

# MAHARASHTRA ELECTRICITY REGULATORY COMMISSION

## NOTIFICATION (DRAFT)

### ELECTRICITY ACT, 2003.

No. MERC/Tech/Regulation/\_\_\_\_.- In exercise of the powers conferred under Section 61 and Section 86(3) read with Section 181 of the Electricity Act, 2003 (36 of 2003) and in pursuance to Clause 5.3 of the Tariff Policy, 2016 and all other powers enabling it in this behalf, and after previous publication, the Maharashtra Electricity Regulatory Commission makes the following Regulations to amend the Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 (**‘the Principal Regulations’**), namely:

#### **1 Preamble**

As per Section 86 (1) (e) of the Electricity Act, 2003 (“EA 2003” or “the Act”), the State Electricity Regulatory Commissions (“SERCs” or “Commissions”) have been assigned the function of promoting generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity to any person. The Maharashtra Electricity Regulatory Commission notified the Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019 on 30<sup>th</sup> December, 2019. The Ministry of Power, Government of India has notified the Electricity (Rights of Consumers) Rules, 2020 and the Electricity (Rights of Consumers) Amendment Rules, 2021. These changes have been appropriately incorporated in the Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating Systems) (First Amendment) Regulations, 2023.

#### **2 Short title and commencement**

- 2.1. These Regulations may be called the Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating Systems) (First Amendment) Regulations, 2023.
- 2.2. These Regulations shall come into force from the date of their publication in the Official Gazette.

#### **3 Amendment to Regulation 2 of the Principal Regulations:-**

##### **Substitution of Regulation 2.1 (j) of the Principal Regulations:-**

“2.1 (j) **“Eligible Consumer”** means a consumer of electricity in the area of supply of the Distribution Licensee who uses or intends to use a Renewable Energy

Generating System, installed on a roof-top or any other mounting structure in his premises, to meet all or part or no part of his own electricity requirement, and includes a Consumer catering to a common load such as a Housing Society:

Provided that such Generating System may be owned and/or operated by such Consumer, or by a Distribution Licensee or third party leasing such System to the Consumer:

Provided further that in case of Net Metering Arrangement, the capacity of Renewable Energy Generating System shall be limited to 1 MW or Contract Demand/Sanction Load of consumer, whichever is lower:

Provided also that for all other arrangements, the capacity of Renewable Energy Generating System shall be limited to Contract Demand/Sanctioned Load of consumer.”

**Introduction of Regulation 2.1 (k)(a) and 2.1 (k)(b) after Regulation 2.1 (k) of the Principal Regulations:—**

“2.1(k)(a) **“Gross-Metering”** means a mechanism whereby the total renewable energy generated from Renewable Energy Generating system of an eligible consumer and the total energy consumed by the eligible consumer are accounted separately through appropriate metering arrangements and for the billing purpose, the total energy consumed by the eligible consumer is accounted at the approved grid tariff and total renewable energy generated is accounted at pre-determined tariff by the Commission.

2.1 (k)(b) **“Gross Metering Connection Agreement”** means an agreement entered into by a Distribution Licensee and an Eligible Consumer for executing a Gross Metering arrangement.”

**Substitution of Regulation 2.1 (n) of the Principal Regulations:-**

“2.1(n) **“Net Billing Arrangement”** means an arrangement under which surplus energy injected into the Grid by Renewable Energy Generating System is purchased by the Distribution Licensee and the Distribution Licensee raises the bills on the consumer for his consumption from the Grid at the approved grid tariff, after giving credit for energy injected into the Grid at pre-determined tariff.”

**Introduction of Regulation 2.1 (t)(a) after Regulation 2.1 (t) of the Principal Regulations:—**

“2.1 (t) (a) **“Prosumer”** means a person who consumes electricity from the grid and can also inject electricity into the grid for Distribution Licensee, using same point of supply.”

