



Maharashtra State Electricity Distribution Co. Ltd.

(A Govt. of Maharashtra Undertaking)
CIN : U40109MH20005SGC153645

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PLOT No. G-9, PRAKASHGAD
Prof. ANANT KANEKAR MARG
BANDRA (East)
MUMBAI-400051

No. CE/COMM/Petition /GIRREGS Reg 2019/ **No 1 8 7 6 3** Date: **12 AUG 2021**

To,

The Secretary,

Maharashtra Electricity Regulatory Commission,
13th Floor, World trade Centre, Cuffe parade, Culaba,
Mumbai- 400005.

Sub: Petition for removal of difficulties in implementation under Regulation 19 of the MERC
(Grid Interactive Rooftop Renewable Energy Generating System) Regulation, 2019.

Respected Sir,

Please find enclosed herewith the MSEDCL's Petition for removal of difficulties in implementation under Regulation 19 of the MERC (Grid Interactive Rooftop Renewable Energy Generating System) Regulation, 2019.

Payment of requisite fees Rs.10000/- is paid vide ref.No. MAHBH21223562270 Date: 11.08.2021 through RTGS.

Thanking You!

Yours faithfully,


Chief Engineer (Commercial)

Copy S.w.r. to:-

The Director, (Commercial), MSEDCL, Mumbai.

BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION, MUMBAI

FILING NO:

CASE NO:

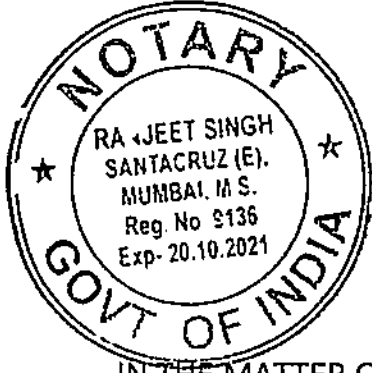
IN THE MATTER OF

PETITION FOR REMOVAL OF DIFFICULTIES IN IMPLEMENTATION OF MERC (GRID INTERACTIVE ROOFTOP RENEWABLE ENERGY GENERATING SYSTEM) REGULATION, 2019

INDEX

S.No.	Particulars	Page No.
1.	Covering Letter	–
2.	Petition	1-10
3.	Grid Interactive Rooftop Renewable Energy Generating System Regulations 2019	11-27
4.	Memo of Authorization	28
5.	Details of Payment of Fees	29

BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION, MUMBAI



FILING NO:

CASE NO:

IN THE MATTER OF

PETITION FOR REMOVAL OF DIFFICULTIES IN IMPLEMENTATION OF MERC (GRID INTERACTIVE ROOFTOP RENEWABLE ENERGY GENERATING SYSTEM) REGULATIONS, 2019

AND

IN THE MATTER OF

REGULATION 19 OF THE MERC (GRID INTERACTIVE ROOFTOP RENEWABLE ENERGY GENERATING SYSTEM) REGULATIONS, 2019

AND

IN THE MATTER OF

MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED –

THE PETITIONER

Maharashtra State Electricity Distribution Company Ltd. respectfully submits as under:

1. Background

1.1. Maharashtra State Electricity Distribution Co. Ltd. (hereinafter to be referred to as "MSEDCL" or "the Petitioner") has been incorporated under Indian Companies Act, 1956 pursuant to decision of Government of Maharashtra to reorganize erstwhile Maharashtra State Electricity Board. The Petitioner submits that the said reorganization of the MSEB has been done by Government of Maharashtra pursuant to "Part XIII – Reorganization of Board" read with section 131 of The Electricity Act 2003. The Petitioner has been incorporated on 31.5.2005 with the Registrar of Companies, Maharashtra, Mumbai has obtained Certificate of Commencement of Business on 15th Sep 2005. The Petitioner is a Distribution Licensee under the provisions of the Electricity Act, 2003 (EA, 2003) having license to supply electricity in the State of Maharashtra except some parts of city of Mumbai.

1.2. The Petitioner is a Company constituted under the provisions of Government of Maharashtra, General Resolution No. PLA-1003/C.R.8588/Energy-5 dated 25th January 2005 and is duly registered with the Registrar of Companies, Mumbai on 31st May 2005.

1.3. The Petitioner is functioning in accordance with the provisions envisaged in the Electricity Act, 2003 and is engaged, within the framework of the Electricity Act, 2003, in the business of Distribution of Electricity to its consumers situated over the entire State of Maharashtra, except Mumbai City & its suburbs (excluding Mulund & Bhandup). Petitioner is serving role of both Supply and Wire Licensee.

1.4. It is most respectfully submitted that the Hon'ble Commission has issued the MERC (Grid Interactive Rooftop Renewable Energy Generating System)



Regulations, 2019 vide its No. MERC/Tech/Regulation/2019/1234 on 30th December 2019 (“Hereinafter to be referred as GIRREGS Regulations 2019”). The GIRREGS Regulations 2019 were applicable for the consumers installing a Roof-top Renewable Energy Generating Systems below 1 MW under Net Metering Arrangement.

1.5. MSEDCL has upgraded online portal for application of consumers which provides facility from application to provide all information up to commissioning of system. MSEDCL also provided Mobile App for field officer to carry out technical feasibility on consumer’s site.

1.6. Petitioner hereby files its petition under clause 19 of MERC (Grid Interactive Rooftop Renewable Energy Generating System) Regulations, 2019 requesting the Hon’ble Commission for review of the regulations considering the issues and difficulties submitted in the Petition.

