



# WEST BENGAL ELECTRICITY REGULATORY COMMISSION



Ref No. WBERC/Regulation-79/24-25/ 5580

Dated, Kolkata, the 03<sup>rd</sup> October, 2024

## PUBLIC NOTICE

**Subject : Notice Inviting Comments / Suggestions/ Objections on Draft West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024**

The West Bengal Electricity Regulatory Commission has brought out the Draft West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 which is available at [www.wberc.gov.in](http://www.wberc.gov.in).

All stakeholders/ interested persons may submit Comments / Suggestions/ Objections on the draft to West Bengal Electricity Commission at Plot No : AH/5 (2<sup>nd</sup> and 4<sup>th</sup> Floor), Premises No : MAR 16-1111, Action Area – 1A, New Town, Kolkata – 700 163 by **14<sup>th</sup> November, 2024 (3 P.M.)**.

By Order of the Commission

Place : Kolkata

Date: 03<sup>rd</sup> October, 2024

Sd/-

Secretary



(Draft)

## WEST BENGAL ELECTRICITY REGULATORY COMMISSION

### NOTIFICATION

No. .... /WBERC

Kolkata, the ..... 2024

The West Bengal Electricity Regulatory Commission, in exercising the powers conferred by subsection (1) and clause (zp) of subsection (2) of section 181, along with clause (e) of subsection (1) of section 86, and subsection (4) of section 86, read with subsection (4) of section 2 of the Electricity Act, 2003, and all powers enabling it on that behalf, hereby promulgates the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

#### Part – A

##### 1. Short Title and Commencement:

- (1) The regulations shall be referred to as the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.
- (2) These regulations shall take effect from the date of publication in the Official Gazette.
- (3) These Regulations shall extend to the whole of the State of West Bengal.

##### 2. Definitions: In these regulations, unless the context requires otherwise:

- (1) **“Act”** means the Electricity Act, 2003;
- (2) **“Billing Cycle or Billing Period”** means the period for which regular electricity bills are prepared for different categories of consumers by the distribution licensee, as specified by the Commission in the WBERC (Electricity Supply Code) Regulations, 2013;
- (3) **“Commission”** means the West Bengal Electricity Regulatory Commission or WBERC constituted under section 82 of the Act;



(4) **“Consumer”** means any person who is supplied with electricity for his own use by a distribution licensee or the Government or by any other person engaged in the business of supplying electricity to the public under the Electricity Act, 2003 or any other law for the time being in force and includes any person whose premises is for the time being connected for the purpose of receiving electricity with the works of a distribution licensee, the Government or such other person, as the case may be;

(5) **“Contract demand”** or **“Sanctioned load”** means the electrical load which, in accordance with a signed contract or agreement between the licensee and the consumer, the licensee has committed to deliver and the consumer has the right to draw at the point of supply of the consumer at any or all time during the continuance of the contract or agreement;

(6) **“Days”** means clear working days;

(7) **“Feed-in tariffs”** means preferential tariffs for procuring Renewable Energy by Distribution licensees as determined by the Commission from time to time;

(8) **“Gross-metering”** means a mechanism whereby the total solar energy generated from Grid Interactive rooftop Solar Photovoltaic system of a Prosumer and the total energy consumed by the Prosumer are accounted for separately through appropriate metering arrangements and for billing purposes, the total energy consumed by the Prosumer is accounted at the applicable retail tariff and total solar power generated is accounted for at feed-in tariff determined by the Commission;

(9) **“Licensee”** means a person who has been granted a licence under section 14 including deemed licensee;

(10) **“Net-billing or net feed-in”** means a single bi-directional energy meter used for net-billing or net feed-in at the point of supply wherein the energy imported from the Grid and energy exported from Grid-Interactive Rooftop Solar photovoltaic system of a Prosumer is valued at two different tariffs, where-

(a) the monetary value of the imported energy is based on the applicable retail tariff;

(b) the monetary value of the exported solar energy is based on a feed-in tariff determined by the Commission;

(c) the monetary value of the exported energy is deducted from the monetary value of the imported energy to arrive at the net amount to be billed (or credited/carried over);

(11) **“Net meter”** or **“bi-directional meter”** means an energy meter that is capable of recording both the import and export of electricity;

(12) **“Net-metering”** means a mechanism whereby solar energy exported to the Grid from the Grid Interactive rooftop Solar Photovoltaic system of a Prosumer is deducted from energy



imported from the Grid in units (kWh) to determine the net imported or exported energy. The net energy import or export is billed, credited, or carried over by the distribution licensee based on the applicable retail tariff using a single bi-directional energy meter for net metering at the point of supply.

(13) **"Occupier"** means the owner, tenant or person in occupation of the premises where electricity is used or proposed to be used;

(14) **"Owner"** means the person who has absolute right over the property and the expression owner includes the legal heirs';

(15) **"Point of supply of a consumer"** means the point of commencement of supply of energy to a consumer as specified in the CEA (Measures relating to safety and electric supply) Regulations, 2010 or any subsequent replacement of it;

(16) **"Prosumer"** means a person who consumes electricity from the grid and can also inject electricity into the grid for distribution licensee, using the same point of supply;

(17) **"Resident Welfare Association"** means an association comprising all the property owners within a Co-operative Group Housing Society, Multi-storeyed Building, Residential Colony, or a similar body registered with the State Government.

