

INDIA



India's quest for energy alternatives



By Prabjot Singh Bhullar

On the road to sustainable development, India has been exploring alternatives to conventional energy in an attempt to bridge the demand-supply gap in the energy sector. Whilst wind energy dominates the renewable energy sector in India, recent studies have revealed that a fall in the cost of manufacturing solar technologies over the coming years would result in a significant increase in solar energy generation.

The Government of India has launched eight missions as part of the National Action Plan on Climate Change (NAPCC) to identify actions needed to address climate change in the areas of solar energy, enhanced energy efficiency, sustainable habitat, water, sustaining the Himalayan eco-system, green India, sustainable agriculture and strategic knowledge for climate change.

The Jawaharlal Nehru National Solar Mission (JNNSM) is one of the eight missions under the NAPCC which outlines plans for a national target of 20 gigawatts of solar generation capacity by the year 2022.

The JNNSM's focus is to create an enabling environment for solar technology penetration. The first phase (up to 2013) proposes capturing options in solar thermal and promoting off-grid systems to reach out to consumers without access to commercial energy. In order to facilitate grid-connected solar power generation in the first phase, a mechanism of "bundling" expensive solar power with cheaper power from the unallocated quota of the Government of India generated at the National Thermal Power Corporation Limited (NTPC) coal based stations has been proposed (Bundling Scheme). The Bundling Scheme envisages:

- NTPC's Vidyut Vyapar Nigam Limited (NWN) being designated as the nodal agency for procuring solar power by entering into agreements with developers setting up solar projects before March 2013;
- For each megawatt of installed capacity of solar power for which an agreement has been signed by NWN, the Ministry of Power (MOP) is to allocate an equivalent amount of

capacity from the unallocated quota of NTPC coal based stations to NWN;

- Sale of the "bundled power" by NWN to the distribution utilities at the Central Electricity Regulatory Commission (CERC) determined prices.

Apart from policy initiatives, legal and regulatory initiatives have played a key role in creating a market for private sector investments in the renewable energy sector in India:

- The Electricity Act, 2003 (Act) mandated the State Electricity Regulatory Commissions to specify a percentage of power to be procured by distribution licensees from renewable sources;
- The National Electricity Policy and Tariff Policy have justified the determination of a differential tariff for non-conventional technologies for a transition time until these technologies can compete;
- CERC has addressed the mismatch between availability of renewable energy resources within the State and the requirement of the obligated entities to meet their renewable purchase obligations by laying the foundation for "inter-state" sales by issuing the CERC (Terms and Conditions for Tariff Determination from Renewable Energy Sources) Regulations, 2009, and the CERC (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010.

While policy, legal and regulatory initiatives for promoting renewable energy are commendable, it remains to be seen whether these will be sufficient to attract investments so as to meet the targets set out under the JNNSM, or whether policy makers need to revisit the JNNSM.

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