**4 Amendment to Regulation 3 of the Principal Regulations in PART A – GENERAL:-**

**Substitution of Regulation 3.1(c) and introduction of Regulation 3.1(d):-**

“3.1 (c) Gross Metering arrangements.

3.1 (d) Grid Connected Renewable Energy Generating Systems connected behind the Consumer’s meter, who have not opted for Net Metering Arrangement or Net Billing Arrangement or Gross Metering Arrangement.”

**Introduction of Regulation 3.3 after Regulation 3.2 of Principal Regulations:-**

“3.3 ‘Net Metering arrangement and/or Net Billing Arrangement’ referred together in Regulations 4 to 10 of the Principal Regulations shall be referred as ‘Net Metering arrangement and/or Net Billing Arrangement and/or Gross Metering Arrangement’ as applicable.”

**5 Amendment to Regulation 4 of the Principal Regulations in PART A – GENERAL:-**

**Introduction of Regulation 4.3 after Regulation 4.2 of the Principal Regulations:-**

“4.3 The Prosumer will maintain consumer status and have the same rights as the general consumer.”

**6 Amendment to Regulation 8 of the Principal Regulations in PART B – TECHNICAL ARRANGMENTS:-**

**Substitution of Regulation 8.3 of the Principal Regulations:-**

“8.3 The Net Metering Arrangement or **Net Billing Arrangement** shall include a single-phase or a three-phase Net Meter, as may be required, located at the point of inter-connection as ascertained by the Distribution Licensee.”

**Substitution of Regulation 8.11 of the Principal Regulations:-**

“8.11 In case of Renewable Energy Generating System set up under **Gross Metering Arrangement**, an additional Check Meter for the Renewable Energy Generation Meter of appropriate class shall be installed by the Distribution Licensee.”

**7 Amendment to Regulation 9 of the Principal Regulations in PART B – TECHNICAL ARRANGMENTS:-**

**Substitution of Regulation 9.5 of the Principal Regulations:-**

“ 9.5 The procedure for application for connectivity of a Renewable Energy Generating System with the Network of the Distribution Licensee and timelines for performing various activities are set out at **Annexure-1** of these Regulations:

Provided that in case of delay in performing any activity by Distribution Licensee, it shall compensate the concerned consumer at the rate of five hundred rupees per day of delay in performing the activity.”

## **8 Amendment to Regulation 10 of the Principal Regulations in PART B – TECHNICAL ARRANGMENTS:-**

### **Introduction of Regulation 10.3 (a) after Regulation 10.3 of the Principal Regulations:-**

“10.3 (a) A model Gross Metering Connection Agreement is provided at **Annexure 7**, which the Distribution Licensee may modify suitably, subject to consistency with these Regulations .”

## **9 Amendment to Regulation 11 of the Principal Regulations in PART C – COMMERCIAL ARRANGEMENTS**

### **Introduction of Proviso to Regulation 11.4(e) of the Principal Regulations:—**

“ Provided that in case such credit amount is continuously increasing at the end of three consecutive financial years, then at the end of third financial year, 50% of the credit amount shall be paid in cash to the consumer and balance 50% shall be credited in electricity bill.”

### **Introduction of Regulation 11 (A) after Regulation 11 of the Principal Regulations:—**

#### **11 (A) Net Billing – Energy Accounting and Settlement**

11.1 (A) The accounting of electricity exported and imported by the Eligible Consumer shall become effective from the date of connectivity of the Renewable Energy Generating System with the distribution network.

11.2 (A)The Distribution Licensee shall undertake meter reading of both, the Renewable Energy Generation Meter and the Net Meter, for all Eligible Consumers, according to the regular metering cycle.

11.3 (A) For each Billing Period, the Distribution Licensee shall make the following information available on its bill to the Eligible Consumer:

a) Quantum of Renewable Energy generation recorded in the Renewable Energy Generation Meter in the billing period, including opening and closing balance;

- b) Quantum of electricity units consumed by the Consumer in the billing period, including opening and closing balance;
- c) Quantum of energy injected and drawn by Prosumer into/from Grid of the Distribution Licensee;
- d) Renewable Energy generation units used by the Distribution Licensee for RPO compliance.

