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ROUND THE CLOCK SUPPLY OF POWER – RENEWABLE ENERGY SYNERGISES WITH COAL

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On 22 July 2020, the Ministry of Power (MoP) rolled out Guidelines for Tariff Based Competitive Bidding Process for Procurement of Round-The Clock Power from Grid Connected Renewable Energy Power Projects, complemented with Power from Coal Based Thermal Power Projects (Guidelines).

The Guidelines have been introduced, *inter alia*, to provide for (i) supply of renewable energy along with the power produced from coal based thermal power plants, to ensure uninterrupted round the clock power supply to distribution companies (DISCOMs); and (b) additional renewable energy capacity, to ensure fulfilment of the renewable purchase obligation by DISCOMs.

These Guidelines have been issued by MoP under Section 63 of the Electricity Act 2003 (Electricity Act). Section 63 of the Electricity Act provides for adoption of tariff by the appropriate electricity regulatory commission, if such tariff has been determined by a transparent bidding process under the '*guidelines*' issued by the Government of India (GoI). Therefore, the bidding process and tender documents for procurement of renewable energy along with coal based thermal power, will need to be compliant with these Guidelines.

Background

It is relevant to note that, this is not the first time in the Indian power industry, that bundling of renewable energy and coal based thermal power has been introduced. Phase 1 of the National Solar Mission also witnessed bundling of expensive solar power with cheap power generated by coal based thermal power plants of NTPC Limited (NTPC). The bundled power was then sold by NTPC (the then intermediary) to the DISCOMs. However, under the Guidelines, given the reduced tariffs in the solar power sector, we now see reverse bundling, that is, cheap solar power will now be bundled with comparatively expensive coal based thermal power.

Further, earlier the coal based thermal power was only procured from NTPC power plants and was bundled with solar power by NTPC itself, whereas under the Guidelines the procurement of coal based power, this time, can be from any coal based thermal power plant (having spare capacity), and now it will be the responsibility of the renewable power generator itself to make arrangements to procure and bundle the coal based thermal power with renewable energy, in comparison to as previously done by intermediaries.

By allowing bundling of renewable energy with the coal based thermal power, the MoP, through the Guidelines, has tried to address the challenges posed by intermittent and unpredictable nature of renewable energy and low capacity utilisation of the transmission system and ensuring grid stability.

Guidelines Deconstructed

Set out below are some of the key provisions of the Guidelines:

- ***Applicability***

  Only inter-state transmission system connected solar power and wind power projects (or a combination of both, with or without Energy Storage System) will be considered for renewable energy supply under the Guidelines. Further, for bundling, only coal based thermal power from thermal power plants, partly or fully commissioned or to be commissioned before the issuance of the bid or under construction at the time of issuance of the bids, having a spare generating capacity (with no power supply commitments or contracts) available on a long term basis will be considered. Power plants with coal linkage from both domestic and imported sources will be considered.

- ***Energy Mix***

  The energy mix in the power to be supplied should be such that at least 51% of the power comprises renewable energy and the remaining 49% is the power from coal based thermal power plants. The power generators will be required to ensure 85% of the power availability annually, along with 85% of power availability during peak hours (i.e. 4 hours out of 24 hours). Peak hours will be specified in the bid document (Annual Power Commitment).

- ***Bidding Process and PPA***

  The bidding process will be a single stage two-part bidding process (technical and financial bids). A bid can only be placed for supplying at least 250 megawatt (MW) of power (with certain exceptions for projects to be established in North Eastern or special category states or for projects outside renewable energy parks). However, there will be no maximum cap on the quantum of power which can be allocated to a single bidder.

  Bidders will be required to submit a proof of tie up with the thermal power plant, which can be a board resolution by the company which owns the thermal power plant certifying the tie-up with the generator and the spare capacity available. Bidders will be allowed to tie up with multiple thermal power plants for their spare capacities. Further, a single thermal power plant is also allowed to tie up its '*multiple*' spare capacities with different bidders.

  The power purchase agreement (PPA) to be signed under the Guidelines will have a term of 25 to 35 years.

