Draft Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2021

The Ministry of Power issued the Draft Electricity (Promoting Renewable Energy through Green Energy Open Access) Rules, 2021 on 16th Aug, 2021. The key highlights are mentioned below:

Applicability - This rule will be pertinent to green energy purchase and consumption including energy generated via Waste-to-Energy plant.

Renewable Purchase Obligation (RPO) - There will be uniform RPO for all obligated entities (i.e., the distribution licensees, open access and captive power consumers). Non-obligated entity may also select to purchase and consume Renewable Energy (RE) as per their requirements by below-mentioned methods:

- Own Generation from RE sources – There is no capacity limit for installation of RE power plants behind the meter. Distribution licensee will not be liable to purchase such energy. The entity/developer with whom the entity has medium/long-term PPA may set up the RE plant.
- By procuring RE via Open Access from any developer with whom the entity enters into an agreement.
- By requisition from distribution licensee –
    - Any entity may opt to purchase green energy only up to a certain percentage of the consumption or its entire consumption and can place a requisition for this with their Distribution Licensee, which shall procure such quantity of green energy and supply it.
    - Green energy can be purchased against RPO on consumption from captive power plant or energy availed through open access from sources other than RE sources.
    - A larger share of RE may be purchased by consumer on voluntary basis than he is obligated to do. For easier implementation, this may be a minimum 50% of consumption from green energy, which can be upto 100% in step of 25%.
    - Green energy tariff will be determined by the appropriate Commission,
    - An appropriate Commission will determine the Green Energy Tariff that consists of average pooled power purchase cost of the RE, cross-subsidy and service charges covering all prudent cost of the distribution licensee for providing the green energy.
    - Distribution Licensee shall requisite for green energy for a minimum period of one year.
- Purchase of Renewable Energy Certificates (RECs) to meet the RPO.
- Purchase of Green Hydrogen – The obligated entity including the Industries can also purchase Green hydrogen (hydrogen produced using electricity from RE sources) to meet their RPO. The Green hydrogen quantum would be evaluated by considering the equivalence to the Green hydrogen produced from one MWh of electricity from RE sources or its multiple.

Green Energy Open Access (GEOA) – To provide GEOA to consumers who wants to use it, the Appropriate Commission shall prepare regulations in line with this Rule.

The Consumers, except captive consumers, having contracted demand/sanctioned load of 100 kW and above shall be eligible to take power through green energy open access.

The reasonable conditions such as the minimum number of time blocks for which the consumer shall not change the quantum of power consumed through open access may be imposed so as to avoid high variation in demand to be met by the distribution licensee.

Procedure for grant of Green Energy Open Access - If sufficient spare capacity in the transmission system is available, then short and medium term open access shall be allowed whereas for long term open access, the transmission system may be augmented. However, priority shall be given to long term in the existing system if spare capacity is available. Further, open access for non-fossil fuel sources shall be given priority over the open access from the fossil fuel.

Banking - Banking may be allowed on monthly basis on payment of charges to compensate additional costs to the distribution licensee incurred by the Banking. The amount of banked energy by green open access consumers should not exceed 10% of the consumers' total yearly energy consumption from the distribution licensee.

Cross Subsidy Surcharge – Cross Subsidy Surcharge and Additional Surcharge will not be applicable for power that are produced from Waste-to-Energy plant. The surcharge for green open access consumer purchasing green energy, from a generating plant using renewable energy sources, shall not be increased, during twelve years from the date of commissioning of the generating plant using renewable energy sources, by more than fifty percent of the surcharge fixed for the year in which open access is granted.
The rating/labelling of the consumer will be based on the percentage of green energy purchased from the distribution licensee.

The draft document can be accessed here

CER Opinion

1. **Renewable Purchase Obligation (RPO) (Rule 4):** As per the draft Rule (4.1), *"There shall be uniform Renewable Purchase Obligation, on all obligated entities that is – the distribution licensees, open access consumers and captive power consumers".* However, it needs to be clarified whether the uniformity of RPO on obligated entities is across the country or across these three set of obligated entities within a state.

2. **Defining 'Behind the meter' Generation Sources (Rule 4):** Rule (4.2 (A)) provides the definition of 'Behind the meter' as "*the electricity generated for their own use and not for injection of such power into the electricity grid*". Although, in the case of captive (group) and specifically plant not located on the premises of the consumer, such power generated

for their own use would have to be 'injected' into the electricity grid for wheeling the same to the premises of the consumers. Hence, the above definition need to be modified appropriately.

3. **Components of Tariff for Green Energy (Rule (4.2 (C))):** Rule (4.2 ((C) (d))) provides for the delineation of tariff determined by the appropriate Commission. The identified components herein should not limit the respective Commission from including other additional components towards determination of tariff for green energy. For example, the cost of purchase of Renewable Energy Certificates (RECs), network charges, application of network losses etc.