1.7. The specific grounds on which the review of the clause of the MERC (Grid Interactive Rooftop Renewable Energy Generating System) Regulations, 2019 is being sought have been identified in the subsequent paragraphs.

2. Regulations 6.0 Eligible Consumer and individual Project capacity

2.1. The Petitioner submits that, as per clause 6.6 of MERC (Grid Interactive Rooftop Renewable Energy Generating System) Regulations, 2019, *“Consumers with pending arrears with the Distribution Licensee shall not be eligible for Net Metering Arrangement or Net Billing Arrangement under these Regulations.”*

2.2. As per above provision in GIRREGS Regulations 2019, MSEDCL upgraded its online application portal and accordingly, the consumers having arrears with



their connections are being restrained from allowing to apply under GIRREGS Regulations 2019.

Net Metering arrangement is being adopted by all category consumers including the category of consumers like Public Water Works, Street Light and consumers under Public Services. These category consumers are Government offices, Public water works, Public Health Centers etc. Consumers under these categories are generally owned and operated by the either by local bodies which comes under the State Government.

2.4. The Energy Bills of these consumers are paid through the funds received to local bodies provided by State Government. Since the process of receipt of fund and its processing for approval at local level usually takes time, these consumers are therefore fail to pay their outstanding energy bills before due date and hence they are seems always in arrears to MSEDCL.

2.5. The numbers of consumers with outstanding arrears is under these categories are as:

CATEGORY	LIVE CONSUMERS	SANCTIONED LOAD	LIVE TOTAL ARREARS
	Nos	KW	Rs.
HT-RAILWAY/METRO/MONO	93	89876	20385722
HT-PWW	1024	595573	6369185253
HT-AGRICULTURE	1011	0	791577759
HT-PUBLIC SER.-GOVT	398	238740	297106728
HT-PUBLIC SER.-OTHER	1095	710744	273890478
	3621	1634933	7752145940
LT-PWW (URBAN)	987	0	900266611
LT-PWW (RURAL)	55278	0	15153787741
ST.LIGHT	101743	443573	59841026220
LT-PUBLIC SER.-OTHER	82316	443738	651011578
LT-PUBLIC SER.-GOVT	47944	100792	331305893
LT Total	288268	988103.28	76877398042
Grand Total	291889	2623036.28	84629543982

2.6. Since, Rooftop RE Generating System under Net Metering Arrangement is a tool that has been used to meet various policy objectives such as Promoting



distributed generation energy and Promoting solar and/or other renewables source of energy. Also, Government of India has revised Solar Mission in 2014 with a target of 100 GW installed capacity of solar electricity by 2022. Out of which 40 GW is now projected to come through grid connected rooftop solar systems. Ministry of New and Renewable Energy, GoI has launched Grid Connected Rooftop Solar Program for achieving this capacity.

2.7. The Petitioner submits that, if these categories of consumers which comes under the Government of Maharashtra/Central Government is allowed to install Rooftop Solar Projects in their premises, it will not only make them partially independent on their Energy Requirement but also contribute to renewable energy capacity addition, reduced in monthly their energy bills and simultaneously the arrears.

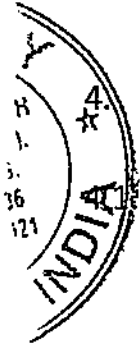
3. Scheme For Allowing Government Consumers To Apply For Rooftop Solar/RE Having Arrears

3.1. Consumers under these categories will be allowed to apply for Rooftop RE system under Net Metering/Net Billing Arrangement if they agree to pay their Arrears under this scheme

3.1.1. This scheme for application of Rooftop RE generating system under Net Metering/Net Billing Arrangement under GIRREGS Regulations 2019 will be applicable only to Government owned consumers having arrears.

3.1.2. 30% of Arrears Amount up to previous months Energy Bill shall be paid by these consumers for online application of Rooftop RE Generating System.

3.1.3. Remaining 70% Arrears Amount shall be paid by such consumers in six equal monthly instalments.



Regulatory Provisions

The Petitioner humbly submits that the Hon'ble commission has the powers to amend and to issue orders and remove the difficulties in implementation MERC (Grid Interactive Rooftop Renewable Energy Generating System) Regulations, 2019.

- 4.2. The Petitioner submits that the Regulation 17 of the GIRREGS Regulations 2019 provides inherent power to the Hon'ble Commission to issue any orders and practice directions for implementation. The relevant Regulation is reproduced below:

17. Issue of Orders and Practice Directions

Subject to the provisions of the Act, the Commission may from time to time issue Orders and Practice Directions with regard to the implementation of these Regulations.

- 4.3. The Petitioner submits that the Regulation 18 of the GIRREGS Regulations 2019 provides for powers to amend. The relevant Regulation is reproduced below:

18. Power to amend

The Commission may, at any time, vary, alter, modify or amend any provisions of these Regulations, for reasons to be recorded in writing.

- 4.4. The Petitioner further submits that the Regulation 19 of the GIRREGS Regulations 2019 provides for powers to remove difficulties. The relevant Regulation is reproduced below:

19. Power to remove difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific Order, make such provisions not



inconsistent with the provisions of the Act as may appear to it to be necessary for removing such difficulty.

- 4.5. The Petitioner most respectfully submits that Hon'ble Commission has sufficient powers to deal with the matter and issue orders on any matter as deemed appropriate.
- 4.6. The Petitioner craves leave of this Hon'ble Commission to file additional affidavit, reply/documents etc. in case need arises at a subsequent stage with the prior permission of this Hon'ble Commission.
- 4.7. Therefore it is submitted that Petitioner has not filed any other proceedings arising out of the present matter claiming similar reliefs before any court or forum.