(18) **"Rooftop Solar PV System"** means the solar photo voltaic power system installed on the rooftops or any other mounting structure of consumer premises that uses sunlight for direct conversion into electricity through photo voltaic technology.

(19) **"Settlement Period"** means the period at the end of which net-metering/net billing settlement between the distribution licensee and the prosumer takes place, generally beginning from the first of April in an English calendar year and ending with the thirty-first of the March of the next year.

(20) **"Tariff Regulations"** mean the regulations specified by the Commission under section 61 of the Act;

(21) **"TOD Tariff"** means Time-of-the-Day Tariff as specified in Tariff Regulations.

### **3. Scope and applicability:**

These Regulations would apply to:

- (1) Grid-Interactive Rooftop Solar PV System for Prosumers of the distribution licensees under the Commission.
- (2) All the distribution licensees under the Commission.

### **4. Rights of Prosumer:**



(1) While the prosumer will maintain consumer status and have the same rights as of the general consumer, they will also have the right to set up rooftop solar photovoltaic (PV) systems – either by themselves or through a service provider like Renewable Energy Service Company (“RESCO”) or Utility Led Aggregation (“ULA”), on a first-come-first-serve basis subject to limitations outlines in these regulations. Grid Interactive Rooftop Solar photovoltaic (PV) systems may also be set up on another part of the premises of the prosumers, apart from the roof, however, the total installed capacity shall not exceed “Contract demand” or “Sanctioned load”.

(2) The prosumer may avail of net metering, net billing or gross metering mechanism to set up a Grid interactive rooftop solar PV system under these Regulations.

(3) The prosumer is allowed to set up a rooftop solar PV system with battery storage.

**5. Procedure for application under net metering, net billing or net feed-in and gross metering:**

(1) Prosumers seeking Net Metering, Net Billing, Net Feed-in, or Gross Metering arrangements must initiate their application process through the distribution licensee’s website, ensuring compliance with the eligibility criteria stipulated in these regulations.

(2) Upon submission of the application, prosumers will promptly receive an automated acknowledgement, accompanied by a unique registration number for future reference.

(3) Prosumers are mandated to fulfil the requisite fee obligations to the distribution licensee.

(4) Prosumers utilizing rooftop solar photovoltaic systems exceeding a capacity of 10 kW shall deposit infrastructure upgrade costs, if applicable, upon notification from the distribution licensee. Distribution licensee in its notice shall submit the breakup of infrastructure upgradation cost along with justification.

(5) Upon completion of the installation of the rooftop solar photovoltaic system, prosumers must provide the distribution licensee with the installation certificate.

(6) Prosumers are required to formalize their participation in the relevant Net Metering, Net Billing, or Net Feed-in/Gross Metering Arrangements by executing the necessary agreement with the distribution licensee, utilizing the standardized format accessible on the licensee’s online platform.

(7) Once a prosumer is allowed a specific category of grid-connected Solar Rooftop PV arrangement—whether Net Metering, Net Billing, or Gross Metering—the prosumer shall not be allowed to switch to another category within the first six months. Thereafter, the prosumer shall be permitted to apply for a switch only once per year subject to recovery of all necessary charges related to that switchover.



**6. Duties of Distribution licensees:**

(1) Each distribution licensee shall modify the existing detailed procedure in connection with net metering/net billing/gross metering in accordance with these regulations and send a copy to the Commission for approval within 1 (one) month of notification of these regulations.

(2) Model Common Application Form for the Prosumers for applying for Net Metering/Net Billing or Net Feed-in/Gross Metering Arrangement is attached in Annexure – 1 of these Regulations that the distribution licensee shall follow in providing online application facility.

(3) Model Agreement of 'Net Metering', 'Net Billing or Net feed-in' and 'Gross Metering Arrangement is attached in Annexure – 2, Annexure – 3 and Annexure – 4 of these Regulations that the distribution licensees shall follow in providing format of Agreement to the Prosumers for their desired Arrangements.

(4) The distribution licensee shall facilitate the process for setting up a Grid-Interactive Rooftop Solar PV System for Prosumers at Prosumers' premises. In this regard, the licensee shall-

(a) create an online portal within one month from the date of notification of these regulations for receiving applications from prosumers for installation, interconnection and metering of distributed renewable energy systems or devices at their premises within one month from the date of notification of these Regulations, and update the same regularly;

(b) prominently display on its website and in all its offices, the following; namely: -

(i) approved detailed procedure for installation and commissioning of rooftop solar system;

(ii) a single point of contact to facilitate the consumers in the installation of rooftop solar systems from submission of application form to commissioning.

(iii) address and telephone numbers of offices where filled-up application forms can be submitted;

(iv) complete list of documents required to be furnished along with such applications;

(v) applicable charges to be deposited by the applicant;

(vi) list of service providers who are empanelled with the distribution licensee for the benefit of consumers who want to install rooftop solar PV systems through service providers; and

(vii) financial incentives to the prosumers, as applicable under various schemes and programmes of the Central and State Governments;

(5) The distribution licensee shall ensure that-

(i) Application forms shall be accepted online or through hard copy. Hard copy of Form shall be made available in the supply office of the distribution licensee.

