RERC (Grid Interactive Distributed Renewable Energy Generating Systems) (First Amendment) Regulations, 2023 [Draft]

RERC notified a draft on "RERC (Grid Interactive Distributed Renewable Energy Generating Systems) (First Amendment) Regulations, 2023 in May, 2023.

- According to the proposed draft, in case of net billing arrangement as well as net metering arrangement, the peak AC capacity of the RE generator should not exceed the capacity under the connection agreement.
- In case of net billing arrangement, if the peak AC capacity exceeds the capacity of the connection agreement, the corresponding excess generation shall lapse.
- In case of net metering arrangement, if the quantum of electricity exported exceeds the quantum imported, the distribution licensee shall purchase such excess energy at the weighted average tariff, discovered through competitive bidding and adopted by the commission whereas the net imported energy shall be billed as per the applicable slab.
- In case of net metering arrangement, there is no provision of cross-subsidy surcharge for RESCO owned RE generating systems.

Keywords: RPO, CDM, Net Billing Arrangement, Net Metering Arrangement, Parallel Operation Charges.

The document can be accessed here.

CER Comments

1. Renewable Energy Obligation: Clause 5.4 of the principal document states that *"The Discom may consider the quantum of electricity generation from Renewable Energy Generating System under Net Billing arrangements towards RPO."*

This clause proposes that the 'total generation' from the Renewable Energy Generating Systems (REGS) under net billing arrangement shall be counted towards RPO of the Discom. The RE generation has embedded value due to the green attributes, currently separately valued as Renewable Energy Certificates (RECs). The REC framework may allow monitisation of such attributes for sale thereof. The regulation should provide for the right of the RE generator to register and claim RECs for the whole generation, except that which is exchanged with the discom. Furthermore, the regulation does not explicitly provides for a condition wherein a generator with a contract to sell part of the RE energy generated through open access to a consumer located in another state.

A scenario as illustrated in following figure 1 may occur wherein the installed capacity of a generator (say, 10 MW) is greater than the connection agreement with the Discom (say 1 MW) and 5 MW capacity is contracted with an open access consumer located in another state. In such a case, the open access consumer outside the state should be explicitly recognised as an 'obligated entity'. Thus the discom should not claim RPO for the RE energy sold to an open access consumer outside the state. Further, it is suggested that the RPO associated with the renewable energy should be applicable only for the capacity agreed for connectivity or the RE electricity injected into the grid, whichever is higher.

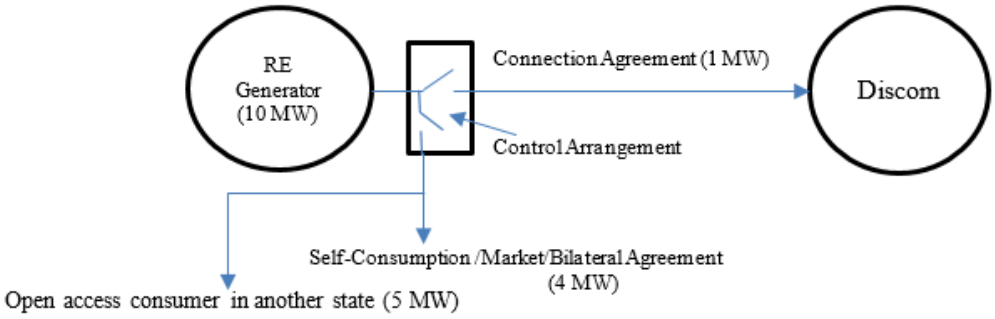

Figure 1: RE generator with inter-state sale of RE power through open access

2. CDM Benefits: Clause 5.5 of the principal document states *"the proceeds from CDM benefits **shall be retained by the Discom (emphasis added).**"*

If costs for project document development under the CDM and registration, is to be borne by the RE developer, full CDM claim by the discom would leave no incentive for the RE generator to go through the process of CDM registration. In the absence of any incentive, none of the project developer would engage into this process and may discourage future investments as well as foreign investment in such projects which derive their economics partly from the potential revenue through the CDM mechanism.

3. Tariff as per Connection Agreement (TPPA?): As per clause 12.5.3 (f) of the principal document, TPPA (Tariff as per connection agreement?) is to be entered on the basis of *"tariff as per connection agreement".* The acronym TPPA seems incongruent and does not seem to be defined neither in the principle regulation nor the proposed amendment. To avoid ambiguity, this should be modified as ***"the applicable tariff calculated as per the regulations"***.