11.4 (A) The energy generated by the Renewable Energy Generating System shall be first used for self-consumption and surplus energy injected into the Grid or energy drawn from the Grid shall be billed as per following equation:

$$\text{Energy Bill of consumer} = \text{Fixed Charges} + \text{other applicable charges and levies} + (E_{DL} \times T_{RST}) - (E_{RE} \times T_{GC}) - \text{Billing Credit};$$

Where:

- a) Fixed Charges means the Fixed/Demand Charges as applicable to the consumer category as per the applicable retail supply Tariff Order;
- b) Other charges and levies mean any other charges such as municipal tax, cess, etc.;
- c)  $E_{DL}$  means the energy drawn from the Grid by the Prosumer;
- d)  $T_{RST}$  means the applicable retail supply tariff of the concerned consumer category as per the applicable retail supply Tariff Order of the Commission;
- e)  $E_{RE}$  means the energy injected into the Grid by the Prosumer;
- f)  $T_{GC}$  means the Generic Tariff approved by the Commission for that year;
- g) Billing Credit is credit available from previous months.

11.5 (A) The Distribution Licensee shall accept the power as per the Useful Life of the Renewable Energy Generating System, unless the Eligible Consumer ceases to be a consumer of the Licensee or the Renewable Energy Generating System is abandoned earlier.

## **10 Amendment to Regulation 12 of the Principal Regulations in PART C – COMMERCIAL ARRANGEMENTS**

### **Substitution of Regulation 12 and 12.1 (a) of the Principal Regulations:-**

#### **“12. Gross Metering – Energy Accounting and Settlement**

12.1 Gross Metering is the arrangement where the Renewable Energy Generating System is setup for selling entire generated power to Distribution Licensee under Power Purchase Agreement:

Provided that if Renewable Energy Generating System is connected on the consumer side of the consumer meter, then the consumer shall have to replace the consumer meter with a Net Meter.”

## **11 Amendment to Annexure-1 of the Principal Regulations**

### **Substitution of Clause 1(h) of Annexure-1 of the Principal Regulations:—**

“(h) The Eligible Consumer and Distribution Licensee shall enter into a Net Metering Connection Agreement or the Net Billing Connection Agreement or **Gross Metering Connection Agreement**, as the case may be, in the prescribed format after the Renewable Energy Generating System is installed but before it is synchronized with the distribution network.”

## **12 Amendment to Annexure-2 of the Principal Regulations**

### **Substitution of heading of Annexure-2 of the Principal Regulations:—**

“Model Application Form for installation of Renewable Energy Generating System under Net Metering Arrangement or Net Billing Arrangement or **Gross Metering Arrangement**”

## **13 Amendment to Annexure-4 of the Principal Regulations**

### **Substitution of Clause 8.2 of Annexure-4 of the Principal Regulations:—**

“8.2 The energy generated by the Renewable Energy Generating System shall be first used for self-consumption and surplus energy injected into the Grid or energy drawn from the Grid shall be billed as per Grid Interactive Renewable Regulations.”

### **Substitution of Clause 8.4 of Annexure-4 of the Principal Regulations:—**

“8.4 The existing metering system, if not in accordance with the Grid Interactive Renewable Regulations, shall be replaced by a bi-directional meter (whole current/CT operated) and a separate Renewable Energy Generation Meter shall be provided to measure Renewable Energy generation. The bi-directional meter (whole current/CT operated) shall be installed at the inter-connection point to the Licensee’s Network for recording export and import of energy. The uni-

directional and bi-directional meters shall be fixed in separate meter boxes in the same proximity.”

