

KERALA STATE ELECTRICITY REGULATORY COMMISSION
THIRUVANANTHAPURAM

Present: Shri. Preman Dinaraj, Chairman
Adv. A.J Wilson, Member (Law)

Date of Hearing: 01.02.2021

OP No 45/2020

In the matter of : Clarification on provisions laid down under Chapter III clause 13 (General Conditions) of KSERC-Notification No.1204/D(T)/ 2019/ KSERC dated,7th February 2020.

Petitioner : Indian Oil Officers Cooperative Housing Society Ltd, Behind JN Stadium, Stadium Link Road, Opposite IMA, Kaloor, Kochi.

Petitioner represented by : Sri. T. Ramachandran, Secretary
Sri. Sachin Jose

Respondent : Kerala State Electricity Board Ltd (KSEB Ltd)

Respondent represented by : Sri. Manoj. G., Asst: Executive Engineer

Order dated 17-02.2021

1. Indian Oil Officers Cooperative Housing Society Ltd (the petitioner), on 23.09.2020, filed a petition before the Commission with the following prayer:

*“Issue a Clarification note on the notification No: 1204/D(T)/2019/KSERC dated 7th February 2020 to clarify that connected load is not a limitation for connecting solar plants for **“Group Housing societies and residential flats”**, prosumers and hence enable us to connect 100 kWp solar power plant at our residential apartment as explained in the submission above”.*
2. The summary of the petition filed by Indian Oil Society is given below:

- (1) The Indian Oil Officer's Cooperative Housing Society Limited (IOCHS or the petitioner) wanted to install a 100kWp solar plant for use of common area of the flat (elevator, common lighting, water-pump, CCTV etc) at their G+20 residential apartment located at Kaloor, Ernakulam.
The connected load of the common facility meter is 55.4 kW and this will be increased by another 17 KW after the construction of 2nd tower, which is expected in March 2021.
- (2) The petitioner approached KSEB Ltd for issuing a Feasibility Report for installing a 100 kWp solar plant for the use of common facilities. However, the Asst: Executive Engineer (AEE), Palarivattom, vide letter dated 15.10.2020 refused to provide the Feasibility Report. AEE informed that feasibility cannot be granted under Chapter III of RE Regulation, 2020, but can be allowed under the provisions of Chapter IV.
- (3) According to the petitioner, the AEE, Palarivattom, misinterpreted the Regulation 13 (a) of the Renewable Energy Regulations, 2020.
- (4) The petitioner further submitted that, due to the non-cooperative approach of KSEB Ltd., over 100 families intending to stay in these residential flats will not be able to benefit from the solar power unit which they are installing from their own funds. They further submitted that as per their understanding, KSERC'S intent as per Regulation 13(2) (a) of the KSERC (Renewable Energy and Net Metering) Regulations, 2020 - is to allow solar energy generating plants of capacity above connected load for common facility connections. They further submitted that the second proviso

“Provided further that the above limit of 20 kW connected load shall not apply in the case of group housing societies and residential flats, for common services such as lift, common lighting, club house, car parking, common areas etc.”

makes this intent of the Commission very clear. They further submitted that if this was not the intent of the Commission, then this proviso was not required and hence redundant. Hence, the petition seeking clarification from the Commission.

- (5) The petitioner also submitted that, the distribution transformer installed will be sufficient to allow 100 kWp solar power feeding and thus able to cater to the load requirement of over 100 families expected to reside in

this housing complex. Hence, there is no technical reason for KSEB Ltd.'s refusal.

3. KSEB Ltd, vide their letter dated 30.01.2021 submitted the following comments on the petition filed by the petitioner and its summary is given below:

- (1) Regulation 13(2) of the KSERC (Renewable Energy and Net Metering) Regulations, 2020 stipulates the capacity of Grid Interactive Renewable Energy Systems installed by a prosumer at his premise as extracted below.

“ (2)The Grid Interactive Renewable Energy Systems, installed by a prosumer at his premise under this chapter shall be:

(a) of not less than one kW and not exceeding 1000 kW capacity on AC side of the inverter connected to the net meter of the distribution system, limited to the sanctioned connected load or contract demand as applicable to the prosumer, with the distribution licensee.