(ii) in case the application form is submitted in hard copy, the same shall be scanned and



uploaded on the website as soon as it is received and acknowledgement with the registration number for that application shall be generated and intimated to the applicant;

(iii) in case the application form is received online through the web portal of the distribution licensee, the acknowledgement with the registration number shall be generated on submission of the application;

(iv) application shall be deemed to be received on the date of generation of acknowledgement with registration number; and

(v) The application tracking mechanism based on the unique registration number shall be provided by the distribution licensee through a web-based application or any other mode to monitor the status of the processing of the application viz receipt of the application, site inspection, meter installation and commissioning, etc.

(6) For installation of rooftop solar photo voltaic systems, the technical feasibility study shall be completed within fifteen days and the outcome of the study shall be intimated to the applicant, failing which it shall be presumed that the proposal is technically feasible.

(7) The applications for rooftop solar photo voltaic systems up to 10 kW capacity, complete in all respects shall be deemed to have been accepted without requiring a technical feasibility study.

(8) Any necessary enhancement of the sanctioned load of the consumer, required by the consumer, shall be carried out by the distribution licensee with the recovery of expenditure, if any, as per relevant Regulations of the Commission.

(9) Subject to sub-regulations (7) and (8) of regulation 6, during the period from the feasibility study or deemed acceptance of the application till the completion of installation, in case, there is any requirement for upgradation of distribution infrastructure like augmentation of the service line, distribution transformer capacity, and the like for installation of the required capacity of rooftop solar photo voltaic system, the same shall be carried out by the distribution licensee and the cost incurred therein shall be borne by the concerned Prosumer:

Provided that the cost of upgradation of the distribution infrastructure, including the distribution transformer, as necessary, to facilitate the installation of rooftop solar photovoltaic systems up to a capacity of 10 kW shall be borne by the distribution licensee and shall be included in the revenue requirement of the distribution licensee.

(10) After installation of the rooftop solar photovoltaic system, the prosumer shall submit the installation certificate to such distribution licensee and such distribution licensee shall complete the signing of the agreement for Net Metering/Net Billing or Net Feed-in/Gross Metering Arrangement, installation of the meter and successful commissioning of the rooftop solar photovoltaic system within fifteen days from the date of submission of the installation certificate.



(11) The Formats of the connection agreement and installation certificate shall be placed on the web portal of the distribution licensee.

(12) The prosumer shall have the option of purchasing the requisite meter himself which shall be tested and installed by the distribution licensee.

(13) If the Prosumer is within the ambit of the Time-of-the-Day ('TOD') Tariff, the Net Meter installed shall be capable of recording TOD consumption and generation.

(14) The distribution licensee shall pass on the financial incentives to the prosumers, as may be provided under various schemes and programmes of the Central and State Governments.

(15) The Prosumer shall bear all costs related to the setting up of the Rooftop Solar PV System, including the cost of the Meters and their testing by the licensee.

#### **7. Monitoring and reporting framework:**

(1) The distribution licensee shall quarterly publish on its website information related to Rooftop Solar PV capacity added during the quarter along with the cumulative capacity addition.

(2) The distribution licensee shall submit information to the West Bengal State Load Despatch Centre every year related to the capacity added and energy offset/procured from Rooftop Solar PV systems within one month from the end of the financial year.

(3) The West Bengal State Load Despatch Centre shall submit a comprehensive report to the Commission on the month-wise Rooftop Solar PV addition and energy offset / procured by the different distribution licensees.

#### **8. Interconnection of Rooftop solar PV system of prosumer:**

(1) The Rooftop Solar PV sources of eligible prosumers shall generally be allowed connectivity at the same voltage level at which the consumer has been given supply by the distribution licensee or any other voltage of the distribution system of the licensee as considered technically and financially suitable by the licensee:

Provided that, the cumulative capacity of Rooftop solar-PV generating systems allowed to be interconnected with the distribution network (feeder/distribution transformer) shall not exceed 100% of the feeder and/or distribution transformer capacity, as applicable:

Provided that HT consumer may install and connect its solar PV system at its LT bus bar provided the meter under net-metering and net-billing arrangement shall be installed on the HT side of the consumer's transformer.



(2) The distribution licensee shall ensure the interconnection of the Rooftop solar-PV generating system of eligible prosumer with its network conforming to the specifications, standard and other provisions specified in the Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations 2013 and its subsequent amendments thereof.

(3) The prosumer shall be responsible for the safe installation, operation, maintenance and rectification of any defect of the solar-PV generating system up to the point of net meter, beyond which the responsibility of safe operation, maintenance and rectification of any defect in the system, including the net meter, shall be that of the distribution licensee as per the provisions specified in the Central Electricity Authority (Measures relating to Safety and Electricity Supply) Regulations, 2023 and its subsequent amendments thereof.

(4) The Rooftop solar-PV generating system must be capable of detecting an unintended islanding condition. The system must have anti-islanding protection to prevent any feeding into the grid in case of failure of supply or grid. Applicable IEC/IEEE technical standards shall be followed to test islanding prevention measure for grid connected inverters.

(5) The prosumer may install grid interactive Rooftop Solar-PV system with or without battery backup:

Provided that if the prosumer prefers setting up of Rooftop solar-PV generating system with battery backup (full load backup/partial load backup), the inverter shall have appropriate arrangement to automatically prevent the battery power from flowing into the grid in the absence of grid supply in addition to manual isolation switch that shall also have to be provided.

(6) The Rooftop solar-PV generating system shall be equipped with an automatic synchronization device:

Provided that the Rooftop solar-PV generating system using an inverter shall not be required to have a separate synchronizing device if it is inherently built into the inverter.



