

6.5 CONCLUSION

India has come a long way since its independence in 1947. It has emerged as a leading developing country with its vibrant democracy and an enviable economic growth despite the world economic recession environment in the recent years. Yet India continues to suffer from significant energy poverty and pervasive electricity deficits. In recent years, India's energy consumption has been increasing at a relatively fast rate due to population growth and economic development, even though the base rate may be somewhat low. The Human Development Indices in respect of India are still far below the desired levels and need to develop much more. With an economy projected to grow at 8-9% per annum, rapid urbanization and improving standards of living for millions of Indian households, the demand for energy is bound to multiply rapidly. All sources of energy will be therefore be required to be optimally exploited if such demands are to be met in time.

India is currently facing critical vulnerabilities with respect to volatilities in fuel prices in the international market on account of the unpredictable security environment in the petroleum producing regions. Rise in fuel prices as well as questions about adequate fuel availability has an unacceptable adverse impact on India's economic growth. To remove such vulnerabilities, transition to RE sources is a strategic necessity for India from the perspectives of energy security, meeting rural and remote area energy demands and for reduction of has emission to comply with international protocols on climate change.

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RE has starting making visible impact in the Indian energy scenario. Apart from contributing to around 12% in the national electric installed capacity, RE based decentralized and distributed applications have benefited millions of rural folks by meeting their cooking, lighting and other energy requirements in an environmentally benign manner. The social and economic benefits include reduction in drudgery among rural women and girls engaged in the collection of fuel wood from long distances and cooking in smoky kitchens, minimization of the risks of contracting lung and eye ailments, employment generation at village level and ultimately improvement in the standard of living and creation of opportunity for economic activities at village level.

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Developing RE sources which have fairly high initial capital costs but are desirable for long-term energy security and environmental protection is particularly challenging in view of the pressure to invest available resources in cheap, short-term solutions that address immediate basic development needs. The challenges are even more when bulk of Indian consumers are poor, extremely price-sensitive and are used to substantial energy subsidies. Hence policy makers need to ensure that RE sources are encouraged without undermining the fundamentals of the market and imposing an unacceptable burden on the exchequer.

In the recent years, India has made impressive strides in RE deployment. The real challenge lies in maintaining this momentum in the

years to come. Various path breaking policy and institutional measures have been introduced and the impact of the same in spurring the growth of RE sources has been very encouraging. This impetus has resulted in bringing about vibrancy across all sectors of the economy related to RE sector. There is a need to sustain and further strengthen this growth rate.

Solar power can help meet the twin objectives of long-term energy security and climate change considerations. Solar power can make a substantive contribution by the end of the thirteenth plan, in meeting our power requirements as well as in mitigating import of fossil fuels and reducing GHG emissions. The foreign exchange savings due to coal and diesel mitigation can be significant. Strategically, India's focus needs to be the development of domestic manufacturing and R&D industry and decentralised solar installed capacity in rural areas where it will have the most social impact.