Provided that the domestic consumers with connected load up to 20 kW is permitted to install ‘Renewable Energy System’ of capacity up to 20 kW, irrespective of their connected load.

Provided further that the above limit of 20 kW connected load shall not apply in the case of group housing societies and residential flats, for common services such as lift, common lighting, club house, car parking, common areas etc.

Provided also that, prosumers including those prosumers mentioned above are also permitted to install Renewable Energy System in excess of their connected load or contract demand as applicable. However, the benefit of net metering shall not be allowed to such prosumers and such prosumers shall be treated at par with the prosumers having RE capacity more than 1 MW, as detailed in Chapter IV of these Regulations.

Provided also that, the Renewable Energy Systems installed by the prosumers under net metering as on the date of notification of these Regulations shall be allowed to continue irrespective of their contract demand or connected load.”

- (2) As per the above Regulation, the domestic consumers with connected load upto 20 kW is permitted to install ‘Renewable Energy System’ of capacity upto 20 kW, irrespective of their connected load. The limit of 20kW connected load shall not apply in the case of group housing societies and residential flats, for common services such as lift, common lighting, club house, car parking, common areas etc.

- (3) As per the understanding of KSEB Ltd., in the case of group housing

societies and residential flats, for common services this limit of 20kW for connected load is not applicable. This clause however does not clearly specify the maximum RE capacity that can be installed for such services. Since this clause does not clearly specify the maximum capacity that can be installed by such users, the Regulation provisions applicable for installation of RE capacity by a prosumer has to be applied, i.e., *if such services have connected load exceeding 20kW, then the RE capacity that can be installed has to be limited to the connected load of the premise as specified under Regulation 13(2)(a) for availing net metering facility.*

4. The Commission admitted the petition as OP No. 45/2020 and conducted hearing on 01.02.2021 at the Conference Hall, Transmission Circle Office, Kalamassery. Sri. T. Ramachandran, Secretary, Indian Oil Officers Co-operative Society Ltd (IOCHS) and Sri. Sachin Jose, Consultant presented the petition on behalf of the petitioner. Sri. Manoj G, Asst Executive Engineer, presented the comments of KSEB Ltd. the summary of the deliberations during the hearing is given below.

- (1) The petitioner submitted that, over a hundred families are going to reside in the residential flats of the petitioner at Kaloor, Ernakulam. The existing connected load of the common facilities is 55.4 kW and it will increase by another 17 kW after completion of the construction of the second tower. In order to meet this increased demand, the petitioner proposed to install a 100kWp Grid Interactive Solar Power Plant towards the requirement of the common facilities of the flat such as elevator, common lighting, water pump, CCTV etc. The petitioner had initiated the process of installing the Solar plant before the notification of the KSERC (Renewable Energy and Net Metering) Regulations 2020.

The petitioner submitted an application before the nearby KSEB Ltd. office at Palarivattom for Feasibility Report in the month of October 2020. But, KSEB Ltd. vide its letter dated 15.10.2020, asked the petitioner to limit the capacity of the solar plant to the connected load of the building for getting the benefit of net metering. If the petitioner's intent is to install Solar PV capacity in excess of the connected load, it may be allowed as per the provisions under Chapter-IV of the KSERC (Renewable Energy and Net Metering) Regulations 2020, but the benefit of net metering shall not be available for such connection.

As per the second proviso to Regulation 13 (2) (a) of the KSERC (Renewable Energy and Net Metering) Regulations, 2020, the group

housing societies and residential flats can install Solar PV capacity above 20kW to meet the power requirements of common services such as lift, common lighting, club house, car parking etc. irrespective of the connected load. Hence, the petitioner requested before the Commission to issue a clarification to the respondent KSEB Ltd and allow them to install Solar PV capacity upto 100kWp for meeting the power requirements of the common services of their residential flats.

- (2) The representative of KSEB Ltd informed that, as a distribution licensee, KSEB Ltd has been facilitating Solar PV installation strictly as per the Regulations, directions and orders issued by the Commission.

