

**BEFORE THE GUJARAT ELECTRICITY REGULATORY COMMISSION
GANDHINAGAR**

In the matter of:

Gujarat Electricity Regulatory Commission (Net Metering Rooftop Solar PV Grid Interactive Systems) (Second Amendment) Regulations, 2020.

CORAM:

Shri Anand Kumar, Chairman

Shri P. J. Thakkar, Member

STATEMENT OF REASONS

1. Background

1.1. In exercise of powers conferred under Sections 61, 66, 86 (1) (e) and 181 of the Electricity Act, 2003 read with all other provisions, the Commission (GERC) notified the Gujarat Electricity Regulatory Commission (Net Metering Rooftop Solar PV Grid Interactive Systems) Regulations, 2016 (Notification No. 5 of 2016) on 18.06.2016 and were subsequently amended through amendments dated 06.10.2017 (Notification No. 2 of 2017).

1.2. Subsequently, while disposing of various Petitions- Petition No. 1727 of 2018, Petition No. 1821 of 2019 and Petition No. 1825 of 2019, the Commission noted need of revisiting the Gujarat Electricity Regulatory Commission (Net Metering Rooftop Solar PV Grid Interactive Systems) Regulations, 2016 (Notification No. 5 of 2016) on issues like tariff/ compensation rate for surplus energy injected into grid by Rooftop Solar Systems, cap for Solar Rooftop capacity, permissible Rooftop capacity vis-a-vis Distribution Transformer capacity, metering requirement, RPO compliance etc. and directed staff of the Commission to initiate the process in this regard.

1.3. Accordingly, a Draft Notification dated 18.12.2019 in this regard has been published and Public Notices were issued seeking suggestions/ objections from the stakeholders in the matter.

1.4. Thereafter, the Commission conducted a public hearing on the Draft Amendment Regulations on 16.01.2020. List of stakeholders who submitted written comments and made representation during public hearing is provided as Annexure-I.

1.5. After detailed analysis and due consideration of the suggestions/ objections provided by the stakeholders as detailed in the succeeding paragraphs, the Commission hereby finalizes the Gujarat Electricity Regulatory Commission (Net Metering Rooftop Solar PV Grid Interactive Systems) (Second Amendment) Regulations, 2020.

2. Amendment in Regulation 2.1 of the Principal Regulations:

2.1. It is proposed to insert new definition for “Micro, Small and Medium (Manufacturing) Enterprise or MSME (Manufacturing)” in the principal Regulations as detailed below-

“Micro, Small and Medium (Manufacturing) Enterprise or MSME (Manufacturing) Enterprise” shall mean a registered enterprise as per the definition of Micro, Small and Medium Manufacturing Enterprises and in accordance with the provisions of the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 as amended from time to time.

As per Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 the MSME (Manufacturing) category is defined as – The enterprises engaged in manufacture or production of goods pertaining to any industry specified in first schedule to Industries (Development and Regulation) Act, 1951 or employing plant and machinery in the process of value addition to the final product having a distinct name or character or use. The Manufacturing Enterprises are defined in terms of Investment in Plant and Machinery as under:

TYPE	MANUFACTURING
	<i>Investment in Plant & Machinery</i>
<i>Micro Enterprises</i>	<i>Not more than Rs. 25 Lakh</i>
<i>Small Enterprises</i>	<i>More than Rs. 25 Lakh but does not</i>

	<i>exceed Rs. 5 Crore</i>
<i>Medium Enterprises</i>	<i>More than Rs. 5 Crore but does not exceed Rs. 10 Crore</i>

2.2. As there is no comment or suggestion received for this amendment, Commission decides to finalize amendment for this Regulation as proposed in the draft.

2.3. It is suggested by stakeholder to revise definition of 'Eligible Consumer' and allow third-party owned Solar Rooftop PV system. Few other stakeholders also suggested to allow RESCO (Renewable Energy Services Company) model under Net Metering Regulations for promotion of more solar installations. However, looking to the present status and impact of the Net Metering Regulations on all the consumers of electricity, the Commission decides to continue present provision of self owned Solar Rooftop PV system under Net Metering Regulations.

