

**KERALA STATE ELECTRICITY REGULATORY COMMISSION**  
**THIRUVANANTHAPURAM**

Present : **Shri Preman Dinaraj, Chairman**  
**Shri K.Vikraman Nair, Member**

**OP 4/ 2018**

In the matter of : Petition for amending KSERC (Grid Interactive Distributed Solar Energy Systems) Regulations 2014 – reg.

Petitioner : General Manager, Matha Amrithanandamayi Math  
Amrita Institute of Medical Science & Research  
Centre, Kochi.

**Order dated 10.04.2018**

1. General Manager, Mata Amritanandamayi Math has submitted a petition for amending the KSERC (Grid Interactive Distributed Solar Energy Systems) Regulations, 2014, with the following prayers.
  - (i) To enhance the solar connectivity of captive consumers at 11 kV to 1500 kW.
  - (ii) To formulate new Regulation for solar connectivity at 33 kV level.
2. The abstract of the petition filed by the petitioner is given below;
  - (i) The petitioner M/s Amritha Institute of Medical Sciences (AIMS), is an HT consumer of KSEB Ltd, availing supply at 11kV with a contract demand of 3000kVA. Now the total load exceeded the contract demand and hence the petitioner is in the process of enhancing the contract demand, and also to change the supply point to 33 kV.
  - (ii) AIMS is an obligated entity under RPO regulation.
  - (iii) At present, AIMS established 330KWp roof top solar plant. Further AIMS proposes to install 1.6MWp solar farm (first phase of 630KWp + second phase of 1MWp) in the adjacent property of 40 acres of land.
  - (iv) The projected Maximum demand of AIMS is 3300kVA and monthly consumption is 15 MU.

- (v) As per the communication from KSEB Ltd, the maximum solar power that can be connected at 11kV level is 1000kW, even though the maximum contract demand is 3000kVA.
  - (vi) The Commission is yet to notify the regulation for solar connectivity at 33 kV level.
  - (vii) Since the petitioner is an obliged entity, the solar connectivity for captive power plant (CPP) at 11 kV may be enhanced to 1.5MW, till new regulation is formulated for solar connectivity at 33kV.
3. The Commission admitted the petition as OP No. 4/2018 and a copy of the petition was forwarded to KSEB Ltd for remarks. The summary of the comments offered by KSEB Ltd is as hereunder.

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- 1) *At present, there are two Renewable Energy Regulations of Hon'ble Commission in force:*
  - 1. *KSERC (Grid Interactive Distributed Solar Energy Systems) Regulations, 2014 applicable for solar having capacity not less than one kilo Watt peak (kWp) and not exceeding one Mega Watt peak (MWp), issued in 2014.*
  - 2. *KSERC (Renewable Energy) Regulations, 2015 applicable for all RE capacity, issued in 2015.*
- 2) *The 2014 Regulations permits unrestricted banking, (that is injection and drawal of energy at any time of a day and allow to carry excess injected energy to any month in an accounting year (October to September)) for solar net metering consumers having capacity less than or equal to 1MW. This facility is provided to small capacity solar generation with a view to promote solar energy and at the same time not imposing financial and technical constraints on the licensee by allowing unrestricted banking.*
- 3) *The RE Regulations issued in 2015 allows the distribution licensee to provide banking for capacity above 1MW, but does not enforce banking. It is at the discretion of the licensee and subject to technical feasibility. However, the prosumer shall be allowed to consume electricity from the grid on any day the quantum of which shall be determined applying the quantitative relation specified under Regulation 26 of the RE Regulations of 2015. The RE Regulations issued in 2015 does not specify any voltage level for RE Connectivity.*
- 4) ***The petitioner in the instant case proposes to have a solar capacity of 1.5 MW, the connectivity can be given at 11KV level itself as per the provisions of KSERC(Renewable Energy)Regulations,2015 and Supply Code. However, the usage and banking condition for the solar energy injected by the***

***applicant shall be governed by the provisions of Regulation 26 of the KSERC (Renewable Energy) Regulations, 2015. The 2014 RE Regulation is not applicable in this case.***

- 5) ***There is no necessity to frame Regulations separately at 33KV level.***
  - 6) *As per KSERC(Renewable Energy)Regulations,2015 (Clause 7), the petitioner is not required to fulfil the RPO for the entire consumption, but, only for the quantum of energy availed through Open Access. The petitioner meets only 30-50% of the total consumption through open access.*
  - 7) *It is further submitted that a Regulation cannot be modified or framed based on a petition filed by a consumer. Regulations are framed by Hon'ble Commission after due procedures."*
4. The hearing on the petition is held on 12.02.2018. Prof. G Raveendran Nair, General Manager, AIMS presented his petition and responded to the queries of the Commission. Sri Bipin Sankar, Dy.CE, presented the views on behalf of KSEB Ltd.