(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. The Total Voltage Harmonic Distortion (THD) shall be within the limits specified in the Technical Standards for Connectivity of the Distributed Generation Resources (Amendments), 2019 of CEA and its subsequent amendments thereof and Indian Electricity Grid Code (IEGC)/IEEE technical standards:

Provided that, if the presence of harmonics is beyond the limits specified mentioned above it may be treated as “the event of threat/damage” and the utility shall have the right to disconnect the Rooftop solar PV generating system. The distribution licensee shall call upon the consumer to rectify the defect within a reasonable time.

(8) The prosumers who have installed grid-connected roof-top solar generators under Net-metering / Net-billing / Gross-Metering arrangement shall have to furnish a certificate of fitness conforming to correct operation of islanding, generation of harmonics and other Power Quality parameters as per limits mentioned above. Prosumers can arrange such testing on their own in the presence of a representative of the distribution licensee or request the connected distribution licensee to arrange such tests on a cost basis. The periodicity and the procedure for such testing will be specified in the detailed procedure developed by the licensee under sub-regulation (1) of regulation 6 of these Regulations. The cost for such testing will be uploaded to the website of the distribution licensee.

(9) Any cost incurred by the licensee shall be subject to recovery from the prosumer.

**9. Metering of solar PV system:**

The Net Metering/Net Billing Arrangement shall include a single-phase or a three-phase Net Meter, as per the existing supply arrangement of the eligible prosumer, located at the point of interconnection as would be ascertained by the distribution licensee. The Rooftop solar PV generation meter and net meter shall be procured and installed by the distribution licensee against the cost to be borne by the consumer. However, if any prosumer wishes to procure the generation meter(s) with standard specification(s) to be set by the distribution licensee, he may procure and present that/those to the distribution licensee for testing and installation:

Provided that, if the eligible consumer is within the ambit of the Time-of-Day ('ToD') Tariff, notwithstanding anything to the contrary contained elsewhere in any other Regulations of the



Commission, the Net Meter installed shall be capable of recording ToD consumption and generation:

Provided that, in case of Gross-Metering arrangement a check meter of appropriate class shall be installed by the distribution licensee for the solar-PV generation meter against the cost to be borne by the consumer:

Provided that All meters shall comply with the CEA (Installation and Operation of Meters) Regulations, 2006 and subsequent amendments thereof and the meters shall have an Advanced Metering Infrastructure (AMI) facility with RS 485 (or higher) communication port:

Provided further that distribution licensee shall be responsible for the testing, installation and maintenance of the metering equipment, and its adherence to the applicable standards and specifications.

#### **10. Renewable Purchase Obligation (RPO):**

- (1) If the prosumer is an Obligated Entity, the quantum of electricity consumed from the Rooftop Solar PV System under the Net Metering or Net Billing Arrangement shall count towards the prosumer's own RPO compliance.
- (2) Any surplus Renewable Energy units purchased by the Distribution Licensee from the prosumer under the Net Billing Arrangement shall be eligible for meeting the Distribution Licensee's RPO.
- (3) Under a Gross Metering Arrangement, the total quantum of electricity recorded by the Generation Meter shall qualify towards the Distribution Licensee's RPO compliance.

#### **11. Feed-in Tariff**

For net billing and Gross-Metering, the feed-in tariff shall include the average power purchase cost of the licensee and the savings from transmission and distribution losses, both calculated based on the average power purchase cost. Feed-in Tariff agreed in the Power Purchase Agreement between the prosumer and the licensee shall be valid for the useful life of the Rooftop Solar PV project. The Commission shall determine the feed-in tariff in the tariff order of the licensee or through a separate order from time to time.



**Part – B**

**Net Metering Rooftop Solar PV System**

**12. Eligibility for setting up Grid Interactive Net Metering Rooftop Solar PV System:**

Net-metering shall be allowed to the prosumers having contract demand or sanctioned load of 1 (one) kW or above to set up rooftop solar photovoltaic (PV) systems for a minimum 1 (one) kW capacity and maximum up to 500 (five hundred) kW or up to the “Contract demand” or “Sanctioned load”, whichever is lower to offset the prosumer’s electricity consumption from the distribution licensee:

Provided that, for a billing period, solar energy exported to the Grid from Grid Interactive rooftop Solar Photovoltaic system of a Prosumer is deducted from energy imported from the Grid in units (kWh) to arrive at the net imported or exported energy. The net energy import shall be billed at the applicable retail tariff. If there is net energy export by the Prosumer, that shall be carried over to the net billing period. At the end of the settlement period next export, if any, shall be reset to zero.:

Provided further that recording of import and export of energy shall be done by using a single bi-directional energy meter for net-metering at the point of supply;

13. The distribution licensee shall permit total installation of net metering rooftop solar PV systems at least upto the limits specified in the table below in its area of supply. For this purpose, all new roof-top solar connected from the date of issuance of this order shall be considered. All connections for net metering shall be allowed on a first-come, first-serve basis. The distribution licensee shall also have the liberty to allow the installation of a Net Metering Rooftop Solar PV System above the aggregate limit specified in the table if the distribution system permits.

| Year      | WBSEDCL (MW) | CESC (MW) | DVC (MW) | IPCL (MW) |
|-----------|--------------|-----------|----------|-----------|
| 2024-25 * | 51           | 15        | 16       | 2         |

*\*Note: from the date of notification of the regulation up to 31.03.2025*

The Commission shall review the above-specified limit after FY 2024-25 and issue necessary orders to further promote Solar Rooftop PV installations by prosumers.