- ***Composite Tariff***

  Bidders will be required to quote a composite single tariff considering the tariff for the coal based thermal power. Since the cost associated with thermal power generation is prone to variation, 25% of the composite tariff will be adjusted and indexed with the index of coal price (both domestic and international) as notified by the Central Electricity Regulatory Commission periodically.

After, adjustment for indexation: (i) tariff for renewable energy supplied will be paid at indexed composite tariff; and (ii) for thermal component of power, 50% of the indexed composite tariff will be deemed as the '*Fixed Tariff*', and the remaining 50% of the indexed composite tariff will be deemed as the '*Variable* Tariff'. The '*Fixed Tariff*' will be payable on the offered thermal capacity, whereas the '*Variable Tariff*' will be paid basis the thermal power dispatched.

- ***Penalty for Shortfall in Annual Power Commitment and Energy Mix***

  If the Annual Power Commitment is not met, the generator can be liable to pay an amount equal to 25% of the cost of the shortfall in energy terms calculated, at the maximum indexed composite tariff payable during the year. Additionally, if the renewable energy supplied is less than 51% in the energy mix, the generator can be liable to pay an amount equal to 25% of the maximum indexed composite tariff payable during the year for each unit of shortfall. However, if the renewable energy supplied is less than 51% and the Annual Power Commitment has also not met, the total penalty payable in such case will be the maximum of the two penalties payable, and not both the penalties.

- ***Compensation for Offtake Constraints***

  If grid unavailability is beyond 175 hours in a year (as will be defined in the PPA) for reasons not attributable to the generator and the generator can generate power during such period, the procurer will be required to pay the generator a compensation computed as per the formula specified in the Guidelines. Additionally, if there is any reduction in offtake of power than the offered power, the procurer will be required to pay the generator a compensation computed as per the formula specified in the Guidelines.

Comments

The Guidelines permitting bundling of power is a welcome step. The World Bank in its Energy Sector Management Assistance Program paper on '*Paving the Way for a Transformational Future Lessons from Jawaharlal Nehru National Solar Mission Phase I*' in 2014 had observed that bundling of solar power with cheaper conventional power reduces the tariff impact of solar power on the distribution utilities. Therefore, it will be a good test to see if the same impact can be brought in, by bundling cheap solar power with expensive coal based thermal power.

Further, if the implementation of the Guidelines is successful, it will further add on large scale grid connected solar energy projects in the country, accelerating the ambitious target of GoI of achieving 100GW of grid connected solar power capacity by 2022 and 24x7 affordable power for all by 2025. On the same hand, successful implementation of the Guidelines may also help in providing some assistance, if not complete relief, to the already stressed coal based thermal power sector, which is reeling under the stress of liquidity.

However, with already low tariffs being discovered for renewable energy projects under competitive bidding, coupled with hefty dues pending with the DISCOMs and the renegotiation of PPAs by some DISCOMs to revisit tariff in the past, it will be interesting to see if '*composite tariff*' will be able to evince any interest with the generators. Recently, Solar Energy Corporation of India (SECI), one of the solar power intermediaries in India, had extended the bid submission date of its tender for procuring 5 GW renewable power on round the clock basis complemented with coal based thermal power to 1 September 2020 for hard copies and 28 August 2020 for soft copies. While the tender was issued by SECI when the Guidelines were in draft stage, it will still help us to gauge the market sentiment basis response to the tender.

- *Dibyanshu (Partner), Anuj Sahay (Counsel), Nikesh Tyagi (Senior Associate) and Sathyajith Nair (Associate)*

For any queries please contact: editors@khaitanco.com

Mumbai
One Indiabulls Centre, 13th Floor
Tower 1 841, Senapati Bapat Marg
Mumbai 400 013, India

T: +91 22 6636 5000
E: mumbai@khaitanco.com

New Delhi
Ashoka Estate, 12th Floor
24 Barakhamba Road
New Delhi 110 001, India

T: +91 11 4151 5454
E: delhi@khaitanco.com

Bengaluru
Simal, 2nd Floor
7/1, Ulsoor Road
Bengaluru 560 042, India

T: +91 80 4339 7000
E: bengaluru@khaitanco.com

Kolkata
Emerald House
1 B Old Post Office Street
Kolkata 700 001, India

T: +91 33 2248 7000
E: kolkata@khaitanco.com