As per the first proviso to Regulation 13 (2)(a) of the KSERC (Renewable Energy and Net Metering) Regulations 2020, domestic consumers with connected load upto 20 kW is permitted to install 'Renewable Energy System' of capacity upto 20 kW irrespective of connected load. However, as per the third proviso to the same Regulation 13(2)(a), "*prosumers including those prosumers mentioned above are also permitted to install Renewable Energy System in excess of their connected load or contract demand as applicable. However, the benefit of net metering shall not be allowed to such prosumers and such prosumers shall be treated at par with the prosumers having RE capacity more than 1 MW, as detailed in Chapter IV of these Regulations*".

Hence, they submitted that such relaxation is not available to the 'group housing societies and residential flats' installing Solar PV systems for common services, exceeding either their contract demand or connected load as applicable. Such consumers have to limit the Solar PV installation to the connected load/ contract demand as the case may be, for availing net metering facility. If 'group housing societies and residential flats' intend to install Solar PV capacity above the connected load, such consumers can install Solar PV system only as per the third proviso to Regulation 13(2)(a) of the KSERC (Renewable Energy and Net Metering) Regulations 2020.

Analysis and Decisions

5. The Commission has examined in detail the petition filed by M/s Indian Oil Officers Cooperative Housing Society Ltd and also the comments of the respondent KSEB Ltd as per the provisions of the Electricity Act, 2003 and KSERC (Renewable Energy & Net Metering) Regulations, 2020.

6. The only issue raised by the petitioner is to seek clarification of the Commission whether the KSERC (Renewable Energy and Net Metering) Regulations, 2020, permits the 'Residential flats' to install Solar PV systems with capacity in excess of the connected load of the 'common facility connection' under Chapter 3, Net Metering. In order to clarify this issue, the Commission examined in detail the provisions of the KSERC (Renewable Energy and Net Metering) Regulations, 2020 (herein after referred as '**RE Regulations, 2020**'), and the relevant Regulations are extracted below for ready reference.

- (1) Regulation 2(1) (bc) of the '**RE Regulations,2020**' defines the 'Prosumer' as below.

“(bc) ‘Prosumer’ means a captive consumer, having a renewable energy system installed at the same premise of the consumer who generates and consumes the electricity generated from such renewable energy system and who can also inject the surplus power from the renewable energy system into the grid using the same network;”

As mentioned above, a Prosumer has to use the same network, which was created for availing supply from the licensee for injecting surplus power, if any, from the Solar PV system to the grid.

- (2) Regulation 13 of the '**RE Regulations,2020**' specifies the 'General Conditions' for installing Solar PV system by Prosumers under net metering facility. The relevant Regulations is extracted below.

“ 13. General Conditions.-

(1) The distribution licensee shall provide the net metering arrangement to the prosumer, who intends to install Grid Interactive Renewable Energy Systems at his premise on non-discriminatory and first come first serve basis, within 10 days from the date of submission of the approval of Renewable Energy System from the Electrical Inspector. In case the distribution licensee is not able to provide the net meters within the above mentioned 10 days, the eligible consumer after intimating the licensee can purchase the net meters at his own cost conforming to the specifications to be notified by the licensee at their website.

(2) The Grid Interactive Renewable Energy Systems, installed by a prosumer at his premise under this Chapter shall be:

(a) of not less than one kW and not exceeding 1000 kW capacity

on AC side of the inverter connected to the net meter of the distribution system, limited to the sanctioned connected load or contract demand as applicable to the prosumer, with the distribution licensee.

Provided that the domestic consumers with connected load up to 20 kW is permitted to install 'Renewable Energy System' of capacity up to 20 kW, irrespective of their connected load.

Provided further that the above limit of 20 kW connected load shall not apply in the case of group housing societies and residential flats, for common services such as lift, common lighting, club house, car parking, common areas etc.

Provided also that, prosumers including those prosumers mentioned above are also permitted to install Renewable Energy System in excess of their connected load or contract demand as applicable. However, the benefit of net metering shall not be allowed to such prosumers and such prosumers shall be treated at par with the prosumers having RE capacity more than 1 MW, as detailed in Chapter IV of these Regulations.

Provided also that, the Renewable Energy Systems installed by the prosumers under net metering as on the date of notification of these Regulations shall be allowed to continue irrespective of their contract demand or connected load.