**14. Net Metering Energy Accounting and Settlement:**



(1) The distribution licensee will conduct meter readings for all grid-integrated rooftop solar PV systems of prosumers as per the regular metering cycle as consumers.

(2) Both the generation meter and bi-directional energy meter readings will be recorded by the distribution licensee.

(3) The distribution licensee will include the following information on its bill to the consumer for each billing period: (a) Recorded rooftop solar PV generation from the generation meter. (b) Energy injected into the grid by the rooftop solar PV system during the billing period, with present and previous readings. (c) Energy supplied by the distribution licensee during the billing period, with Present and previous readings. (d) Net energy import/export (e) Excess energy brought forward from the previous billing period. (f) Net energy import requiring payment by the prosumer. (g) Net energy export carried over to the next billing period.

**Illustration of Net Metering:**

Amount to be billed to a Net Metering prosumer shall be:

$$N_{\text{met}} = \{(E_{\text{imp}} - E_{\text{exp}}) - E_{\text{bf}}\} \times T$$

Where,

$E_{\text{imp}}$  = Energy imported (in kWh) from the grid during the billing period

$E_{\text{exp}}$  = Energy exported (in kWh) to the grid during the billing period

$E_{\text{bf}}$  = Excess of energy exported (in kWh) over energy imported (in kWh) from the grid in the previous billing cycle

$T$  = Applicable tariff of the consumer (in Rs. / kWh) including MVCA, if any

In case  $E_{\text{imp}} < (E_{\text{exp}} + E_{\text{bf}})$ , then  $N_{\text{met}} = 0$  and the energy (in kWh)  $(E_{\text{exp}} + E_{\text{bf}} - E_{\text{imp}})$  shall be carried forward to the next billing cycle

(4) For prosumers under a time-of-day tariff: (a) Electricity consumption in each time block will be offset against generation in the same time block. (b) Excess generation in any time block will be accounted for in the immediately lower tariff time block. (c) This process continues until all consumption in lower tariff blocks is offset against rooftop solar PV generation. (d) Any excess generation after offsetting consumption will be carried forward to the next billing cycle. (e) The same process applies in subsequent billing cycles.



(5) At the beginning of each year, the cumulative carried-over injected energy will be reset to zero.

(6) Prosumers shall continue to pay all other charges, such as fixed/demand charges, meter rent, subsidy, rebates and surcharges, government levies & duties and arrears due to tariff revision during any billing period.

(7) The distribution licensee will accept power generated by the rooftop solar PV system throughout its useful life unless the prosumer ceases to be a consumer or abandons the rooftop solar PV system prematurely.

### **Part – C**

#### **Net Billing or Net Feed-in Rooftop Solar PV systems**

##### **15. Eligibility for setting up Grid Interactive Net Billing or Net feed-in Rooftop Solar PV System:**

Net Billing or Net feed-in shall be allowed to prosumers having a “Contract demand” or “Sanctioned load” of 1kW or above to set up rooftop solar photovoltaic (PV) systems for a minimum 1 kW capacity and maximum up to the “Contract demand” or “Sanctioned load”:

Provided that, for a billing period, energy imported by a prosumer and solar energy exported to the grid by the Prosumer shall be valued at two different tariffs, where (a) the monetary value of the imported energy is based on the applicable retail tariff and (b) the monetary value of the exported solar energy is based on feed-in tariff determined by the Commission. The difference between the monetary value of energy imported and the monetary value of energy exported during a billing cycle shall be billed to the prosumer. If the monetary value of energy imported is less than the monetary value of energy exported the difference amount shall be carried forward to the next billing cycle. At the end of the settlement period, if there is a net amount receivable by the prosumer, it shall be reset to zero:

Provided further that recording of import and export of energy shall be done by using a single bi-directional energy meter for net-metering at the point of supply;

##### **16. Net Billing or Net Feed-in Energy Accounting and Settlement:**

(1) The distribution licensee will conduct meter readings for all grid-integrated rooftop solar PV systems of prosumers as per the regular metering cycle as consumers.



(2) Both the generation meter and bi-directional energy meter readings will be recorded by the distribution licensee.

(3) The distribution licensee will include the following information on its bill to the consumer for each billing period: (a) Recorded rooftop solar PV generation from the generation meter, (b) Energy injected into the grid by the rooftop solar PV system during the billing period, with present and previous reading, (c) Energy supplied by the distribution licensee during the billing period, with Present and previous reading, (d) Monetary value of energy imported at retail tariff of the consumer, (e) Monetary value of energy exported at feed-in tariff determined by the Commission, (f) Billing credit brought forward from the previous billing period, (g) Amount billed to the net billing prosumer (h) Billing credit carried forward to the next billing period

**Illustration of Net Billing:**

Amount to be billed to a Net Billing prosumer shall be:

$$N_{bill} = \{(B_{imp} - B_{exp}) - B_{bf}\}$$

Where,

$B_{imp}$  = Energy imported (in kWh) from the grid during the billing period x applicable retail tariff (in Rs. / kWh) including MVCA, if any

$B_{exp}$  = Energy exported (in kWh) to the grid during the billing period x feed-in tariff (in Rs. / kWh)

$B_{bf}$  = Billing credit (in Rs.) brought forward from the previous billing period.