4. **Designing a Product for Green Energy (Rule 4):** *Singh (2009)*[1] A green product to be offered by a distribution licensee would generally be defined as a percentage of part of the product portfolio. Furthermore, it may not be possible for a consumer to forecast a required quantum for required energy for the coming year. Thus, the distribution licensee should be informed of the intent of consumer in purchasing a green electricity product with certain proportion of renewable energy. By choosing a particular green product (say, 100% green, 50% green etc.), the consumer would have appropriately informed the utility of the expected demand for green energy.

5. **Pre-Specification of Advance Quantum of Green Energy (Rule (4.2 (C)))**: Rule (4.2 ((C) (e))) states that "*The quantum of green energy shall be pre-specified for at least one year"*. In light of the above-mentioned comment, such pre-specification of green energy quantum would not be required.

6. **Green Energy Open Access (Rule 5):** As per the draft Rule, contracted demand/sanctioned load of large consumers is given in hundred kW and above. The contracted demand/sanctioned load for large consumers is generally specified in kVA, and should be incorporated so. Furthermore, the proviso regarding minimum number of time blocks should be modified as the 'minimum number of **continuous** time blocks for which the consumer shall not change the quantum of power consumed' (emphasis added).

7. **Banking of Green Energy (Rule 8.1):** According to Rule 8.1 "*Banking may be permitted on monthly basis on payment of charges to compensate additional costs, if any, to the distribution licensee by the Banking. The appropriate Commission shall fix the applicable charges*". It is suggested that TOD based banking and withdrawal of green energy should be provided for green open access consumers.

8. **Cross Subsidy Surcharge (Rule 9):** As per the first proviso given in Rule 9 (a) "*the surcharge for green open access consumer purchasing green energy, from a generating plant using renewable energy sources, shall not be increased, during twelve years from the date of commissioning of the generating plant using renewable energy sources, by more than fifty percent of the surcharge fixed for the year in which open access is granted*".

[1] Singh A. 2009. A market for renewable energy credits in the Indian power sector, Renewable and Sustainable Energy Reviews; 13(3): 643-652. https://doi.org/10.1016/j.rser.2007.10.011

$x_{t=12} \leq 1.5x_{t=1}$ (1)
where x_t is the Cross Subsidy Surcharge for t[th] year

A new proviso may be added just after the above-mentioned proviso: 'Provided that the Cross Subsidy Surcharge may not exceed the limit prescribed in the prevailing tariff policy'. The tariff policy (2016) aims to reduce Cross Subsidy Surcharge to 20% of its opening level in 2010-11.

$x_t \leq 20\% \, of \, ACoS$ (2)
Clearly the above proviso is not in line with the tariff policy and need to be modified accordingly.

9. **Applicability of Additional Surcharge (Rule 9 (a)):** The second proviso of Rule 9 (a) needs to be corrected as - the applicability of additional surcharge as specified in the Electricity Act 2003 refers to the assets stranded because of the consumer seeking open access. It is important to highlight that these provision of the Act would prevail over the 'non applicability of additional surcharge' as specified in these rules.

10. **Cross Subsidy Surcharge and Additional Surcharge for Waste-to-Energy (Rule 9 (a)):** As per the third proviso in Rule 9 (a) "*Cross Subsidy Surcharge and Additional Surcharge shall not be applicable in case power produced from a Waste-to-Energy plant is supplied to the open access consumer"*. It needs to be clarified whether waste-to-energy plants includes those based on agricultural waste or municipal waste or both. Moreover, instead of providing exemption of Cross Subsidy Surcharge to waste-to energy plants, it will be economically efficient to provide additional support for the electricity generation from waste-to energy plants. This will avoid the asymmetric treatment of technology-based cross subsidy surcharge.

11. **Green Certificate (Rule 10):** *Singh (2009)* and *Singh (2010)*[2] proposed merger of an energy efficiency certificate (ESCerts) scheme that may be launched in future (This was later launched under the PAT scheme) with the then suggested REC market. Given the common decarbonisation attribute of the RECs and the ESCerts, merger of the later market in the former would provide numerous benefits for the both. This would not only enhance the overall cost effectiveness of cost of compliance by the obligated entities (for RPO as well as energy efficiency target under the respective framework) but also enhance the footprint of the REC+ESCerts market, provide missing liquidity and efficiency to the ESCerts market.

[2] Singh, A. 2010. "Economics, Regulation and Implementation Strategy for Renewable Energy Certificates in India" in India Infrastructure Report 2010, Oxford Univ. Press.
https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3440253

12. **Allocation of RECs to consumers buying Green Energy (Rule 10):** The consumers should not be required to request the distribution licensee for green certificate. It should be an automatic process to provide green certificate to the consumers. Either a value attributable to RECs may be adjusted the consumer's bill, or the same may be available for sale by the consumer through an intermediary.