**Substitution of Clause 8.5 of Annexure-4 of the Principal Regulations:—**

“8.5 The Licensee shall issue monthly electricity bill after considering both the energy drawn from the Grid and injected into the Grid by the Prosumer as specified in the Grid Interactive Renewable Regulations.”

**Introduction of Annexure-7 after Annexure-6 of the Principal Regulations:—**

**Annexure-7**

**Model Gross Metering Connection Agreement**

This Agreement is made and entered into at (location) \_\_\_\_\_ on this (date) \_\_\_\_\_ day of (month) \_\_\_\_ (year) \_\_\_\_\_ between the Eligible Consumer (Name) \_\_\_\_\_ having \_\_\_\_\_ premises at (address) \_\_\_\_\_ and Consumer No. \_\_\_\_\_ as the first Party,

AND

the Distribution Licensee \_\_\_\_\_ (hereinafter referred to as ‘the Licensee’) and having its Registered Office at (address) \_\_\_\_\_ as second Party of this Agreement.

Whereas the Eligible Consumer has applied to the Licensee for approval of a Gross Metering Arrangement under the provisions of the Maharashtra Electricity Regulatory Commission (Grid Interactive Renewable Energy Generating Systems) Regulations, 2019 (‘the Grid Interactive Renewable Regulations’) as amended from time to time and sought its connectivity to the Licensee’s distribution Network;

And whereas the Licensee has agreed to provide Network connectivity to the Eligible Consumer for injection of electricity generated from its Renewable Energy Generating System of \_\_\_\_\_ kilowatt;

Both Parties hereby agree as follows:

**1. Eligibility**

The Renewable Energy Generating System meets the applicable norms for being integrated into the distribution network, and that the Eligible Consumer shall maintain the System accordingly for the duration of this Agreement.

## **2. Technical and Inter-connection Requirements**

- 2.1 The metering arrangement and the inter-connection of the Renewable Energy Generating System with the Network of the Licensee shall be as per the provisions of the Grid Interactive Renewable Regulations, and the technical standards and norms specified by the Central Electricity Authority for connectivity of distributed generation resources and for the installation and operation of meters.
- 2.2 The Eligible Consumer agrees, that he shall install, prior to connection of the Renewable Energy Generating System to the Network of the Licensee, an isolation device (both automatic and in-built within inverter and external manual relays); and the Licensee shall have access to it if required for the repair and maintenance of the distribution Network.
- 2.3 The Licensee shall specify the interface/inter-connection point and metering point.
- 2.4 The Eligible Consumer shall furnish all relevant data, such as voltage, frequency, circuit breaker, isolator position in his System, as and when required by the Licensee.

## **3. Safety**

- 3.1 The equipment connected to the Licensee's distribution System shall be compliant with relevant International (IEEE/IEC) or Indian standards (BIS), as the case may be, and the installation of electrical equipment shall comply with the requirements specified by the Central Electricity Authority regarding safety and electricity supply.
- 3.2 The design, installation, maintenance and operation of the Renewable Energy Generating System shall be undertaken in a manner conducive to the safety of the Renewable Energy Generating System as well as the Licensee's Network.
- 3.3 If, at any time, the Licensee determines that the Eligible Consumer's Renewable Energy Generating System is causing or may cause damage to and/or results in the Licensee's other consumers or its assets, the Eligible Consumer shall disconnect the Renewable Energy Generating System from the distribution Network upon direction from the Licensee, and shall undertake corrective measures at his own expense prior to reconnection.
- 3.4 The Licensee shall not be responsible for any accident resulting in injury to human beings or animals or damage to property that may occur due to back-feeding from the Renewable Energy Generating System when the grid supply is off. The Licensee may disconnect the installation at any time in the event of such exigencies to prevent such accident.



#### **4. Other Clearances and Approvals**

The Eligible Consumer shall obtain any statutory approvals and clearances that may be required, such as from the Electrical Inspector or the municipal or other authorities, before connecting the Renewable Energy Generating System to the distribution Network.