4. Billing Credit: As per clause 12.5.4 of the principal document, *"If the value of Renewable Energy generation in a month is more than the value of all other components of consumer bill……"*

The above clause may be rephrased as *"If the value of Renewable Energy generation in a month is more than the* ***sum of values*** *of all other components of consumer bill……"*

5. Net Billing Arrangement: The proposed amendment to Clause 12.5.6 states that "*The peak AC capacity of the Renewable Energy generating system installed under the Net Billing arrangement shall not exceed the AC capacity agreed under the Connection Agreement. In case at any point of time, if the peak AC capacity exceeds the above agreed AC capacity, the corresponding excess generation shall lapse."*

The Variable Renewable Energy (VRE) sources (wind and solar), being non-despatchable, can potentially inject the electricity generated out of total capacity (which may be more than the capacity agreed in the connection agreement) as mentioned in the above clause. This justifies relevance of the above clause. However, in case of despatchable RE sources, a RE generating plant would be able to control the energy generated and injected into the grid. Under such circumstances, the generators may be allowed to seek a connection agreement for a capacity lower than the installed capacity. The excess generation over this limit may not be counted.

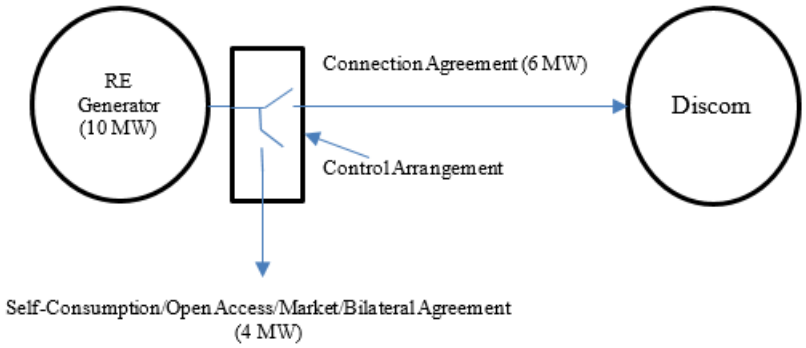

Figure 1: Scenario for Despatchable RE generators

Earlier the net billing arrangement between the Renewable Energy Generating System and the Discom(s) was calculated based on minimum Capacity Utilization Factor (CUF), without considering the maximum generation. The proposed net billing arrangement based on AC capacity agreed under connection agreement would benefit the generators to some extent, but at the same time it would discourage further RE capacity addition.

The regulations should also clarify that only excess energy injected into the grid, beyond the connectivity agreement excluding captive consumption (wheeled through the intra-state grid) or sold through any contract or agreement would lapse. For more clarity, the clause should be rephrased as "…… if the peak AC capacity exceeds the above agreed AC capacity, the corresponding excess energy, excluding that scheduled for sale to a third party under any contract or agreement, **injected into the grid** shall lapse."

6. Net Metering Arrangement: The proposed amendment to Clause 12.6.1 (a) states that *"If the quantum of electricity exported by a domestic category consumer exceeds the quantum imported during the Billing Period, the excess quantum exported by such domestic consumer shall be purchased by the Distribution Licensee at the weighted average tariff of large-scale solar projects of 5 MW and more, discovered through Competitive Bidding in last Financial Year, and adopted by the Commission plus 15%. In case no bidding is done in previous Financial Year, then the latest tariff discovered through competitive bidding plus 15% shall be applicable. The total amount arrived for excess energy injected by such consumer shall be adjusted in the form of credit equivalent to such amount payable in the immediately succeeding billing cycle."*

Further clarification is required with regard to the methodology of determination of weighted average tariff for the excess quantum that is being exported by the domestic consumer and purchased by the Distribution Licensee. It is suggested that the weighted average tariff or Levelized Cost of Electricity (LCOE) (for the respective technology) for the same year for calculation of which the weighted average tariff is being calculated should be considered. It should also be clarified whether the proposed Clause will be applicable to both inter-state as well as intra-state RE generators, as different tariff structure will be applicable to both.

7. Maximum Permissible Capacity: The proposed amendment to Clause 12.6.1(d) states that *"The peak AC capacity of the renewable energy generating system installed under Net-Metering Arrangement shall not exceed the AC capacity agreed under the Connection Agreement. In case of any point of time, if the peak AC capacity exceeds the above agreed AC capacity, the corresponding excess generation shall lapse."*

The draft clause would effectively disallow the RE plant to have a generation capacity higher than the connection agreement ***(as there may arise the scenarios as mentioned in comments 1 and 5 above).*** It is suggested that such restrictions need to be avoided, as it would become a barrier for overall addition in the RE capacity across the country.

8. Parallel Operation Charges: As per Clause 17.1 of the principal Regulations, *"The Commission may stipulate from time to time the 'Parallel Operation Charges' to be levied on the energy generated under Net Metering systems, which shall cover balancing, banking and wheeling cost after adjusting RPO benefits, avoided distribution losses and any other benefits accruing to the Distribution Licensee, based on the Petition filed by Distribution Licensee, supported by adequate justification:…"*

It is suggested that the parallel operation charges proposed to be applicable for net metering systems, the Regulations should specify a framework for calculation of the same. Also, a mechanism should be specified for calculation of RPO benefits and distribution losses, which are to be adjusted for calculation of parallel operation charges