

## **Suggestions to Uttar Pradesh Electricity Regulatory Commission on Draft RSPV Regulations, 2015**

The Uttar Pradesh Electricity Regulatory Commission has announced draft Rooftop Solar PV Grid Interactive System (Gross/Net Metering) Regulations, 2015 for public consultation. Accordingly, UPNEDA would like to submit its suggestions on the draft regulations for the consideration of Honourable Commission.

### **A. Draft Regulation 5. Capacity of Rooftop PV System**

The provision under draft Regulation 5.1. is elaborated below,

*5.1 The maximum peak capacity of the grid connected rooftop solar system to be installed by any **eligible consumer shall not exceed 90% of the sanctioned connected load / contract demand** of the consumer. (emphasis added)*

#### Suggestion

This clause shall discourage the consumers who intends to implement rooftop solar system under gross as well as net metering mechanism.

For gross metering mechanism, the consumer would like to take maximum commercial advantage of the roof and hence the maximum capacity of the system should not be linked with the sanctioned connected load/contract demand of such consumer. Further, the projects implemented under the gross metering would support the distribution licensees in meeting their Renewable (Solar) Purchase Obligation specified by the UPERC.

For net metering mechanism, this clause will ensure continuous dependence, of the consumer, on the distribution licensee for meeting the electricity requirements. The consumer should be allowed to settle its entire 'electricity requirements' from the rooftop solar photovoltaic system which it has installed, primarily to meet its captive needs, after undertaking sufficient analysis.

Thus, we see that the Honourable Commission has ample scope to reconsider the specified clause for removal and specify that the consumer(s), implementing the rooftop solar photovoltaic system for self-consumption, shall have to meet the consequences in case the definition and requirements of captive consumer as specified under Electricity Rules, 2005 are not met.

### **B. Draft Regulation 6. Capacity of Transformer**

The provision under draft Regulation 6.2. is elaborated below

*6.2 Provided that the capacity to be allowed in the area fed from the distribution transformer or **any other transformer** from which power is fed to the eligible consumer **shall not exceed 15% or any other percentage** as may be fixed by the Commission of the rated capacity of such transformer(s). (emphasis added)*

Suggestion

The cumulative capacity of the rooftop solar photovoltaic systems connected with the distribution transformer shall be crucial from technical reasons.

Here, the Honourable Commission may associate the cumulative capacity of the rooftop solar photovoltaic system, in an area, with the upstream or the ahead distribution transformer and not with the electrical transformer which is under the purview of the eligible consumers. Further, the percentage (15% or any other percentage) should also be defined after sample analysis. Presently, following the clause, an area fed with a distribution transformer having a rating of 100kVA shall host rooftop solar photovoltaic systems equivalent to 15kW which seems to be on a lower side. For consumers having big roofs this clause will put discouragement

Further, the Honourable Commission may also specify that the distribution licensee shall arrange to replace the distribution transformer with an upgraded capacity transformer as soon as the cumulative capacity of the rooftop solar photovoltaic system is equivalent or exceeding the rating of the said distribution transformer.

**C. Draft Regulation 8. Interconnection with the distribution system**

The provision under draft Regulation 8.1 (i) is elaborated below,

*8.1 The interconnection of the rooftop solar system with the distribution system of the distribution licensee shall be made as per the technical specifications and standards for connectivity as specified by the Central Electricity Authority. The distribution licensee shall ensure that:*

*(i) The interconnection of the rooftop solar system with the distribution system conforms to the specifications, standards and provisions as provided in the Central Electricity Authority (Technical Standards for connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time*

Suggestion

The scope of Central Electricity Authority (Technical Standards for connectivity of the Distributed Generation Resources) Regulations, 2013 is for generating companies seeking connectivity with the distribution system below 33kV (for example 11kV).

Here, the Honourable Commission may also like to necessitate requirement for making provision for connectivity at or above 33kV wherein the CEA (Technical Standards for connectivity) Regulations, 2006 and amendment 2010 shall be applied. Following which the systems above 1 MW can be connected with the distribution system.

Accordingly, Honourable Commission while finalising the Regulations may appropriately consider such fact and make suitable inclusions.

**D. Draft Regulation 10. Energy Accounting and Settlement**

The provision under draft Regulation 8.1 (i) is elaborated below,

(iii) *If the electricity supplied by the distribution licensee during any billing period exceeds the electricity generated by the eligible consumer's rooftop solar system, the distribution licensee shall raise invoice for the net electricity consumption after taking into account any electricity credit balance remaining from previous billing periods;*

*Provided, in case the eligible customer is under the ambit of time of day tariff, as determined by the Commission from time to time, the electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the same time block. Any cumulated excess generation over consumption in any time block in a billing cycle shall be accounted as if the generation occurred during **the off-peak time block**.*

Suggestion

Primarily, the Commission should consider defining peak and off peak hours. Neither the present draft regulations nor the tariff order defines the peak and off peak hours. However, the Honourable Commission has do specified rebate and surcharge for different time blocks of the day in its Tariff Order for the distribution licensees. UPNEDA believes that the Honourable Commission is intending to follow the same approach.