#### **Analysis and Decision**

5. The following Regulations, notified by the Commission are in force, for promoting Renewable Energy including Solar Plants in the State of Kerala.
  - (1) KSERC (Grid Interactive Distributed Solar Energy Systems) Regulations, 2014 (herein after referred as Net metering Regulations, 2014).
  - (2) KSERC (Renewable Energy) Regulations, 2015 applicable for all RE capacity, issued in 2015 (herein after referred as RE Regulations, 2015).
6. The Net metering Regulations, 2014 is for promoting grid connected solar installations by the consumers at their premises, and capacity of such solar system shall not be less than 1 kWp and shall not exceed 1 MWp. Further, the Net metering Regulations, 2014 permits unrestricted banking during the settlement period from October to September, so that the excess energy generated from solar plant after adjusting against their own consumption, if any, can be banked for the use during the settlement period.
7. The RE Regulations, 2015 is applicable to all RE sources including solar plants without any capacity limit. RE Regulations, 2015 provides for

mandatory banking only up to 1MW. However, providing banking facility for RE sources including solar plants having capacity more than 1 MW is the discretion of the distribution licensee.

8. The following three issues are raised by the petitioner before the Commission during the deliberations of the subject matter.
  - (i) The petitioner is an obligated entity.
  - (ii) To enhance the solar connectivity of captive consumers at 11 kV from 1000 kW to 1500 kW.
  - (iii) To formulate new Regulation for solar connectivity at 33 kV level.

**Issue No.1. Whether the petitioner is an obligated entity as per KSERC (Renewable Energy) Regulations, 2015.**

9. As per the Regulation 3 of the RE Regulations 2015, the following entities are obligated entities.
  - (i) distribution licensee;
  - (ii) buyer licensee;
  - (iii) captive consumer; and
  - (iv) Open access consumer.

AIMS is a consumer of KSEB Ltd and therefore the petitioner is not a distribution licensee or buyer licensee. However, if the petitioner is availing power under open access and have captive power plant with fuel other than renewable energy sources, the petitioner has RPO for such open access consumption and captive generation, and such RPO can be adjusted against the electricity generated from the solar plant installed by them.

**Issue No. 2: Enhancing the solar connectivity of captive consumers at 11 kV to 1500 kW under Solar Regulations, 2014.**

10. The Commission had notified the Net metering Regulations, 2014 with the intention of promoting grid connected solar installations by the consumers of the distribution licensees at their premises. This Regulation was notified in line with the 'Model Regulation for Rooftop Solar Grid Interactive systems based on Net metering' notified by the Forum of Regulations in August 2013. Under the Net metering Regulations, 2014, the maximum capacity of the solar plant, that can be installed by the consumer at his premises is limited to 1 MW. However, this Regulations mandates for connectivity of the solar systems with the LT/ HT feeders as per the procedures specified in the said

Regulations. Further, this Regulations provides mandatory banking facility, obligation of the distribution licensee to provide net metering system, permits the consumers to use the excess solar energy in other premises etc.

11. However, as per the provisions of the RE Regulations, 2015, read along with the provisions of the KSERC (Connectivity and Intra State Open Access) Regulations, 2013 (herein after referred as Open Access Regulations, 2013) provides for connectivity at intra-state transmission system or distribution system as the case may be, depending on the capacity of the generating plant. The relevant portion of the Open Access Regulations, 2013 is extracted below.

**4. Eligibility for connectivity.**- (1) *A consumer having contracted load above 12 MVA or a generating station having capacity above 12 MW shall be eligible to obtain connectivity to the intra-state transmission system and shall apply for connectivity in accordance with the provisions in the State Grid Code, unless already connected at the appropriate voltage level as specified in the State Supply Code.*

(2) *A consumer having contracted **load of and below 12 MVA** or a **generating station** having installed capacity **of and below 12 MW** shall be eligible to obtain connectivity to the distribution system and shall apply for connectivity **as per the provisions of the State Supply Code or the State Distribution Code**, unless already connected at appropriate voltage level as specified in the said Codes:*

12. Further, as per the Regulation, 8 of the Kerala Electricity Supply Code, 2014, the maximum capacity that can be connected at 11kV is 3 MVA, 22kV is 6 MVA and at 33 kV is 12 MVA.
13. As above, as per the provisions of the RE Regulations, 2015 read along with the Open Access Regulations, 2013, the petitioner can get connectivity for the 1.63 MW solar plant proposed to be installed at the nearby premises of petitioner, subject to the terms and conditions specified in these Regulations.

### **Issue No.3 Formulate new Regulations for solar connectivity at 33 kV.**

14. As extracted under paragraph 11 above, the RE Regulations, 2015, read along with Open Access Regulations, 2014 provides for connectivity of generating plant including solar plant having capacity upto 12 MVA with the distribution system, and solar plant having capacity above 12 MVA with the intra-state transmission system, there is no requirements for notifying separate Regulations, for this purpose as prayed by the petitioner.

With the above observations, the Commission disposes the petition filed by General Manager, Matha Amrithanandamayi Math, Amrita Institute of Medical Science & Research Centre, Kochi, for amending KSERC (Grid Interactive Distributed Solar Energy Systems) Regulations 2014.

Sd/-

**K.Vikraman Nair**  
**Member**

Sd/-

**Preman Dinaraj**  
**Chairman**

**Approved for Issue**

Sd/-

**Santhosh Kumar. K.B**  
**Secretary**