#### **5. Period of Agreement, and Termination**

5.1 This Agreement shall be for a period for 20 years, but may be terminated prematurely

a) By mutual consent; or

b) By the Eligible Consumer, by giving 90 days' notice to the Licensee;

c) By the Licensee, by giving 30 days' notice, if the Eligible Consumer breaches any terms of this Agreement or the provisions of the Grid Interactive Renewable Regulations and does not remedy such breach within 30 days, or such other reasonable period as may be provided, of receiving notice of such breach, or for any other valid reason communicated by the Licensee in writing;

d) By the Licensee, by giving 30 days' notice, if the Eligible Consumer fails to pay his dues in a timely manner or indulges in any malpractices.

#### **6. Access and Disconnection**

6.1 The Eligible Consumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Renewable Energy Generating System, both automatic and manual, by the Eligible Consumer.

6.2 If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Renewable Energy Generating System, both automatic and manual, it may disconnect power supply to the premises.

6.3 Upon termination of this Agreement under Clause 5, the Eligible Consumer shall disconnect the Renewable Energy Generating System forthwith from the Network of the Licensee.

#### **7. Liabilities**

7.1 The Parties shall indemnify each other for damages or adverse effects of either Party's negligence or misconduct during the installation of the Renewable Energy Generating System, connectivity with the distribution Network and operation of the System.

7.2 The Parties shall not be liable to each other for any loss of profits or revenues, business interruption losses, loss of contract or goodwill, or for indirect, consequential, incidental or special damages including, but not limited to,

punitive or exemplary damages, whether any of these liabilities, losses or damages arise in contract, or otherwise.

## **8. Commercial Settlement**

- 8.1 The commercial settlements under this Agreement shall be in accordance with the Grid Interactive Renewable Regulations.
- 8.2 The entire units generated by the Renewable Energy Generating Station in the billing period shall be purchased by the Distribution Licensee at Rs. \_\_\_\_\_ per kWh for the entire duration of the Agreement.
- 8.3 The Licensee shall not be liable to compensate the Eligible Consumer if his Renewable Energy Generating System is unable to inject power generated into the Licensee's Network on account of failure of power supply in the grid/Network.
- 8.4 The existing metering System shall be continued, and a separate Renewable Energy Generation Meter may be provided to measure Renewable Energy generation.
- 8.5 The entire energy generated from Renewable Energy Generating System by an eligible consumer shall be purchased by the Distribution Licensee at the pre-determined tariff as approved by the Commission and the energy consumed by the eligible consumer shall be charged at the applicable retail tariff as per concerned consumer category of retail supply Tariff Order of the Commission.
- 8.6 The Licensee shall issue monthly electricity bill for the energy consumed by the Consumer on the scheduled date of meter reading. The Licensee shall bill the Consumer for the consumption after giving due credit for the Renewable Energy generation, as specified in the Grid Interactive Renewable Regulations.

## **9. Connection Costs**

The Eligible Consumer shall bear all costs related to the setting up of the Renewable Energy Generating System, excluding the cost of the Renewable Energy Generation Meter.

## **10. Dispute Resolution**

- 10.1 Any dispute arising under this Agreement shall be resolved promptly, in good faith and in an equitable manner by both the Parties.
- 10.2 The Eligible Consumer shall have recourse to the concerned Consumer Grievance Redressal Forum constituted under the relevant Regulations in respect of any grievance regarding billing, which has not been redressed by the Licensee.

In the witness, where of (Name) \_\_\_\_\_ for and on behalf of  
Eligible Consumer) and (Name) \_\_\_\_\_ for and on behalf of  
\_\_\_\_\_ (Licensee) agree to this agreement.

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Mumbai

Dated: \_\_\_\_, 2023

**(Dr. Rajendra G. Ambekar)**

Secretary,

Maharashtra Electricity Regulatory Commission