Accordingly, we hereby make following proposal, in order to promote the rooftop solar projects, the surplus generation in any time block shall be considered as if it has occurred in "Peak" time block instead of "Off-Peak" time block.

The applicable surcharge or rebate corresponding to time blocks are mentioned in the table below,

Time Block	Surcharge/ Rebate
22:00 – 06:00	(-) 7.5%
06:00 – 17:00	0%
17:00 – 22:00	(+) 15%

**'Surplus is compensated with as if it has generated in Off-Peak Time Block'**

If we interpret the clause it shall mean that surplus electricity, immaterial if it has occurred in the respective time block, shall bear a rebate of 7.5% while doing the energy accounting. The rooftop solar plant shall generate electricity during the day time block 06:00 – 17:00 hrs. If the surplus electricity generated (100kWh) during such hours is considered as if it has been generated during off peak hour then perhaps there would be a deduction of 7.5% while doing the energy accounting and only 75kWh shall be accounted.

Instead, the Commission may consider to compensate as if surplus have generated during peak hours and during accounting 115kWh should be considered in lieu with 75kWh. Rooftop solar projects come with an advantage of lowering down the electricity lost in the networks and hence the consumers shall be motivated for installing such systems.

**E. Draft Regulation 12: Solar Purchase Obligation**

The provision under draft Regulation 12.2 is reproduced below,

*12.2 In case of net metering scheme the quantum of electricity adjusted under the net metering arrangement for eligible consumer, who is not defined as Obligated entity, shall qualify towards deemed Renewable Purchase Obligation (RPO) for the distribution licensee in whose area of supply the eligible consumer is located.*

Suggestion

The Commission please further clarify that the electricity which is compensated at 0.50₹/kWh shall necessarily be utilized for meeting Solar Purchase Obligation or the entire electricity generated shall be utilised for meeting Solar Purchase Obligation of the Distribution Licensee.

**F. Miscellaneous**

- a. **Preamble** - *In exercise of powers conferred under section 61, 66, 86(1)(e) and 181 of the Electricity Act, 2003, and all other powers enabling in this behalf, the Uttar Pradesh Electricity Regulatory Commission hereby makes the following Regulations*

**The Section 61 of the Electricity Act, 2003 is empowering the Honourable Commission to specify terms and conditions for the determination of tariff. We believe that such Section can be considered for removal as the provisions are not for determination of tariff.**

- b. **Regulation 2. s)** “Rooftop solar system” means the grid interactive solar photo voltaic power system installed on the rooftops/ground mounted or open land of consumer premises that uses sunlight for direct conversion into electricity through photo voltaic technology

**There is a need to relook the definition of Rooftop Solar System. In general rooftop Solar System can't be put on ground or open land for such the definition for small scale solar photovoltaic power plant may be defined.**

- c. **Regulation 4.5** If the eligible consumer or third party owner installs solar rooftop system under the gross metering scheme, the **entire power generated, after meeting auxiliary power requirements, if any** from such an installation shall be injected to the distribution system of the licensee at the interconnection point.
- d. **Regulation 7.5 (iii)** to stay in the priority list till its validity i.e. up to 180 (one hundred and eighty) days under **clause 3(2) of these guidelines**, for re-consideration and approval in case of future availability of applied capacity at the distribution transformer level etc. within such period.

**Clause 3(2) and the Guidelines seems missing**

- e. **Regulation 7.7** At the time of submission of Registration Form, the Distribution Licensee shall perform preliminary checks of all the documents submitted along with the Registration Form in the presence of applicant or his representative, and if found complete, shall receive the form and acknowledge its receipt.

**To avoid any discrepancy and time delay, the Honourable Commission may define the documents submitted along with the registration form.**

- f. **Regulation 10.3 (V)** Provided also that licensee shall reimburse the eligible consumer or third party owner of the solar rooftop system as the case may be through RTGS/NEFT/ DD or through cheque within the due date of the electricity bill of the consumer in whose premises the rooftop solar system has been installed.

**The reimbursement, by the distribution licensee, through Cheque may discouraged.**

- g. **Same terminology may be used everywhere either rooftop solar system, rooftop solar photovoltaic system, rooftop solar PV system etc.**