovery in India's industrial sector and hurt its overall economic growth. State electricity boards run the infrastructure for power distribution, but they are in poor financial conditions. Although the government has loosened limitations on foreign investment in the power sector, the notion of working with the financially beleaguered electricity boards has scared off private investment.



Everything in our environment is made out of energy. It might be mechanical, thermal, radiative, electrical, chemical, or radioactive in nature.

- Inferior quality of coal – India is the third-largest producer of coal in the world. It produces 557 million tonnes (metric tons) of coal. The majority of the coal produced is consumed by the power sector. Owing to summer heat, frequent labor strikes, and natural disasters, India has had a harder time meeting growing market demands and facing an economic burden along with environmental pollution.

- Energy poverty – In India, energy access is a major concern. According to a survey, kerosene is still used for lighting in 77 million households in India. It is considerably worse in rural areas, where up to 44% of homes do not have access to power. While India has launched a number of programmes and attempts to combat energy poverty, they have run into logistical issues and poor implementation on the ground. In the case of rural areas, access issues and geographical hindrances make addressing the issue extremely costly and difficult.



The end of the line is that energy is one of the vital factors for the development of the country. It's no surprise that India being the fourth-largest consumer of energy faces some hurdles itself that need to be subdued. Albeit, catering to the hurdles mentioned above should be done in a sustainable manner keeping in mind our environment



FACTS ABOUT ENERGY

- Nearly 5 lakh people die every year because they use wood/coal-burning cook stoves. Now, people are waking up to newer means of cooking. Biomass cook stoves alone have over 11 varieties.
- India now can produce solar energy cheaper than burning diesel. India also receives more solar energy than the entire energy consumption of the country!
- 32% of all primary energy use is produced by biomass at the moment. What you can't eat, can light your home.