5. Prayers

- 5.1. The Petitioner therefore, based on the submissions made in the foregoing paragraphs, most earnestly prays to the Hon'ble Commission:
- a) To admit the Petition as per the provisions of the Regulation 17, 18 and 19 of the MERC (Grid Interactive Rooftop Renewable Energy Generating System) Regulations, 2019;
 - b) To provide necessary amendment in the GIRREGS Regulations 2019 by allowing Government owned consumers having arrears Rooftop RE generating system under Net Metering/Net Billing Arrangement under GIRREGS Regulations 2019 if they agree to participate in the MSEDCLs scheme for part payment of arrears.



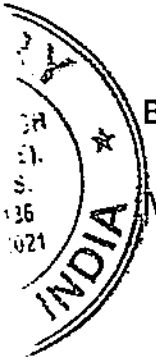
- c) To pass any other order as the Hon'ble Commission may deem fit and appropriate under the circumstances of the case and in the interest of justice.
- d) To condone any error/omission and to give opportunity to rectify the same.
- e) To permit the Petitioner to make further submissions, addition and alteration to this Petition as may be necessary from time to time.

It is prayed accordingly.

Date:

Place: Mumbai

MSEDCL



BEFORE THE MAHARASHTRA ELECTRICITY REGULATORY COMMISSION,
MUMBAI

FILING NO:

CASE NO:

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PETITION FOR REMOVAL OF DIFFICULTIES IN IMPLEMENTATION OF MERC (GRID
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MAHARASHTRA STATE ELECTRICITY DISTRIBUTION COMPANY LIMITED –
THE PETITIONER



AFFIDAVIT ON BEHALF OF PETITIONER (MSEDCL)

I, Dattatraya Ramchandra Bansode, aged 50 Years, son of Ramchandra Bansode, working as Chief Engineer (Commercial), in the office of Maharashtra State Electricity Distribution Company Limited having my office at 5th Floor, Prakashgad, Bandra (East), Mumbai-400051 do solemnly affirm and say as follows:

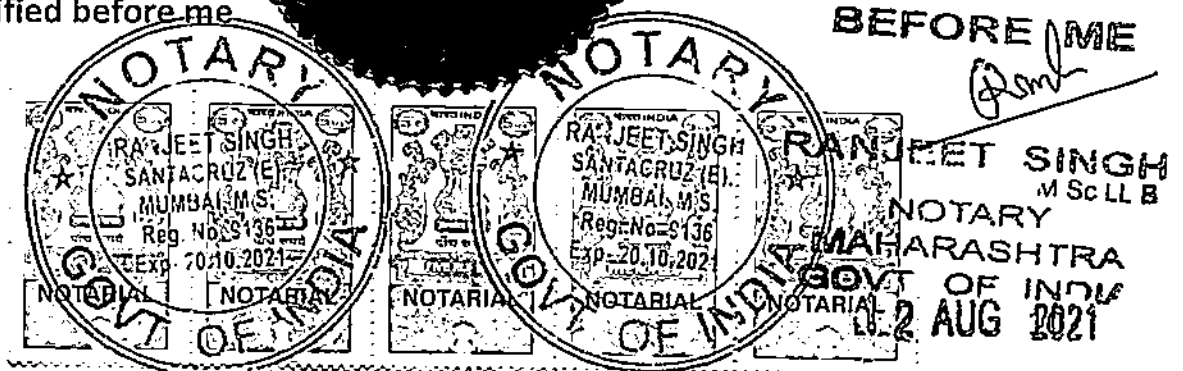
2. I am the Chief Engineer (Commercial) of Maharashtra State Electricity Distribution Co. Ltd., the Petitioner in the above matter and am duly authorized as the Respondent to make this affidavit.
3. The statements made in the enclosed submission are based on the information received from the concerned officers of the Company and I believe them to be true.
4. I say that there are no proceedings pending in any court of law/ tribunal or arbitrator on any authority, wherein the Petitioner is a party where issues arising and /or reliefs sought are identical or similar to the issues arising in the matter pending before the Commission.

I solemnly affirm at Mumbai on this 12th day of August 2021 that the contents of this affidavit are true to my knowledge, no part of it is false and nothing material has been concealed there from.


Deponent 12/8

Chief Engineer (Comm.)
MSEDCL Ltd., Prakashgad

Identified before me





MAHARASHTRA ELECTRICITY REGULATORY COMMISSION, MUMBAI

**Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop
Renewable Energy Generating Systems) Regulations, 2019**

ELECTRICITY ACT, 2003

No. MERC / Tech /Regulation/2019 /1234- In exercise of the powers conferred under Sections 86(1) (e) and 181 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling it in this behalf, and after previous publication, the Maharashtra Electricity Regulatory Commission hereby makes the following Regulations, namely:-

1 Short title, extent and commencement

- 1.1 These Regulations may be called the Maharashtra Electricity Regulatory Commission (Grid Interactive Rooftop Renewable Energy Generating Systems) Regulations, 2019.
- 1.2 These Regulations shall extend to the whole of the State of Maharashtra.
- 1.3 These Regulations shall come into force from the date of their publication in the *Official Gazette*.