In case of  $B_{imp} < (B_{exp} + B_{bf})$ , then  $N_{bill} = 0$  and the billing credit (in Rs.) of  $(B_{exp} + B_{bf} - B_{imp})$  shall be carried forward to the next billing cycle

(4) At the end of the financial year, any outstanding Billing Credit, if any, shall be reset to zero.

(5) Prosumers shall continue to pay all other charges, such as fixed/demand charges, meter rent, subsidy, rebates and surcharges, government levies & duties and arrears due to tariff revision during any billing period.

(6) The distribution licensee shall accept power generated by the rooftop solar PV system throughout its useful life unless the prosumer ceases to be a consumer or abandons the rooftop solar PV system prematurely.



## Part – D

### Gross Metering Rooftop Solar PV System

#### 17. Eligibility for setting up Grid Interactive Gross Metering Rooftop Solar PV System:

Gross Metering shall be allowed to the prosumers having contract demand or sanctioned load of 1kW or above set up rooftop solar photovoltaic (PV) systems for a minimum 1 kW capacity and maximum up to the "Contract demand" or "Sanctioned load":

Provided that, for a billing period, the energy consumed by a prosumer and solar energy generated by the Prosumer shall be accounted for separately using two separate energy meters, where (a) the monetary value of the energy consumed is based on the applicable retail tariff and (b) the monetary value of the solar energy generated is based on feed-in tariff determined by the Commission. The difference between the monetary value of energy consumed and the monetary value of energy generated during a billing cycle shall be billed to the prosumer. If the monetary value of energy consumed is less than the monetary value of energy generated, the difference amount shall be carried forward to the next billing cycle. At the end of the settlement period, if there is a net amount receivable by the prosumer, it shall be paid by the distribution licensee:

Provided further that recording of energy consumption by a prosumer and energy generated from the rooftop Solar PV system shall be done by using two distinct energy meters at the point of supply and ex-bus of solar generator separately;

#### 18. Gross Metering Accounting and Settlement:

(1) The distribution licensee shall conduct meter readings for all grid-integrated rooftop solar PV systems of prosumers as per the regular metering cycle of the consumer.

(2) Both the generation meter and consumer energy meter readings shall be recorded by the distribution licensee.

(3) The distribution licensee shall include the following information on its bill to the consumer for each billing period: (a) Recorded rooftop solar PV generation from the generation meter with Present and previous readings, (b) Energy consumed by the prosumer during the billing period, with Present and previous reading, (c) Monetary value of energy consumed at retail tariff of the consumer, (d) Monetary value of energy generated at feed-in tariff determined by the Commission, (e) Billing credit brought forward from the previous billing period, (f) Amount billed to the prosumer under gross metering (g) Billing credit carried forward to the next billing period



**Illustration of Gross Metering:**

Amount to be billed to a Gross Metering prosumer shall be:

$$N_{\text{gross}} = \{(B_{\text{con}} - B_{\text{gen}}) - B_{\text{bf}}\}$$

Where,

$B_{\text{con}}$  = Energy consumed (in kWh) by a consumer during the billing period x applicable retail tariff (in Rs. / kWh) including MVCA, if any;

$B_{\text{gen}}$  = Energy generated (in kWh) by rooftop solar PV of prosumer during the billing period x feed-in tariff (in Rs. / kWh);

$B_{\text{bf}}$  = Billing credit (in Rs.) brought forward from the previous billing period;

In case of  $B_{\text{con}} < (B_{\text{gen}} + B_{\text{bf}})$ , then  $N_{\text{gross}} = 0$  and the billing credit (in Rs.) of  $(B_{\text{gen}} + B_{\text{bf}} - B_{\text{con}})$  shall be carried forward to the next billing cycle.

(4) Billing credit, if any, at the end of a settlement period shall be paid by the distribution licensee to the prosumer.

(5) Prosumers shall continue to pay all other charges, such as fixed/demand charges, meter rent, subsidy, rebates and surcharges, government levies & duties and arrears due to tariff revision during any billing period.

(6) The distribution licensee shall accept power generated by the rooftop solar PV system throughout its useful life unless the prosumer ceases to be a consumer or abandons the rooftop solar PV system prematurely.

**PART - E**

**19. Consistency in Definition Across Regulations:** Words and expressions utilized but not defined in these regulations, yet defined in the Act or any other regulations issued by the Commission, shall hold the same meaning ascribed to them in the Act or such other regulations issued by the Commission.

**20. Power to Amend:**

The Commission may from time to time add, vary, alter, modify or amend any provisions of these regulations.



**21. General Power:**

(1) The Commission may suo-motu or on an application from any prosumer and/or licensee, relax any provision of these regulations and/or pass appropriate orders to remove any difficulty in implementing the provisions of these regulations.

(2) Nothing in these regulations shall be deemed to limit or otherwise affect the inherent power of the Commission to make such orders as may be necessary for meeting the ends of justice, or to prevent the abuse of the process of the law.

**22. Repeal and Saving:**

(1) Regulation 2.1(xi)(A), regulation 2.1(xix)(A), Regulation 2.1(xix)(B), Regulation 2.1(xix)(C), Regulation 2.1(xix)(D), Regulation 2.1(xix)(E), Regulation 6.1(v)(c), Regulation 7.2, Regulation 16.9, Schedule – 1 and Schedule - 2 of the West Bengal Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2013 notified vide Notification No. 50/ West Bengal Electricity Regulatory Commission dated 22.03.2013 and WBERC (Cogeneration and Generation of Electricity from Renewable Sources of Energy) (First Amendment) Regulations, 2020 notified vide Notification No. 71/ WBERC dated 21.12.2020 shall stand repealed.

