

## Role of Power exchanges

As a national level market place, their role becomes very important in a decentralised market design, which is why the renewable energy certificates (REC) mechanism was introduced on exchanges, says **Navneeraj Sharma**.

The Jawaharlal Nehru National Solar mission (JNNSM) has been a huge success and we have reached an installed solar capacity of 979 MW in May 2012 from 17.8 MW in 2010. The Charanka solar power park with a peak capacity of 214 MW has already achieved the status of largest PV plant in the world. In the 13th Five Year Plan, India has set a target of reaching 20 GW grid-connected solar power by 2022. Solar power prices have touched about Rs 7.5 per KWh in JNNSM Phase 1 Batch 2 from Rs 10.5 per KWh in JNNSM Phase 1 Batch 1 and are converging towards grid parity at a much quicker pace. The JNNSM target presents both an opportunity and a challenge. India has a tremendous opportunity to lead the developing countries in sustainable models of development and giving a fillip to an indigenous technology-intensive industry. On the other hand it also needs to deal with the challenges in making short run costly solar power palatable to different stakeholders. The design of our power sector is changing from a regulated sector to that of a competition-based sector. Vertically integrated entities are being separated to strengthen the competition. A similar approach is being adopted in the renewable energy space where the private sector is taking the lead in development of the projects with the regulator fixing the tariffs. A prime example for this is the JNNSM Phase 1 bidding.

As a national level market place, the role of power exchanges becomes very important in a decentralised market design. Due to this reason the renewable energy certificates (RECs) mechanism was introduced on power exchanges. The exchanges act as a national level aggregator of information for schemes like RECs and others. This information helps regulators gauge market sentiment and gain valuable feedback from market participants and various stakeholders. The REC mechanism has completed 15 monthly trading sessions however solar RECs were traded for the first time only in the May 2012 session. Some key issues which need to be addressed to make India a power house in solar power are:-

- To meet its 2022 target of 20 GW of grid-connected solar power, India needs an investment of around \$40 billion. Currently, floor prices/forbearance prices have been determined till 2016-

17. The absence of a long-term pricing structure creates uncertainty and creates hurdles for developers in arranging finances for their projects. Therefore, there is an immediate need to provide a long-term price horizon to the developers.

- REC mechanism requires all obligated entities to meet their renewable purchase obligations through feed-in tariffs or buying of RECs from developers. Some obligated entities are not complying with their obligations, which can destroy the REC market as complying entities feel cheated and may not comply with their targets from the next REC cycle. There is an urgent need to sort out compliance issues in a centralised manner as it is affecting further investments and placing the existing investments at risk.

- Solar power plants will require grid-connectivity for evacuation of power. There is an urgent need to build interstate and intra-state transmission corridors. Also, as the share of renewable energy increases in India's energy portfolio, the job of the system operator will become that much difficult in maintaining grid stability.

- Various R&D efforts have been carried out to increase the efficiency of solar cell panels. Continual positive outcomes from such efforts have increased the confidence of bidders and they have been bidding aggressively. As an outcome, prices in JNNSM bidding have dropped to as low as Rs 7.5/KWh. Similar efficiency gains (drop in prices) may materialise only if there are major technological breakthroughs and project financing becomes cheaper. If these gains do not materialise, then this kind of universal herd mentality may jeopardise the entire sector.

- India is trying to promote domestic solar panel manufacturers who are currently uncompetitive as compared to their foreign counterparts. The goal of rapid increase in domestic solar capacity and promotion of panel manufacturers go against each other. It requires a fine balancing act to achieve both goals.

India needs a positive environment to encourage developers further and make them exercise a little caution in order to avoid any major pitfalls. **PT**



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Views are personal.