(b) located within the premises of the prosumer;

(c) interconnected and operate safely in parallel with the distribution system of the licensee.

(3) The grid interactive renewable energy system under net metering installed at the premise of the eligible individual prosumer shall utilize the same service line and installation for injection of excess power into the grid.

Provided that, when a prosumer install Renewable Energy System in excess of the connected or contract demand as applicable, the expense for the augmentation of the distribution system required for connectivity shall be borne by the prosumer.

Provided also that the maximum capacity that can be installed by a single phase consumer shall be limited to 5 kW.

A prosumer having electric connections in different premises owned by him shall be eligible to install separate renewable energy system in each of such premises subject to the provisions of these Regulations.

(4) The specifications, capacity and output of the renewable energy system shall be in conformity with the provisions relating to the connected load or contract demand permissible at each voltage level as specified in the Kerala Electricity Supply Code, 2014, as amended from

time to time.”

In this connection, the Commission also examined Regulation 8 of the ‘Kerala Electricity Supply Code, 2014’ which is reproduced below:

8. *“Supply voltages for different connected loads or contract demands.- The supply voltage levels for different connected loads or contract demands for new connections or for gross connected load or contract demand consequent to revision of connected load or contract demand, shall be as follows:-*

Supply voltage	Maximum connected load (for those without demand based metering)	Maximum contract demand (for those with demand based metering)
240 V(single phase)	5 kW	
415V(three phase)	100 kVA	100kVA
11 kV		3000 kVA
22kV		6000 kVA
33 kV		12000kVA
66 kV		20000kVA
110 kV		40000kVA
220 kV		>40000 kVA

Provided that the limit of connected load or contract demand specified for different supply voltage levels may be exceeded up to a maximum of twenty percent if supply at the appropriate higher voltage level is not feasible due to non-availability of distribution line at such higher voltage level in that area of supply:

Provided further that the limits of connected load or contract demand specified for different supply voltage levels as specified above may be exceeded in exceptional cases with the approval of the Commission, subject to the conditions stipulated in such approval”.

7. As seen from the above provisions, as per the Regulation 13(2)(a) of the ‘**RE Regulations,2020**’ all the prosumers irrespective of tariff category are allowed to install Solar PV system between 1 kW to 1000 kW under net metering facility. However, the maximum Solar PV capacity that can be installed by the prosumer is limited to the sanctioned connected load or contract demand of the prosumer as the

case may be. This general condition is applicable to all categories of prosumers. However, as part of promoting roof top Solar PV installation by domestic consumers, the Commission vide the first proviso to Regulation 13(2)(a) permits installation of RE system of capacity upto 20kW irrespective of connected load. As per this provision, all the domestic consumers are allowed to install Solar PV system upto 20kW under net metering, if such consumers has the facility to install Solar PV system at their premises, subject to other conditions in the RE Regulations, 2020.

8. As per the second proviso to the Regulation 13(2)(a) of the RE Regulation 2020, the Commission further specified that the limit of 20 kW connected load limit specified for domestic consumers shall not apply to 'group housing societies and residential flats' for common services. The present issue raised by the petitioner is for clarity on the second proviso to RE Regulation 2020.

According to the petitioner, as per the second proviso to Regulation 13(2)(a) of the RE Regulation 2020, there is no maximum limit to install Solar PV system in the 'residential flats' for common services under net metering. Accordingly, the developers of the 'residential flats' can install Solar PV system for common services under net metering, in excess of connected load, if space is available in the premise for Solar PV installation.

This argument of the petitioner has been objected to by the licensee KSEB Ltd, mentioning that this relaxation is provided only to domestic consumers under 1st proviso to Regulation 13(2)(a) of the RE Regulation 2020. This is not available to 'residential flats' for common services under net metering. Accordingly, the Solar PV system, if any, proposed to be installed in the 'residential flats' for common services under net metering shall be limited to the connected load of their common service. If the Solar PV system proposed to be installed in the 'residential flat' for common services is in excess of the connected load, such a system cannot be regulated under net metering and the same shall be treated as per the 3rd proviso to Regulation 13(2)(a) of the RE Regulation 2020 and be regulated as per the provisions under Chapter IV of the RE Regulation, 2020.