2 Definitions

2.1 In these Regulations, unless the context otherwise requires,

- (a) "Act" means the Electricity Act, 2003 (36 of 2003);
- (b) "Average Power Purchase Cost" or "APPC" means the weighted average price at which the Distribution Licensee has purchased or is expected to purchase electricity (excluding procurement from RE sources and liquid fuel sources), including the cost of self-generation, if any, as approved by the Commission in the relevant Tariff Order or any other general or specific Order;
- (c) "Banked Energy" means the surplus Renewable Energy generated and credited with the Distribution Licensee after set off with consumption in the same Time of Day slot, if applicable;
- (d) "Billing Cycle" or "Billing Period" means the period for which the electricity bill is raised by the concerned Distribution Licensee;



(e) "Check Meter" means a meter, used for accounting and billing of electricity in case of failure of Net Meter or Renewable Energy Generation Meter;

"Commission" means the Maharashtra Electricity Regulatory Commission constituted under the Act;

(g) "Consumer" means a consumer as defined in the Act;

(h) "Contract Demand" means the demand in kilowatt ('kW') or kilovolt ampere ('kVA') or Horse Power ('HP'), as mutually agreed between the Distribution Licensee and the consumer, and as entered into in an agreement in which the Distribution Licensee makes a commitment to supply in accordance with the terms and conditions contained therein; or equal to the Sanctioned Load, where the Contract Demand has not been provided in such agreement;

(i) "Electricity Supply Code" means the Electricity Supply Code specified by the Commission under Section 50 of the Act;

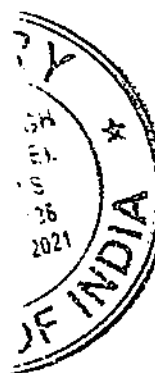
(j) "Eligible Consumer" means a consumer of electricity in the area of supply of the Distribution Licensee who uses or intends to use a Renewable Energy Generating System having a capacity less than 1 MW, installed on a roof-top or any other mounting structure in his premises, to meet all or part or 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 Billing Arrangement, the capacity limit of 1 MW shall not apply;

(k) "Generic Tariff" means the Generic Tariff approved or adopted by the Commission for generation from different Renewable Energy sources in accordance with the Maharashtra Electricity Regulatory Commission (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2019, or as amended from time to time;

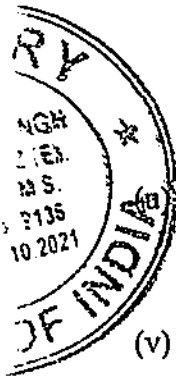
(l) "Inter-connection Point" means the interface of the Renewable Energy Generating



System with the outgoing terminals of the meter / Distribution Licensee's cut-outs/ switchgear fixed in the premises of the Eligible Consumer:

Provided that, in the case of an Eligible Consumer connected at the High Tension ('HT') level, the 'Inter-connection Point' shall mean the interface of the Renewable Energy Generating System with the outgoing terminals of the Distribution Licensee's metering cubicle placed before such Consumer's apparatus;

- (m) "Invoice" means a Monthly Bill or Supplementary Bill, or Monthly Invoice or Supplementary Invoice, as the case may be, raised by the Distribution Licensee;
- (n) "Net Billing Arrangement" means an arrangement under which energy generated by Renewable Energy Generating System is purchased by the Distribution Licensee and the Distribution Licensee raises the bills on the consumer for his consumption at the approved grid tariff, after giving credit for total generated electricity against a pre-determined tariff;
- (o) "Net Billing Connection Agreement" means an agreement entered into by a Distribution Licensee and an Eligible Consumer for executing a Net Billing arrangement;
- (p) "Net Meter" means a bi-directional energy meter, which is capable of recording both the import and export of electricity;
- (q) "Net Metering Arrangement" means an arrangement under which a Renewable Energy Generating System with Net Meter installed at an Eligible Consumer's premises, delivers surplus electricity, if any, to the Distribution Licensee after setting off the quantum of electricity supplied by such Licensee during the applicable Billing Period;
- (r) "Net Metering Connection Agreement" means an agreement entered into by a Distribution Licensee and an Eligible Consumer for executing a Net Metering arrangement;
- (s) "Obligated Entity" means an entity required to fulfil a Renewable Purchase Obligation ('RPO') as specified by the Commission in Regulations governing such Obligation ('the RPO Regulations');
- (t) "Premises" means and includes roof-tops or any areas on the land, building or infrastructure or part or combination thereof in respect of which a separate meter has



been provided by the Distribution Licensee for the supply of electricity;

“Renewable Energy” means the grid connected and grid quality electricity generated from Renewable Energy sources, including a combination of such sources;

(v) “Renewable Energy Certificate” means the Certificate issued in accordance with the procedures specified by the Central Electricity Regulatory Commission;

(w) “Renewable Energy Generating System” means the Renewable Energy power system with or without energy storage installed on a Consumer’s premises, and owned and/or operated by such Consumer or by a Distribution Licensee or a third party, that uses Renewable Energy for conversion into electricity;

(x) “Renewable Energy Generation Meter” means an energy meter used for measuring the energy generated by the Renewable Energy Generating System for the purpose of accounting and billing:

Provided that a separate Renewable Energy Generation Meter shall be installed for each source of Renewable Energy in case of hybrid or combination of such sources;

(y) “Renewable Energy sources” means the renewable sources or combination of such sources, such as Mini, Micro and Small Hydro, Wind, Solar, Biomass including bagasse, bio-fuel, urban or Municipal Solid Waste as defined in the Maharashtra Electricity Regulatory Commission (Terms and Conditions for Determination of Renewable Energy Tariff) Regulations, 2019, as amended from time to time, and such other sources as are recognized or approved by the Ministry of New and Renewable Energy, Government of India;

(z) “Settlement Period” means the period beginning from the first day of April of a calendar year and ending with the thirty-first day of March of the following calendar year.

2.2 Words and expressions used in these Regulations which are not specifically defined herein but are defined in the Act shall have the meaning assigned to them in the Act; and, if not defined in the Act, shall have the meaning assigned to them in any Act of Parliament or the State Legislature applicable to the electricity industry.



PART A – GENERAL

Scope and Applicability

3.1 These Regulations would apply to:

- (a) Net Metering Arrangements;
- (b) Net Billing Arrangements;
- (c) Grid Connected Renewable Energy Generating Systems connected behind the Consumer's meter, who have not opted either for Net Metering Arrangement or Net Billing Arrangement.

3.2 These Regulations shall be applicable to all Grid Interactive installations for which Applications are received on or after the notification of these Regulations.

4 General Conditions of Net Metering Arrangement and Net Billing Arrangement

4.1 Net Metering Arrangement or Net Billing Arrangement, as the case may be, shall be permitted by the Distribution Licensee on a non-discriminatory and Distribution Transformer-wise or feeder wise 'first come, first serve' basis to Eligible Consumers who have installed or intend to install a Renewable Energy Generating System connected to the Network of such Distribution Licensee:

Provided that the inter-connection of such System with the Network of the Distribution Licensee is undertaken in accordance with the standards and norms specified in the Central Electricity Authority (CEA) (Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013 or as may be specified in future.

4.2 The Eligible Consumer of all categories may set up the Renewable Energy Generating System under the Net Metering Arrangement or Net Billing Arrangement.

5 Capacity limits at Distribution Transformer level

5.1 The Distribution Licensee shall allow Net Metering Arrangement or Net Billing Arrangement, as the case may be, to Eligible Consumers as specified in these Regulations.

5.2 The cumulative capacity of all Renewable Energy Generating Systems under Net Metering Arrangements and/or Net Billing Arrangements connected to a particular Distribution Transformer/feeder of the Licensee shall not exceed 70% of its rated capacity:



Provided that the Distribution Licensee may allow Net Metering and/or Net Billing connectivity exceeding 70% of such rated capacity upon consideration of a detailed load study carried out by it.

The Distribution Licensee shall update the Distribution Transformer-wise capacity available and the cumulative capacity of the Renewable Energy Generating Systems installed under Net Metering arrangements quarterly, and provide the information on its website in the month following the close of the relevant quarter in the format specified in Annexure 6.

PART B – TECHNICAL ARRANGEMENTS

6 Eligible Consumer and individual Project capacity

6.1 The minimum size of the Renewable Energy Generating System that can be set up under Net Metering Arrangement and Net Billing Arrangement would be 1 kW.

6.2 The capacity of the Renewable Energy Generating System to be connected at the Eligible Consumer's premises shall not exceed the Sanctioned load (in kW) or the Contract Demand (in kVA) of the Consumer, as applicable.

6.3 The maximum Renewable Energy Generating System capacity to be installed at an Eligible Consumer's premises shall be subject to the cumulative capacity of the relevant Distribution Transformer, which has already been utilized, as specified in Regulation 5.2:

Provided that a variation in the rated capacity of the System within a range of five percent shall be allowed.

6.4 HT (11 kV and above) Consumers may install and connect Renewable Energy Generating System at their LT Bus Bar System:

Provided that, in such cases, the Net Meter shall be installed on the HT side of the Consumer's Transformer.

6.5 An Eligible Consumer may install or enhance the capacity of, or upgrade the Renewable Energy Generating Systems at different locations within the same premises:

Provided that the total capacity of such Systems within the same premises shall not exceed the capacity limits specified in Regulations 6.2 and 6.3.

6.6 Consumers with pending arrears with the Distribution Licensee shall not be eligible for Net Metering Arrangement or Net Billing Arrangement under these Regulations.

7 Inter-connection with the Distribution Network / Grid, Standards and Safety

7.1 The Distribution Licensee shall ensure that the inter-connection of the Renewable Energy Generating System with its Network conforms to the specifications, standards and other provisions specified in the CEA (Technical Standard for Connectivity of the Distributed Generation Resources) Regulations, 2013, the CEA (Measures relating to Safety and Electric Supply), Regulations, 2010, and the Maharashtra Electricity Regulatory Commission (State Grid Code) Regulations, 2006, or as may be specified in future.

7.2 The Eligible Consumer may install a Renewable Energy Generating System with or without storage:

Provided that, if an Eligible Consumer opts for connectivity with storage, the inverter shall have appropriate arrangement to prevent the power from flowing into the grid in the absence of grid supply, and that an automatic as well as manual isolation switch shall also be provided.

7.3 The Eligible Consumer shall be responsible for the safe operation, maintenance and rectification of any defect in the Renewable Energy Generating System up to the point of Net Meter or Renewable Energy Generation Meter, beyond which point such responsibility, including in respect of the Net Meter, shall be that of the Distribution Licensee:

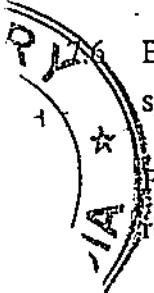
Provided further that the Renewable Energy Generation Meter shall be maintained by the Distribution Licensee.

7.4 The Distribution Licensee shall have the right to disconnect the Renewable Energy Generating System from its network at any time in the event of any threat of accident or damage from such System to its distribution system so as to avoid any accident or damage to it:

Provided that the Distribution Licensee, considering the criticality, may call upon the Consumer to rectify the defect within a reasonable time.

7.5 The Renewable Energy Generating System must have appropriate protection for islanding the RE generating system from the network of the Distribution Licensee to prevent any feeding into the grid in case of failure of supply or grid:

Provided that applicable IEC/IEEE Technical Standards shall be followed to test islanding prevention measure for grid connected inverters.



Every Renewable Energy Generating System shall be equipped with an automatic synchronization device:

Provided that the Renewable Energy Generating System using inverter shall not be required to have separate synchronizing device, if it is inherently built into the inverter.

7.7 The inverter shall have the features of filtering out harmonics and other distortions before injecting the energy into the system of the Distribution Licensee.

7.8 The Total Voltage Harmonic Distortion (THD) shall be within the limits specified in the Indian Electricity Grid Code (IEGC)/IEEE technical standards.

7.9 Grid Connected Renewable Energy Generating Systems connected behind the Consumer's meter, and not opting for either Net Metering Arrangement or Net Billing Arrangement, shall be allowed only after prior intimation to the respective Distribution Licensee:

Provided that the Consumer shall be responsible for ensuring that all necessary safeguarding measures as specified by Central Electricity Authority (CEA) are taken:

Provided further that the Commission may determine additional Fixed Charges or Demand Charges and any other Charges for such Grid Connected systems excluding Non-fossil fuel-based Cogeneration Plants, in the retail Tariff Order, if the Distribution Licensee proposes such additional Fixed Charges or Demand Charges and any other Charges for such systems, in its retail supply Tariff Petition, supported by adequate justification:

Provided also that in case the Consumer installs Renewable Energy Generating Systems behind the Consumer's meter without prior intimation to the respective Distribution Licensee, then the total additional liabilities in terms of additional Fixed Charges or Demand Charges and any other Charges for such systems, shall be levied at twice the determined rate for such period of default.

7.10 The model Form, for intimating installation of Renewable Energy Generator behind the meter by the Eligible Consumer to the concerned Licensee, is set out at Annexure 5 of these Regulations.

8 Metering Infrastructure

8.1 All meters installed at the Renewable Energy Generating System shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof.

8.2 All meters shall have Advanced Metering Infrastructure (AMI) facility with RS 485 (or higher) communication port.

- 8.3 The Net Metering 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.
- 8.4 Existing Meter in the premises of the Eligible Consumer shall be replaced by the Net Meter at the cost of the Consumer, in accordance with the provisions of the Electricity Supply Code.
- 8.5 If the Eligible Consumer is within the ambit of Time-of-Day ('ToD') Tariff, the Net Meter installed shall be capable of recording ToD consumption and generation.
- 8.6 The Distribution Licensee shall be responsible for the testing, installation, and maintenance of the metering equipment, and its adherence to the applicable standards and specifications.
- 8.7 The Eligible Consumer shall procure, at his own cost, a Renewable Energy Generation Meter conforming to the applicable CEA Regulations at an appropriate location to measure the energy generated from the Renewable Energy Generating System.
- 8.8 The Renewable Energy Generation Meter shall be maintained by the Distribution Licensee.
- 8.9 The Net Meter and the Renewable Energy Generation Meter shall be installed at such locations in the premises of the Eligible Consumer as would enable easy access to the Distribution Licensee for meter reading.
- 8.10 In case of Renewable Energy Generating System with capacity above 20 kW set up under Net Metering Arrangement, a Check Meter of appropriate class shall be installed by the Distribution Licensee for the Renewable Energy Generation Meter:

Provided that installation of Check Meter shall be optional for Renewable Energy Generating System with capacity up to and including 20 kW.
- 8.11 In case of Renewable Energy Generating System set up under Net Billing Arrangement, an additional Check Meter for the Renewable Energy Generation Meter of appropriate class shall be installed by the Distribution Licensee.

9 Procedure for Application and Registration

- 9.1 The Eligible Consumer shall apply to the concerned Distribution Licensee for connectivity of the Renewable Energy Generating System with the Licensee's Network along with a registration fee as follows and the Distribution Licensee shall acknowledge receipt of such

Application:

Particulars	Registration Fee
Low Tension Consumer	Rs. 500 for consumer having Sanctioned Load or Contract Demand upto 20 kW and Rs 100 thereafter for every 20 kW or part thereof
High Tension Consumer	Rs 5,000/-

Provided that the Commission may stipulate such other amount through Schedule of Charges of the Distribution Licensee from time to time.

- 9.2 All applications and payment of fees shall be compulsorily made through web-based processing system by electronic means only.
- 9.3 The Consumer shall compulsorily provide details of email address and mobile number, along with the application.
- 9.4 All correspondence by the Distribution Licensee with the Consumer shall be through email and mobile only.
- 9.5 The procedure for application for connectivity of a Renewable Energy Generating System with the Network of the Distribution Licensee is set out at Annexure 1 of these Regulations.
- 9.6 The model Form, along with check-list, for application to be made by the Eligible Consumer to the concerned Licensee, is set out at Annexure 2 of these Regulations.
- 9.7 Before rejecting any application for setting up a Renewable Energy Generating System at a particular Distribution Transformer, the Distribution Licensee shall serve the applicant with a notice to rectify the defects in the ambit of the consumer, within 15 days or such longer period as may be necessary, the deficiencies:

Provided that in case approval cannot be granted due to inadequate Distribution Transformer capacity or any other technical constraints, the consumer should be informed through written communication only, specifying the reasons of the rejection:

Provided further that the application may be considered, in chronological order of seniority and if the Consumer so opts, after such capacity becomes available/technical constraint is rectified.

- 9.8 The approval for connectivity from the Distribution Licensee shall indicate the maximum permissible capacity of the System, and shall be valid for a period of 6 months from the date of approval, or such extended period as may be agreed to by the Distribution Licensee:



Provided that if the Consumer fails to set up the Renewable Energy Generating System within the above stated period, then the approval shall be deemed to be cancelled, and the Consumer shall have to apply afresh.