3. Amendment in Regulation 5 of the Principal Regulation:

3.1. It is proposed to relax cap on cumulative capacity of Solar PV systems allowed on a particular distribution transformer from present limit of the 65% of the peak capacity of the distribution transformer to full capacity of the distribution transformer.

3.2. One distribution licensee suggested to continue cap of 65% of the capacity of Distribution Transformer (DT) for Solar Installations, while other stakeholder suggested to remove cap and provide that it is required to replace DT with higher capacity, if required.

3.3. In order to utilize fullest capacity of a particular Distribution Transformer, it is decided to remove cap of 65% of the capacity and allow installation of Solar Rooftop PV systems upto full capacity of a particular Distribution Transformer. Further, the capacity of a particular Distribution Transformer is required to be designed and decided by the Distribution Licensee in view of the sanctioned load/ contract demand of the consumers connected on downstream network.

3.4. In view of the above, the Commission decides to finalize amendment for this Regulation as proposed in the draft.

4. Amendment in Regulation 6.2 of the Principal Regulations read with First Amendment:

4.1. It is proposed to remove the cap of 50% of consumer's sanctioned load / contract demand for installation of Rooftop Solar PV by MSME (Manufacturing) Enterprise and make it align to the provisions of the State Government Policy in this regard.

4.2. Some stakeholders suggested to relax cap of 50% of the sanctioned load /contract demand for installation of Rooftop Solar PV systems. One Distribution Licensee suggested to keep cap for Residential and MSME (Manufacturing) Enterprises to 100% of sanction load/ contract demand in order to avoid overloading of last mile connectivity segment.

4.3. Some Educational Institutes requested that the cap of 50% of sanctioned load/ contract demand for Rooftop Solar PV installations shall be relaxed for Educational Institutes.

4.4. Looking to the present status of Rooftop Solar PV installations under Net Metering Regulations and its impact on grid and other electricity consumers, the Commission decides to continue present arrangement of cap of 50% installation for other consumers and in order to make exiting Regulation aligned to State Government Policy for MSME (Manufacturing) Enterprises, they are allowed to install Rooftop Solar PV system above 50% of its sanctioned load/ contract demand subject to 15-minute settlement mechanism.

4.5. Further taking the note that typical Solar PV system capacity not exceeding nameplate DC capacity and in view of the telescopic distribution network design, the Commission is of the opinion that at present there is no need to keep or specify cap of 100% of sanctioned load/ contact demand for Residential consumers and MSME (Manufacturing) Enterprises, accordingly they are allowed to install Rooftop Solar PV system in accordance with their self-consumption requirements irrespective of their sanctioned load/ contract demand. However,

in case of continuous overloading of distribution network due to higher capacity of Rooftop Solar PV system, the Distribution Licensee is required to strengthen the network at the cost of concerned consumer.

4.6. In view of the above, the Commission decides to finalize amendment for this Regulation as proposed in the draft.

5. Amendment in Regulation 7 of the Principal Regulations:

5.1. It is proposed to include other agencies as designated by the Government for registration/ coordination along with the GEDA and make it align to the provisions of the State Government Policy in this regard.

5.2. As there is no comment or suggestion received for this amendment, Commission decides to finalize amendment for this Regulation as proposed in draft.

6. Amendment in Regulation 9 of the Principal Regulations:

6.1. It is proposed to amend the Regulation 9 “Energy Accounting and Settlement” of the Principal Regulations so as to replace the existing arrangement of procurement of surplus energy by Distribution Licensee at APPC rate to the compensation mechanism for surplus energy at the fixed rate.

6.2. In recent past while disposing of the petitions filed praying amendments in the Regulations, the Commission noted that- “the solar power projects set up for captive use/ third party sale and solar rooftop are set up primarily for self-consumption and therefore it should not be compared with solar or other generating plants set up exclusively for sale of electricity to the distribution licensee. Accordingly, the procurement rate for surplus energy injected into the licensee’s grid from such plants after self-consumption should be treated differently.