(2) Notwithstanding such repeal, anything done or any action already taken under the repealed Regulations, be deemed to have been done or taken under the corresponding provisions of these regulations.

**By order of the Commission**

**Sd/-**

**(Secretary of the Commission)**

**Place : Kolkata**

**Dated:**



**Model Net Metering/Net Billing or Net Feed-in/Gross Metering Connection Application**

Application Form for Grid-Interactive Rooftop Solar PV Connection under Net Metering/Net Billing/Gross Metering Arrangement

[According to the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024]

Application Number <Autogenerated>

1. Applicant's Full Name (in capital letters):
2. Address of the Premises at Which the Grid-Interactive Rooftop Solar PV System is to be Installed (in capital letters):
3. Mobile Number:
4. E-mail ID (if any):
5. Alternate Address for Communication (if any):
6. Consumer Category of Existing Electricity Connection:
7. Consumer Number:
8. Consumer ID:
9. Sanctioned Load / Contract Demand (in kW /kVA):
10. The capacity of Solar PV to be Installed:
11. Category of Prosumer: Net Metering/Net Billing/Gross Metering

**Declaration:**

I/ We do hereby declare that I/we fulfil the eligibility criteria for net metering/ net billing/ gross metering specified in the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024. I/ We also agree to bear the cost of alteration of service, if any, required under the regulation.

Signature: \_\_\_\_\_

Date: \_\_\_\_\_

Place: \_\_\_\_\_



**Model Agreement of Net Metering Arrangement**

This Agreement is made and entered into on this [date] day of [month], [year], at [location], between the Prosumer identified below, hereinafter referred to as the "Prosumer," and the Distribution Licensee identified below, hereinafter referred to as the "Licensee."

**1. Parties**

(1) The Prosumer:

Name:

Address:

Consumer ID.:

(2) The Licensee:

Name:

Address:

**2. Background**

Whereas the Prosumer having contract demand or sanctioned load of [in kW/kVA] has applied to the Licensee for approval of a Net Metering Arrangement under the provisions of the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 ("Grid-Interactive Rooftop Solar PV Regulations") and sought permission to inject surplus solar power from its Grid-Interactive Rooftop Solar PV system of [capacity in kilowatt] to the Licensee's distribution Network;

Whereas the Licensee has agreed to allow the injection of energy generated from the Grid-Interactive Rooftop Solar PV System of [capacity in kilowatt] of the prosumer;

**3. Agreement**

The Parties hereby agree as follows:

(1) The Prosumer shall fulfil the eligibility criteria specified in the WBERC Grid-Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

(2) The Distribution Licensee shall provide Interconnection of solar PV systems of prosumers as per Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.

(3) The prosumer shall maintain Standards for solar PV systems as per CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.

(4) The Licensee shall provide Metering of the solar PV system of the prosumer as per CEA (Installation and Operation of Meters), Regulations 2006 as amended from time to time.



(5) The Prosumer shall ensure that the Solar PV system complies with CEA (Measures Relating to Safety and Electricity Supply) Regulations, 2023 as amended from time to time.

(6) The Prosumer shall obtain statutory approvals and clearances that may be required, such as from the Electrical Inspector or the municipal or other authorities, before connecting the Rooftop Solar PV System to the distribution Network.

(7) This Agreement shall be valid for 20 (twenty) years from the date of signing but may be terminated prematurely by Prosumer giving 90 (ninety) days' notice.

(8) Licensee may terminate this agreement by giving 30 days' notice, if the Prosumer breaches any terms of this Agreement or the provisions of the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 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.

(9) Licensee may terminate this agreement by giving 30 days' notice if the prosumer fails to pay his dues in a timely manner or indulges in any malpractices.

(10) The agreement stands terminated as and when the consumer status ceases to exist.

(11) The Prosumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Rooftop Solar PV.

(12) If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Rooftop Solar PV System it may disconnect the power supply to the premises.

(13) The commercial settlements under this Agreement shall be in accordance with the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

(14) The Prosumer shall bear all costs related to the setting up of the Rooftop Solar PV System, including the cost of necessary Meters.

In Witness Whereof,

Signature of the Prosumer: \_\_\_\_\_

Signature of Licensee: \_\_\_\_\_

Witness No. 1: Signature: \_\_\_\_\_

Name and Address:

Witness No. 2: Signature: \_\_\_\_\_

Name and Address:



**Model Agreement of Net Billing or Net Feed-in Arrangement**

This Agreement is made and entered into on this [date] day of [month], [year], at [location], between the Prosumer identified below, hereinafter referred to as the "Prosumer," and the Distribution Licensee identified below, hereinafter referred to as the "Licensee."