10 Connection Agreement

10.1 The Distribution Licensee and Eligible Consumer shall enter into a Net Metering Connection Agreement or Net Billing Connection Agreement, as the case may be, after approval of connectivity of the Renewable Energy Generating System with the distribution Network but before the start of actual generation from the System.

10.2 A model Net Metering Connection Agreement is provided at Annexure 3, which the Distribution Licensee may modify suitably, subject to consistency with these Regulations.

10.3 A model Net Billing Connection Agreement is provided at Annexure 4, which the Distribution Licensee may modify suitably, subject to consistency with these Regulations.

10.4 The Distribution Licensee shall make available the Agreement formats on its website, along with the applicable procedure and Application and other relevant forms, within two months of notification of these Regulations.

10.5 The Connection Agreement shall remain in force for twenty years:

Provided that the Eligible Consumer may terminate the Agreement at any time by giving 90 days' notice to the Distribution Licensee:

Provided further that the Distribution Licensee may terminate the Agreement by giving 30 days' notice, if the Eligible Consumer breaches any term of the Agreement and does not remedy such breach within 30 days, or such other longer period as may be provided, of receiving notice from the Licensee of such breach, or for any other valid reason to be communicated in writing:

Provided also that the Distribution Licensee may terminate the Agreement by giving 15 days' notice in case the consumer fails to pay his dues in a timely manner or indulges in any malpractices:

Provided also that the Agreement may be terminated at any time by mutual consent.

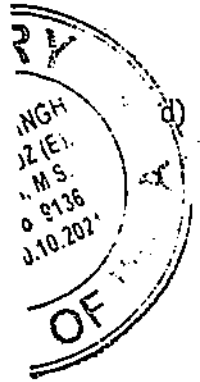
10.6 The Eligible Consumer shall, upon termination of the Agreement, disconnect forthwith its Renewable Energy Generating System from the Distribution Licensee's Network.



PART C - COMMERCIAL ARRANGEMENTS

Net Metering - Energy Accounting and Settlement

- 11.1 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 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 For each Billing Period, the Distribution Licensee shall make the following information available on its bill to the Eligible Consumer:
- Quantum of Renewable Energy generation recorded in the Renewable Energy Generation Meter in the billing period, including opening and closing balance;
 - Quantum of electricity units consumed by the Consumer in the billing period, including opening and closing balance;
 - Quantum of net billed electricity units, for which a payment is to be made by the Consumer;
 - Banked Energy and corresponding monetary compensation, adjusted in the billing period;
 - Renewable Energy generation units used by the Distribution Licensee for RPO compliance.
- 11.4 The energy generated by the Renewable Energy Generating Station shall be offset against the energy consumption of the consumer from the Distribution Licensee in the following manner:
- If the quantum of electricity exported exceeds the quantum imported during the Billing Period, the excess quantum shall be carried forward to the next Billing Period as credited Units of electricity;
 - If the quantum of electricity Units imported by the Eligible Consumer during any Billing Period exceeds the quantum exported, the Distribution Licensee shall raise its invoice for the net electricity consumption after adjusting the credited Units;
 - The unadjusted net credited Units of electricity as at the end of each financial year shall be purchased by the Distribution Licensee at the Generic Tariff approved by the Commission for that year, within the first month of the following year:
Provided that, at the beginning of each Settlement Period, the cumulative quantum of injected electricity carried forward will be re-set to zero;



In case the Eligible Consumer is within the ambit of Time of Day (ToD) tariff, the electricity consumption in any time block, i.e. peak hours, off-peak hours, etc., shall be first compensated with the quantum of electricity injected in the same time block; any excess injection over and above the consumption in any other time block in a Billing Cycle shall be accounted as if the excess injection had occurred during off-peak hours;

- e) The Distribution Licensee shall compute the amount payable to the Eligible Consumer for the excess Renewable Energy purchased by it as specified in Regulation 11.4 (c), and shall provide credit equivalent to the amount payable in the immediately succeeding Billing Cycle.

11.5 The Commission may determine in the retail Tariff Order such Grid Support Charges to be levied on the generated energy under Net Metering systems which shall cover balancing, banking and wheeling cost after adjusting RPO benefits, avoided distribution losses and any other benefits accruing to the Distribution Licensee. These Grid Support Charges would be determined consumer tariff category wise, based on the proposal of the Distribution Licensee in its retail supply Tariff Petition, supported by adequate justification:

Provided that the consumers of all Categories having Sanctioned Load up to 10 kW shall be exempted from payment of Grid Support Charges for Net Metering systems:

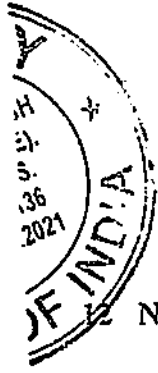
11.6 The Distribution Licensee shall accept the power as per the Useful Life of the Renewable Energy Generating System, unless the Eligible Consumer ceases to be a consumer of the Licensee or the Renewable Energy Generating System is abandoned earlier.

11.7 In case the Eligible Consumer leaves the system or changes the Supply Licensee, the excess electricity shall be considered in the following manner:

- a) The unadjusted Units as on date of leaving the system or changing the Supply Licensee shall be compensated at the Generic Tariff, and adjusted along with the final bill settlement with the existing Supply Licensee;
- b) Any injection of electricity without entering into a new Net Metering Agreement with the new Supply Licensee shall be considered as inadvertent injection and shall not be paid for by the new Supply Licensee.