6.3. Accordingly, it is proposed to change tariff rate for procurement of surplus power from APPC rate to fixed rate of Rs. 2.25 per kWh for Residential and Government consumers, Rs. 1.75 per kWh for other consumers not registered under REC and Rs. 1.50 per kWh for the projects covered under REC.

- 6.4. Further, it is also proposed to cover those MSME (Manufacturing) Enterprises in 15 minutes settlement mechanism, who have opted or would opt to install Solar Rooftop PV more than 50% of its sanctioned load/ contract demand.
- 6.5. In order to provide more clarity, it is also proposed that the Distribution Licensees are required to make payment of credit amount more than Rs. 100 at the end of financial year.
- 6.6. Many stakeholders submitted and requested the Commission to continue present arrangement of procurement of surplus energy by Distribution Licensee at APPC rate. Some stakeholders suggested that the tariff rates for procurement of surplus power generated from Rooftop Solar PV system shall be determined on cost-plus basis only.
- 6.7. At the same time a Consumer Organization suggested that there shall not be increase in cross-subsidization while promoting more Rooftop Solar PV systems and submitted that that the Commission should determine higher fixed charges for such consumers who are opting for Rooftop Solar PV installations. It is also suggested by some stakeholders that now only Gross Metering to be allowed for Rooftop Solar PV system instead of Net Metering.
- 6.8. It is also submitted by one stakeholder that the consumers having relatively higher consumption and having more capacity to pay are now switching over to Rooftop Solar PV system and due to this there is drastic reduction in revenue from such consumers and hence there is higher burden of cross-subsidization on other consumers. It is also suggested that now this is time to repeal this Net Metering Regulations.
- 6.9. The existing Principal Regulations provide for procurement of surplus power from Rooftop Solar PV systems at APPC or APPC linked rate. These rates are in existence as decided by the Commission in accordance with the Section- 86 (b) of the Electricity Act, 2003. Now, in view of the reduction in cost of solar generation, the Commission decides to revisit these rates and fixed the same under the Section- 86 (b) of the Electricity Act, 2003.

- 6.10. Further, in order to promote Rooftop Solar PV systems and facilitates self-consumption from such system by consumers, it is required provide for grid connectivity and commercial mechanism under Net Metering Scheme and looking to the infirm nature of generation of electricity from such systems it is required to provide for commercial arrangement of procurement/ compensation for surplus energy from such Rooftop Solar PV systems by Distribution Licensees.
- 6.11. Earlier looking to the overall supply- demand scenario and cost of generation from Rooftop Solar PV systems, the Commission decided to keep APPC rate as procurement rate for surplus energy from such systems. However, in view of the reduction in the cost of generation as well as resultant tariff rates under competitive bidding mechanism, it is required to revisit the procurement rate by distribution licensees.
- 6.12. Further, it is also noted that the State Government also notified various policies for facilitations and promotion of Rooftop Solar PV system by Residential and MSME (Manufacturing) Enterprises.
- 6.13. It is noted that the Energy and Petrochemicals Department requested the Commission to approve the rate of Rs. 2.25 per kWh for purchase of surplus energy from Rooftop Solar PV projects set up under the SURYA Scheme notified on 5th August 2019.
- 6.14. It is stated that average tariff of Rs. 2.65 per kWh is discovered through competitive bidding process undertaken by GUVNL for purchase of solar power on committed capacity basis. Further, the Government also provides subsidy support under the SURYA Scheme. In view of the above it is considered reasonable and prudent to allow tariff rate of Rs. 2.25 (85% of tariff of Rs. 2.65) per kWh so as to maintain equity between the project set up exclusive for sale to Distribution Licensee on firm capacity basis and the Rooftop projects selling/ injecting only surplus power on infirmed capacity basis.
- 6.15. Further, the State Government in the Amendment in Gujarat Solar Power Policy- 2015 (For MSME Manufacturing Enterprise) dated 26.09.2019 considered the rate of Rs. 1.75 per kWh for purchase of surplus energy from such consumers.

- 6.16. In view of the difference in revenue realization rates of Residential/ Government Consumers and Other Consumers and impact on revenue of Distribution Licensee due to installations of Rooftop Solar PV system by such consumers, the Commission find it reasonable to fix the surplus injection compensation (SIC) rate for Residential/ Government Consumers at Rs. 2.25 per kWh and Rs. 1.75 per kWh for other consumers not covered under REC. Further, the surplus injection compensation rates for REC projects are fixed at Rs. 1.50 (85% of Rs. 1.75) per kWh.
- 6.17. In view of the above and as noted by the Commission earlier- it is required to promote and facilitate installations of Rooftop Solar PV system mainly for self-consumption, it is proposed to keep the tariff / compensation rate for surplus energy exported by such systems to grid at such a level that there should not be adverse impact of the same on other electricity consumers. Accordingly, the Commission decides to keep the tariff rates/ compensation rates for surplus energy from Rooftop Solar PV system as proposed in draft Regulations dated 18.12.2019.
- 6.18. Some stakeholders suggested to allow all Rooftop Solar PV systems under billing cycle basis settlement and also allow to carry forward surplus energy to next quarter.
- 6.19. A Consumer Organization suggested that it is required to specify 15 minutes settlement mechanism for all Rooftop Solar PV installations in order to reduce cross-subsidization and to avoid adverse impact on other consumers.
- 6.20. However, the Commission decides to continue existing arrangement of settlement mechanism of billing cycle for Residential/ Government consumers and other consumers, who opt for Rooftop Solar PV installation up to 50% of sanctioned load/ contract demand and not utilizing 'Renewable attributes'.
- 6.21. Further, to encourage MSME (Manufacturing) Enterprises to schedule their load consumption pattern matching electricity generation from Rooftop Solar PV system, it is decided to allow installations above 50% of its sanction load/ contract demand with settlement mechanism of 15 minutes time block.

6.22. One stakeholder suggested to provide for payment of credit amount to consumer by Distribution Licensee on monthly/ billing basis. However, looking to the present arrangement, it is decided to keep provision of payment by distribution licensee in this regard at the end of financial year and also limited to credit amount above Rs. 100.

6.23. TPL suggested that word 'as may be' provided along with the surplus compensation injection (SIC) rate to be replaced by 'if, any' in order to provide ample clarity and to avoid litigations.

6.24. In view of the above, the Commission decides to finalize amendment for this Regulation as proposed in the draft with slight modification by replacing word of 'as may be' provided along with the surplus injection compensation (SIC) rate by 'if, any', which provides more clarity.

7. Amendment in Regulation 13.5 of the Principal Regulations:

7.1. In order to remove inconsistency between Regulation 13.5 and Annexure- VI to the Principal Regulations, it is proposed to reword Regulation 13.5 stipulating accuracy classes of 1.0/0.5s for the main solar meter.

7.2. Some stakeholder suggested to keep in view the cost of meter while specifying requirement of accuracy classes for meters related to Rooftop Solar PV system.

7.3. Considering above suggestion and in order to remove inconsistency in existing Principal Regulation, the Commission decides to amend this Regulation as stated above.

7.4. Accordingly, the Commission decides to finalize amendment for this Regulation as proposed in the draft.

8. Deletion of both the diagrams under "Net Metering configuration options" i.e. (1) Two meter configuration without storage and (2) Two meter configuration with storage of the Principal Regulations:

