

***Session 4: External Players –  
The United States, India and Australia***

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**India's Energy Security**

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(\* paper was presented by Assoc Prof Rajesh Basrur)

India has witnessed a soaring demand for energy in recent decades due to an expanding economy and rapidly growing population. As of 2008, India accounts for one-sixth of the world's population but consumes just five per cent of global energy.

India's commercial energy mix is dominated by coal, oil and gas. Of the electricity generated, nearly 70 per cent is coal-based while hydro power accounts for about 14 percent and other renewable energy sources (mostly wind and solar), as well as nuclear power, together account for almost five percent of the national electricity supply. About 40 per cent of India's commercial energy use is imported. Import dependency on oil is of particular significance given the volatility in the international oil market. With the production of domestic crude oil remaining stagnant over the past 15 years, import dependency on oil has been increasing and currently stands at about 75 per cent, of which nearly 74 per cent is sourced from the Middle East, Saudi Arabia being the single largest source. Given India's large population and rate of economic growth, and that a large percentage of the population still need access energy, India's energy demand will stay on a high growth trajectory for several decades. Projections up to the year 2020 suggest that oil consumption will grow at a rate of six percent per annum while the annual electricity consumption is expected to be around seven per cent. In the electricity sector, India already has a shortage of nearly 10 per cent in energy and nearly 14 per cent in peaking power. It is evident, therefore, that India will have to continue to contend with energy security issues as well as the associated environmental concerns unless there are some major structural and policy changes.

Looking around, the importance of energy in fostering development has long been identified by many countries and several initiatives have been taken to address the various aspects of energy security. Thus, it is useful to learn from the experiences of the South Asian region, notwithstanding those of other countries as well. The initiatives from these countries can be broadly understood under the following three categories:

First, there is a need to develop substitutes for traditional biomass-based cooking fuels and thus options apart from provision of LPG need to be explored. Secondly, the development of renewable energy sources which can be applied in sectors such as electricity generation, industries, community services and transport. Thirdly, there must be improvements in energy efficiency which can contribute to environmental damage reduction and reduced pressure on energy systems.

In addition to the above, from a traditional energy security point of view, particularly towards reducing supply risks for imported energy, India is also looking into supply diversification and strategic reserves. This in turn highlights the role of energy trade and investment linkages.