11.8 The Eligible Consumer shall have recourse, in case of any dispute with the Distribution Licensee regarding billing, to the mechanism specified by the Commission under Sections (5) to (7) of the Act for the redressal of grievances:

Provided that in case of any dispute with the Distribution Licensee with regard to



implementation of Regulation 5.2 of these Regulations, the concerned Consumer Grievance Redressal Forum may take assistance on technical matters from any Independent Advisor empanelled with the Maharashtra Energy Development Agency (MEDA).

12 Net Billing - Energy Accounting and Settlement

12.1 Net billing is the arrangement where the Renewable Energy Generating Station is:

- a) Installed to serve a specific consumer,
- b) Connected on the Distribution Licensee side or consumer side of the consumer meter,
- c) Selling entire power generated to a Distribution Licensee under Power Purchase Agreement:

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

12.2 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.

12.3 The Distribution Licensee shall undertake meter reading of both, the Renewable Energy Generation Meter and the Consumer Meter or Net Meter, as applicable, for all Eligible Consumers, according to the regular metering cycle.

12.4 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, including opening and closing balance;
- b) Quantum of electricity units consumed by the Consumer in the billing period, including opening and closing balance;
- c) Amount of billing credit, if any, in the billing period, including opening and closing balance;
- d) Renewable Energy generation units used by the Distribution Licensee for RPO compliance.

12.5 The Distribution Licensee shall enter into Power Purchase Agreement at the APPC approved for the respective period by the Commission:



Provided that the APPC stipulated in the Power Purchase Agreement shall be constant for the entire duration of the Agreement.

2.6 The Distribution Licensee shall raise bill on the Consumer in accordance with the following equation:

$$\text{Energy Bill of consumer} = \text{Fixed Charges} + \text{other applicable charges and levies} + (\text{EDL} \times \text{TRST}) - (\text{ERE} * \text{TPPA}) - \text{Billing Credit};$$

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) ERE means the energy units recorded for the billing period by the Renewable Energy Generation Meter;
- d) TPPA means the energy charges as per the Power Purchase Agreement signed between the Consumer and Distribution Licensee, in accordance with Regulation 12.5;
- e) EDL means the energy units supplied (i.e., Gross Electricity Consumption by the Consumer) by the Distribution Licensee as recorded by the consumer meter for the billing period;
- f) TRST means the applicable retail supply tariff of the concerned consumer category as per the applicable retail supply Tariff Order of the Commission;
- g) Billing Credit is the amount by which the value of Renewable Energy generation in a particular month is more than the value of all other components of consumer bill.

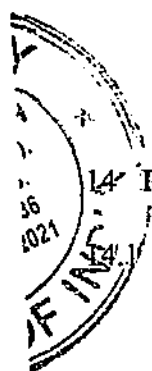
13 Energy Accounting during meter defect/failure/burnt

13.1 In case of defective/failure/burnt condition of any meter, the Distribution Licensee shall replace the meter as specified in the Electricity Supply Code.

13.2 The electricity generated by the Renewable Energy Generating System during the period in which the meter is defective shall be determined based on the readings of the Check Meter:

Provided that if the Check Meter is not installed, then the electricity generated shall be considered equal to the average monthly generation in the last one year or such shorter period as available.

13.3 The consumption of the Consumer during the period in which the Consumer meter or Net



Meter is defective shall be determined as specified in the Electricity Supply Code.

14 Renewable Purchase Obligation

The quantum of electricity consumed by the Eligible Consumer from the Renewable Energy Generating System under the Net Metering Arrangement shall qualify towards his compliance of RPO, if such Consumer is an Obligated Entity.

14.2 The quantum of electricity consumed by the Eligible Consumer from the Renewable Energy Generating System under the Net Metering arrangement shall, if such Consumer is not an Obligated Entity, qualify towards meeting the RPO of the Distribution Licensee.

14.3 All units of Renewable Energy purchased by the Distribution Licensee shall qualify towards meeting its RPO.

14.4 Under the Net Billing Arrangement, the entire quantum of electricity recorded by the Generation Meter shall qualify towards meeting the RPO of the Distribution Licensee.

15 Eligibility under Renewable Energy Certificate mechanism

The Renewable Energy generated by an Eligible Consumer under the Net Metering Arrangement or the Net Billing Arrangement under these Regulations shall not be eligible for issuance of Renewable Energy Certificate.

PART D - MISCELLANEOUS

16 Power to Relax

The Commission may, by general or special order, for reasons to be recorded in writing and after giving an opportunity of hearing to the parties likely to be affected, relax or waive any of the provisions of these Regulations on its own motion or on an application made to it by any interested person.

17 Issue of Orders and Practice Directions

Subject to the provisions of the Act, the Commission may from time to time issue Orders and Practice Directions with regard to the implementation of these Regulations.

18 Power to amend

The Commission may, at any time, vary, alter, modify or amend any provisions of these Regulations, for reasons to be recorded in writing.



19 Power to remove difficulties

If any difficulty arises in giving effect to the provisions of these Regulations, the Commission may, by general or specific Order, make such provisions not inconsistent with the provisions of the Act as may appear to it to be necessary for removing such difficulty.

20 Repeal and Savings

Save as otherwise provided in these Regulations, the Maharashtra Electricity Regulatory Commission (Net Metering for Rooftop Solar Photo Voltaic Systems) Regulations, 2015 are hereby repealed:

Provided that Renewable Energy Generating Systems covered under the Maharashtra Electricity Regulatory Commission (Net Metering for Rooftop Solar Photo Voltaic Systems) Regulations, 2015, shall continue to be governed by the aforesaid Regulations till validity of the Agreement signed under the aforesaid Regulations.

(Abhijit Deshpande)

Secretary,

Maharashtra Electricity Regulatory Commission

Mumbai

Dated: 30 December, 2019