8.1. It is proposed to delete above mentioned diagrams as it is not relevant to present Regulations.

- 8.2. As there is no comment or suggestion received for this amendment, Commission decides to finalize amendment for this Regulation as proposed in draft.
9. Amendment in Clause 7 of Annexure IV to Principal Regulations pertaining to Interconnection Agreement between Distribution Licensee and Solar Rooftop PV Project Owner:
- 9.1. In view of the amendment in Energy Accounting and Settlement mechanism, it is also required to amend relevant clauses in the aforesaid agreement.
- 9.2. The Regulation-11 of the existing Principal Regulations provide that- *“The quantum of electricity consumed by the Eligible Consumer, who is not defined as an obligated entity, from the Rooftop Solar PV System under net- metering arrangement shall qualify towards compliance of Renewable Purchase Obligation (RPO) for the distribution licensee and no REC shall be issued as the generated solar energy shall be used to meet the Distribution licensee’s RPO.”*
- 9.3. However, in Clause 7 of Annexure IV to Principal Regulations pertaining to Interconnection Agreement between Distribution Licensee and Solar Rooftop PV Project Owner, it is provided that only surplus energy purchase shall be utilized for meeting RPO of Distribution Licensees.
- 9.4. In order to remove this inconsistency and to provide clarity in this regard, it is proposed to cover renewable generation and self-consumption by consumers, who are not availing renewable attributes of such generation and self-consumption for RPO, to be consider for meeting the RPO of concerned Distribution Licensee.
- 9.5. Some stakeholders have submitted that only purchase of electricity by Distribution Licensee from Rooftop Solar PV required to be considered for meeting the RPO instead of entire generation.
- 9.6. However, in order to align the provisions of agreement in line with the Regulation-11 of the Principal Regulations, the Commission decides to specify that the entire generation of Rooftop Solar PV system, where the concerned consumer is not utilizing ‘Renewable attribute’, is required to be considered to meet the RPO of

the Distribution Licensees and accordingly decides to amend this part of Regulations.

10. Amendment in Clause 1.3 of Annexure IV of the Principal Regulations:

10.1. It is proposed to provide more clarity about continuing arrangement for cap of 50% of Solar Rooftop PV capacity of the sanctioned load / contract demand of the consumer by rewording aforesaid Regulation.

10.2. As there is no comment or suggestion received for this amendment, Commission decides to finalize amendment for this Regulation as proposed in draft.

11. Other Submission from Gujarat Urja Vikas Nigam Limited (GUVNL):

11.1. The GUVNL in its written submission stated that they have initially approached the Commission on 15.09.2017 for the consideration of lower rate for purchase of surplus power instead of APPC in view of the reduction in cost of solar power. The rates being notified under draft amendments should be applied to all agreements signed by GUVNL after its letter dated 15.09.2017 should be applied at least from the date of filing of the Petition on 13.03.2018. Further requested that the Regulations may be made effective from such date.

11.2. In this regard, the Commission decides that the issue related to agreements already executed by the GUVNL will be addressed separately and the amendments as proposed in draft and as discussed in this SoR are finalized and shall come into force with effect from the date of their publication in the Official Gazette.

12. Other Submission from Torrent Power Limited (TPL):

12.1. TPL also requested to amend Clause 7(11), which provides for installation of proper protection system (inverter shall have anti islanding feature) along with second line of protection such as no volt relay. It is further submitted that- the

Chief Electrical Inspector has issued letter regarding second line of protection such as no volt relay for Solar PV System greater than 10 KW.

12.2. The Commission find above suggestions appropriate and in order to provide more clarity decides to incorporate the same in amendments.

Sd/-

[P J THAKKAR]

MEMBER

Sd/-

[ANAND KUMAR]

CHAIRMAN

Place: Gandhinagar

Date: 23.01.2020.

Annexure- I

List of Stakeholders, who submitted written comments and made representation during public hearing dated 16.01.2020 on GERC (Net Metering Rooftop Solar PV Grid Interactive Systems) (Second Amendment) Regulations, 2019

Sr No.	Name of the Stakeholder	Written Submission	Made representation during Public Hearing
1.	Gujarat Urja Vikas Nigam Limited	Yes	Yes
2.	Shri Kirtikumar N. Shah	Yes	Yes
3.	Federation of Renewable & Consumers of Energy	Yes	-
4.	Shri Ashwani Chandra	Yes	-
5.	Rajkot Chamber of Commerce & Industry	Yes	-
6.	Hero Future Energies Private Limited	Yes	-
7.	Jan Kalyan Foundation	Yes	Yes
8.	All India Consumer Action and Protection Committee	Yes	-
9.	Torrent Power Limited	Yes	Yes
10.	Sarvajanik Education Society	Yes	-
11.	Shree Sachin Vibhag Kelvani Mandal	Yes	-
12.	Shri Krishnakumar Bajaj	Yes	-