9. The Commission also examined Regulation 8 of the Kerala Supply Code, 2014 and noted that at supply voltage of 415V, the maximum connected load or contract demand permitted is limited to 100 kVA subject to other conditions mentioned above. Hence, in the case of LT connections, a maximum load of 100 kVA can be permitted depending upon their contract demand or connected load.
10. The Commission also carefully considered the arguments presented by the petitioner as well as the respondent. The Commission, also considered the fact that there is an urgent requirement to encourage renewable energy generation within the State considering the fact that the distribution licensee has till date not been able to achieve the RPO in any of the previous years. Hence, the Commission had incorporated the provisions of net metering, to facilitate RE generation, especially the installation roof top solar PV system. Further, the Commission while defining the 'Prosumer', has clearly mentioned that the prosumer is permitted to inject the surplus power from the 'renewable energy system' using the same network.

In addition, Regulation 13(3) of the RE Regulations 2020, specifies as follows.

“(3) The grid interactive renewable energy system under net metering installed at the premise of the eligible individual prosumer shall utilize the same service line and installation for injection of excess power into the grid.

Provided that, when a prosumer install Renewable Energy System in excess of the connected or contract demand as applicable, the expense for the augmentation of the distribution system required for connectivity shall be borne by the prosumer.”

As extracted above, the Prosumers under net-metering is intended to use the same service line for availing supply from the licensee as well as for injecting surplus power during any time slot. However, if the prosumer desires to install the RE system in excess of the connected load or contract demand, the expenses for the augmentation of the distribution system required for connectivity has to be borne by the prosumer.

11. Further, as per the 'General Condition 8(a) under Part-A LT Tariff' of the Schedule of Tariff and Terms and Conditions for Retail Supply' notified by the Commission vide the Order dated 08.07.2019 in Petition OA No. 15/2018,

specify as follows.

“8(a) Power supply for common facilities in high rise buildings/ apartment complex etc used exclusively for domestic (housing) purpose such as fire control, common lighting, lifts, water pumping, sewage treatment, waste disposal, offices of the residential associations in residential apartment complexes shall be billed at domestic tariff.”

As above, the common services in ‘residential flats’ exclusively used for domestic purposes is billed under domestic tariff and accordingly the connection for common service in ‘residential flat’ is to be treated as a prosumer for domestic use.

12. Commission further noted that, if the connected load of the consumer exceeds 100 kW, the consumer has to change the supply voltage from LT to HT. Considering the above, the maximum Solar PV system that can be installed in ‘residential flats’ for common services availing supply at LT shall be limited to 100 kW.
13. The Commission, duly considering the various provisions in the RE Regulations, 2020, and other Rules and Regulations in force, hereby clarify the following.
 - (1) All prosumers, irrespective of their tariff category, are allowed to install Solar PV system under net metering up to the sanctioned connected load or contract demand as applicable to the prosumer, subject to other conditions specified under Regulation 13 of the KSERC (Renewable Energy and Net Metering) Regulations, 2020 and its amendments from time to time.
 - (2) Domestic consumers with connected load upto 20KW is permitted to install Solar PV system of capacity upto 20kW under metering, irrespective of their connected load, subject to other provisions of the KSERC (Renewable Energy and Net Metering) Regulations, 2020 and its amendments from time to time.
 - (3) As per the prevailing Tariff Orders and Schedule of Tariff and Terms and Conditions of Supply, the power supply to common facilities in group housing societies and residential flats exclusively for domestic purpose such as fire control, common lighting, lifts, water pumping etc shall be billed under domestic tariff. Accordingly, the service connections to common services in group housing societies and residential flats ‘is to be treated as prosumer for domestic use.

- (4) Distribution Licensees shall irrespective of the connected load/contract demand permit group housing societies and residential flat complexes availing supply at LT voltage levels for common services such as lift, common lighting, club house, car parking etc., to meet their power requirements of their common services, to install Solar PV system under net metering as a Prosumer, upto a maximum capacity of 100kW.

Sd/-

Adv. A.J. Wilson

Member(Law)

Sd/-

Preman Dinaraj

Chairman

Approved for issue

C R Satheeshchandran

Secretary (i/c)