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LOW TARIFF FOR SOLAR PV PROJECTS: THE GOOD AND THE NOT SO GOOD

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Tariffs for solar power have been falling steadily since 2010 when the Jawaharlal Nehru National Solar Mission ("JNNSM") was launched – from the lowest tariff of ₹10.95 per kWh, discovered for photovoltaic ("PV") projects in batch I of phase I of JNNSM, to ₹7.49 per kWh (being the lowest tariff discovered in reverse auctions based on discounted feed-in tariff) for PV projects in batch II of phase I of JNNSM, to a levelised tariff of ₹5.45 per kWh (₹4.95 per kWh in case benefit of accelerated depreciation is availed) for PV projects selected under reverse auctions based on viability gap funding ("VGF") under batch I of phase II of JNNSM.

Solar power tariffs are now consistently under ₹5 per kWh. In November 2015, under batch II of phase II (State specific bundling scheme) of JNNSM, SunEdison, USA quoted the lowest tariff of ₹4.63 per kWh to win the 500 MW capacity Ghani solar park in Andhra Pradesh. In December, 2015, SB Energy, (formerly known as SBG Cleantech), a three-way joint venture between SoftBank Group, Bharti Enterprises Limited and Foxconn Technology Group, also quoted ₹4.63 per kWh to win NTPC's bid to develop a 350 MW solar plant also in Ghani solar park. Fortum Finnsurya, a unit of Finland's state-controlled Fortum Oyj topped this in January 2016 with its winning tariff bid of ₹4.34 for a 70 MW solar PV project in the 420 MW Bhadla solar park-II in Rajasthan. The question everyone is asking is "can they go any lower?"

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Recent low tariff discoveries in reverse auctions under the JNNSM schemes may have encouraged the Ministry of New and Renewable Energy ("MNRE") in December 2015 to slash the tariff payable to solar PV power developers under batch III of phase II of JNNSM, from ₹5.43 per kWh to ₹4.43 per kWh. Further, on the basis of recent tariffs discoveries in auctions conducted by several states (Andhra Pradesh, Madhya Pradesh, Punjab, etc.), falling prices of solar PV modules and other non-module cost components, and overall improved economics of solar power development, the Central Electricity Regulatory Commission also in December 2015, took a call to benchmark the capital cost norm for solar PV projects at ₹5.132 million/MW, down by about ₹10 million/MW from the earlier benchmark capital cost norm of ₹60.855 million/MW.

At this rate, solar power tariffs will achieve grid parity, that is, solar power at the same price as coal based power, earlier than anticipated. Solar power tariffs are already within striking distance of conventional thermal power tariffs. For instance, the price of coal based thermal power averages around ₹3 per kWh currently. SunEdison's 500 MW project at ₹4.63 per kWh, bundled with NTPC's unallocated thermal power will yield a final price of ₹3.5 per kWh. The guestion of grid parity is no longer when, but how soon.

Coupled with this is the notion that grid parity, when it occurs, will be achieved with minimum subsidies or even without subsidies. Dependence on subsidies could be greatly reduced as low tariffs have also been discovered in reverse auctions where VGF have not been offered. For instance, SkyPower, Canada's bid of ₹5.05 per kWh for a 50MW project in Madhya Pradesh is lower than the levelised tariff of ₹5.79 per kWh under the VGF scheme.

It is also expected that the low cost of solar power will ease the strain on already cash-strapped power distribution companies for meeting their renewable power purchase obligations ("RPO") whenever that is enforced – to comply with RPOs, power distribution companies can either generate a minimum amount of renewable power or purchase bundled solar power from conventional power generators, or purchase renewable energy certificates to make up for any deficit.

On the whole, all looks good and well. According to CRISIL Ratings, India's solar power capacity rose from 10 MW in March 2010 to more than 3,000 MW in December 2014. Capacity addition estimates have been upwardly revised for 2016-2017, indicating growth. Solar power looks to be well on its way to being more as a viable energy source, not just as an alternative to conventional power sources.

On the flip side, it has been argued that solar tariffs below ₹5 per kWh may not really be sustainable or viable in the long term and further falls in solar power tariffs may, in the future, keep investors away from the solar sector on account of low profits. Falling solar power tariffs have been attributed to aggressive bidding in a fight for relevancy and market share (i.e., by building a portfolio of projects to create greater value), and not necessarily falling capital costs. Given the competitiveness of recent tariff discoveries, there would hardly be any profit margins for project developers after debt servicing. If project developers are under margin pressures, it is only a matter of time before they start cutting corners which bring us to the next concern – the issue of quality of execution as also the key components particularly modules, which could substantially impact output in the long term.

It is further argued that such low tariff rates will make long term financing expensive for project developers, especially for projects in States with poor offtake payment history, as most financial institutions may not consider these projects "bankable". While VGF and accelerated depreciation benefit will take care of equity financing required for solar projects, sourcing long term financing becomes difficult if the revenue stream from the project is uncertain or not assured. Other than profitability of these projects, the larger issue in the value chain is insufficient power evacuation and payment for power evacuated by State owned off-takers who are considered "non-bankable counter parties". In any event, financial institutions are already distressed by multiple defaults by State owned utilities under lending facilities for the purchase of power.

There is also talk of projects being stalled or abandoned over viability of such projects. It has been revealed that out of 1GW of projects allocated under State policies in the past 2 years, nearly 40% of the capacity is either significantly delayed or cancelled for various reasons. This has been countered that any delayed or canceled capacity can again be put up again for bids in subsequent rounds.

Overall, the solar power goals of the Government are commendable and capacity addition in recent years has been impressive. Lower tariffs are no doubt welcome, however, not at the cost of long term development of a healthy and efficient solar power sector that sustains better economies of scale.

Feedback

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