

Indian renewable sector at crossroads

It has been nearly three years since the announcement of the 100 gigawatt (GW) solar capacity target for March 2022. The sector has made huge strides in this time and it is a good time to take stock of the progress made so far and analyse key trends.

Annual capacity addition has grown in the last three years at a compounded annual growth rate of 80% to an estimated 16 GW as of September. Top international and Indian investors, including private equity funds, sovereign wealth funds, conglomerates and utilities have entered the market, drawn by its high growth prospects and supportive policy framework. Growing capacity addition and private sector interest provide a ringing endorsement of government vision. In fact, it is remarkable that financing, which used to be touted as the main barrier to sector growth, has turned into a key enabler. As the sector matures, however, it faces new challenges and the policy environment needs to adapt accordingly.

The sector's growth has been very patchy—Karnataka, Andhra Pradesh, Telangana and Tamil Nadu account for 56% of total operational plus pipeline capacity. In contrast, their combined power consumption is only about 25% of national consumption. By 2018, renewable power penetration in these states is expected to cross 20%, generally regarded as a critical threshold for grid stability. Most other states, including Maharashtra and Gujarat, are already power-surplus, the result of breakneck thermal power capacity addition in the last five years (91 GW), and hence moving cautiously on renewable power. The problem is so acute that the ministry of power envisages no new thermal power capacity from 2022-27 and the recent economic survey has called for rationalization of renewable capacity addition.

The result ironically is that demand for solar power is slowing down when tariffs have fallen to a low of Rs2.42 per kWh, making solar power the cheapest new source of power in India. We expect utility-scale solar capacity addition to slow down to about 5 GW per annum, down from about 8 GW in 2017, over the next three-four years before the excess supply situation eases.

Aggressive bidding and the sharp fall in prices have raised concerns whether the solar sector will suffer the same fate as thermal power or roads, where irrational pricing led to many projects being abandoned or financially distressed. Our assessment is that because of their short gestation period, credible sponsor groups and small individual project sizes, most solar projects will come online as planned. Delays are possible and some investors will bear pain but the banks should be largely protected.

The steep fall in tariffs has led to “buyer's remorse” for many distribution companies (discoms), which have procured solar power at higher prices and are now trying to wriggle out of their commitments. States are not only scrapping ongoing tenders but also, in some cases, seeking to renegotiate or cancel previously allocated projects. We are hopeful that the regulators and judiciary bodies will clamp down on such unilateral attempts as happened in Gujarat in 2014, when the state's discoms tried to renegotiate their high-priced power purchase agreements. Wayward discoms, poor planning and policy uncertainty pose the biggest challenges to the sector. Private investors, particularly international players, need reassurance that contracts will be honoured.

As the sector matures, incentives provided by the government—capital subsidies, accelerated depreciation, free transmission, zero value-added tax, etc.—are being gradually wound down. Instead, the sector faces a growing challenge of how variable, intermittent power can be absorbed into the grid. More stringent forecasting and scheduling restrictions are on their way and the “must run” status of the sector is also under threat.

Solar panel manufacturing also remains a dilemma. Domestically manufactured modules account for less than 10% of consumption notwithstanding the Make In India campaign and policies such as domestic content requirement. Total import bill for the sector is estimated at Rs30,000 crore this year, about 1% of total imports. This may not be a daunting amount but the conundrum for policymakers is whether we need cheap power or economic growth and jobs. Are we just replacing oil imports from West Asia with equipment imports from China? Domestic manufacturers have petitioned for protectionist duties. A cogent long-term vision for manufacturing sector is missing and there are fears that India has missed the bus on manufacturing.

Inevitably, these challenges need to be addressed to achieve solar power potential in India. The 100 GW target for 2022 may be too ambitious but there should be no doubt that solar is the right technology for addressing many of India's energy sector woes—cost, access, air quality and security. It has the potential to transform our economy, environment and the lives of hundreds of millions of our citizens.

If prices keep falling even at a reduced rate of 5-7% per annum, as is widely believed, solar power will become vastly more attractive than other competing power sources. We could be looking at solar power at Rs1.50 per unit in a few years. Improvements in storage technology will solve the main challenge of intermittency. That will mean 24x7 solar power at attractive prices and no environmental burden. We are confident that long-term growth of solar power in India will be faster than most industry forecasts.

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