**1. Parties**

(1) The Prosumer:

Name:

Address:

Consumer No.:

(2) The Licensee:

Name:

Address:

**2. Background**

Whereas the Prosumer having contract demand or sanctioned load of [in kW/kVA] has applied to the Licensee for approval of a Net Billing Arrangement under the provisions of the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 ("Grid-Interactive Rooftop Solar PV Regulations") and sought permission to inject surplus solar power from its Grid-Interactive Rooftop Solar PV system of [capacity in kilowatt] to the Licensee's distribution Network;

Whereas the Licensee has agreed to allow the injection of energy generated from the Grid-Interactive Rooftop Solar PV System of [capacity in kilowatt] of the prosumer;

**3. Agreement**

The Parties hereby agree as follows:

(1) The Prosumer shall fulfil the eligibility criteria specified in the WBERC Grid-Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

(2) The Distribution Licensee shall provide Interconnection of solar PV systems of prosumers as per Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.

(3) The Prosumer shall maintain Standards for solar PV systems as per CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.

(4) The Licensee shall provide Metering of the solar PV system of the prosumer as per CEA (Installation and Operation of Meters), Regulations 2006 as amended from time to time.

(5) The Prosumer shall ensure that the Solar PV system complies with CEA (Measures Relating to Safety and Electricity Supply) Regulations, 2023 as amended from time to time.



(6) The Prosumer 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 Rooftop Solar PV System to the distribution Network.

(7) This Agreement shall be valid for 20 (twenty) years from the date of signing but may be terminated prematurely by Prosumer giving 90 (ninety) days' notice.

(8) Licensee may terminate this agreement by giving 30 days' notice, if the Prosumer breaches any terms of this Agreement or the provisions of the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 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.

(9) Licensee may terminate this agreement by giving 30 days' notice if the Eligible Consumer fails to pay his dues in a timely manner or indulges in any malpractices.

(10) The agreement stands terminated as and when the consumer status ceases to exist.

(11) The Prosumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Rooftop Solar PV.

(12) If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Rooftop Solar PV System it may disconnect the power supply to the premises.

(13) The commercial settlements under this Agreement shall be in accordance with the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

(14) The Prosumer shall bear all costs related to the setting up of the Rooftop Solar PV System, including the cost of necessary Meters.

In Witness Whereof,

Signature of the Licensee: \_\_\_\_\_

Signature of Prosumer: \_\_\_\_\_

Witness No. 1: Signature: \_\_\_\_\_

Name and Address:

Witness No. 2: Signature: \_\_\_\_\_

Name and Address:



**Model Agreement of Gross Metering Arrangement**

This Agreement is made and entered into on this [date] day of [month], [year], at [location], between the Prosumer identified below, hereinafter referred to as the "Prosumer," and the Distribution Licensee identified below, hereinafter referred to as the "Licensee."

**1. Parties**

(1) The Prosumer:

Name:

Address:

Consumer No.:

(2) The Licensee:

Name:

Address:

**2. Background**

Whereas the Prosumer having contract demand or sanctioned load of [in kW/kVA] has applied to the Licensee for approval of a Gross Metering Arrangement under the provisions of the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 ("Grid-Interactive Rooftop Solar PV Regulations") and sought permission to inject entire solar power from its Grid-Interactive Rooftop Solar PV system of [capacity in kilowatt] to the Licensee's distribution Network;

Whereas the Licensee has agreed to allow the injection of energy generated from the Grid-Interactive Rooftop Solar PV System of [capacity in kilowatt] of the prosumer;

**3. Agreement**

The Parties hereby agree as follows:

(1) The Prosumer shall fulfil the eligibility criteria specified in the WBERC Grid-Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

(2) The Distribution Licensee shall provide Interconnection of solar PV systems of prosumers as per Central Electricity Authority (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.

(3) The Prosumer shall maintain Standards for solar PV systems as per CEA (Technical Standards for Connectivity of the Distributed Generation Resources) Regulations, 2013 as amended from time to time.

(4) The Licensee shall provide Metering of the solar PV system of the prosumer as per CEA (Installation and Operation of Meters), Regulations 2006 as amended from time to time.



(5) The Prosumer shall ensure that the Solar PV system complies with CEA (Measures Relating to Safety and Electricity Supply) Regulations, 2023 as amended from time to time.

(6) The Prosumer 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 Rooftop Solar PV System to the distribution Network.

(7) This Agreement shall be valid for 20 (twenty) years from the date of signing but may be terminated prematurely by Prosumer giving 90 (ninety) days' notice.

(8) The Licensee may terminate this agreement by giving 30 days' notice, if the Prosumer breaches any terms of this Agreement or the provisions of the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024 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.

(9) Licensee may terminate this agreement by giving 30 days' notice if the Eligible Consumer fails to pay his dues in a timely manner or indulges in any malpractices.

(10) The agreement stands terminated as and when the consumer status ceases to exist.

(11) The Prosumer shall provide access to the Licensee to the metering equipment and disconnecting devices of Rooftop Solar PV.

(12) If, in an emergent or outage situation, the Licensee cannot access the disconnecting devices of the Rooftop Solar PV System it may disconnect the power supply to the premises.

(13) The commercial settlements under this Agreement shall be in accordance with the West Bengal Electricity Regulatory Commission (Grid Interactive Rooftop Solar PV System for Prosumers) Regulations, 2024.

(14) The Prosumer shall bear all costs related to the setting up of the Rooftop Solar PV System, including the cost of necessary Meters.

In Witness Whereof,

Signature of the Licensee: \_\_\_\_\_

Signature of Prosumer: \_\_\_\_\_

Witness No. 1: Signature: \_\_\_\_\_

Name and Address:

Witness No. 2: Signature: \_\_\_\_\_

Name and Address: