

ASSAM ELECTRICITY REGULATORY COMMISSION

Notification

Dated Guwahati the 31st July, 2014

GRID INTERACTIVE SOLAR PV SYSTEMS REGULATIONS, 2014

No. AERC.453/2014/5 In exercise of powers conferred under sections 61, 66, 86(1)(e) and 181 of the Electricity Act, 2003 (Act 36 of 2003) and all other powers enabling it in this behalf, and after previous publication, the Assam Electricity Regulatory Commission hereby makes the following regulations for the grid interactive solar photovoltaic (PV) systems.

REGULATIONS

1. SHORT TITLE AND COMMENCEMENT:

- 1.1. These regulations may be called the “Assam Electricity Regulatory Commission (**Grid Interactive Solar PV Systems**) Regulations, 2014”.
- 1.2. These regulations shall extend to the whole of the State of Assam.
- 1.3. These regulations shall come into force from the date of their publication in the Assam Gazette.

2. INTRODUCTION:

In the AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2014, Regulation 15 & 16 are related to Grid Interactive Solar PV Systems. Extract of this two regulations are incorporated in Appendix I.

Under Regulation 15.3 (ii) it is provided that - “The technical parameters, net metering, billing and safety requirements of such projects shall also be as per the provisions of the AERC ‘Grid Interactive Solar PV Systems Regulation, 2014’.”

These regulations are made to meet the requirements of the Regulation 15.3 (ii) of the AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2014, and other matters related to Grid Interactive Solar PV Systems.

3. DEFINITIONS AND INTERPRETATIONS:

- 3.1. In these regulations, unless the context otherwise requires –
 - a) “**Act**” means the Electricity Act, 2003 (36 of 2003) and subsequent amendments thereof;
 - b) “**agreement**” means an agreement entered into by the Distribution licensee and the consumer;
 - c) “**billing cycle or billing period**” means the period for which regular electricity bills as specified by the Commission, are prepared for different categories of consumers by the licensee;

- d) **“Commission”** means the Assam Electricity Regulatory Commission constituted under the Act;
- e) **“consumer”** means any person who is supplied with electricity for his own use by a licensee or the Government or by any other person engaged in the business of supplying electricity to the public under this Act or any other law for the time being in force and includes any person whose premises are, 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;
- f) **“Contracted load”** or **“contract demand”** means the maximum demand in kW, kVA or BHP, agreed to be supplied by the licensee and indicated in the agreement executed between the licensee and the consumer;
- g) **“Distribution licensee”** or **“licensee”** means a person granted a license under Section 14 of the Act authorizing him to operate and maintain a distribution system for supplying electricity to the consumers in his area of supply;
- h) **“Electricity Supply Code”** means the AERC (Electricity Supply Code and Related Matters) Regulations, 2004’ and subsequent amendments thereof;
- i) **“eligible consumer”** means a consumer of electricity in the area of supply of the distribution licensee, who uses a grid interactive solar PV system installed in his premises, to offset part or all of the consumer's own electrical requirements, given that such systems can be self-owned or third party owned;
- j) **“financial year”** or **“year”** means the period beginning from first of April in an English calendar year and ending with the thirty first of the March of the next year;
- k) **“interconnection point”** means the interface of solar power generation facility with the network of distribution licensee;
- l) **“invoice”** means either a Monthly Bill / Supplementary Bill or a Monthly Invoice/ Supplementary Invoice raised by the distribution licensee
- m) **“kWp”** means Kilo Watt peak rating of Solar Panel ;
- n) **“net metering”** means an arrangement under which a grid interactive solar system installed at an eligible consumer premises delivers surplus electricity, if any, to the Distribution Licensee after meeting his own need. Such injection shall be accounted for off-setting the electricity supplied by distribution licensee during the applicable billing period.
- o) **“obligated entity”** means the entity mandated under clause (e) of subsection (1) of section 86 of the Act to fulfill the renewable purchase obligation and identified under AERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010’;
- p) **“premises”** means areas on the land, building or infrastructure or part or combination thereof in respect of which a separate meter or metering arrangements have been made by the licensee for supply of electricity;

- q) **‘rooftop solar system’** means the solar photo voltaic power system installed on the rooftops of consumer premises that uses sunlight for direct conversion into electricity through photo voltaic technology;
 - r) **“Renewable Energy Certificate (REC)”** means the means the certificate issued in accordance with the procedures approved by the Central Electricity Regulatory Commission;
 - s) **‘settlement period’** means the period beginning from first of April in an English calendar year and ending with the thirty first of the March of the next year;
 - t) **“tariff order”** in respect of a licensee means the most recent order issued by the Commission for that licensee indicating the rates to be charged by the licensee from various categories of consumers for supply of electrical energy and services;
- 3.2. All other words and expressions used in these Regulations although not specifically defined herein above, but defined in the Act, shall have the meaning assigned to them in the Act. The other words and expressions used herein but not specifically defined in these Regulations or in the Act but defined under any law passed by the Parliament applicable to the electricity industry in the State shall have the meaning assigned to them in such law.

4. SCOPE AND APPLICATION:

- 4.1. These Regulations shall apply to the distribution licensee and consumers of electricity of distribution licensee of the State of Assam.
- 4.2. A Solar Grid Interactive system installed in a premises may be owned by consumer or a 3rd party.
- 4.3. The eligible consumer may install the solar system under net metering arrangement which,
 - a) shall be within the permissible rated capacity as defined under these Regulations.
 - b) shall be located in the consumer premises.
 - c) shall interconnect and operate safely in parallel with the distribution licensee network.

5. GENERAL PRINCIPLES:

The distribution licensee shall offer the provision of net metering arrangement to the consumer, who intends to install grid connected rooftop solar system, in its area of supply on non-discriminatory and first come first serve basis.

Provided that the distribution licensee shall offer the provision of net metering to the consumer for the target capacity as specified under these Regulations;

Provided further that the consumer is eligible to install the grid connected rooftop solar system of the rated capacity as specified under these Regulations;

6. CAPACITY TARGETS FOR DISTRIBUTION LICENSEE:

- 6.1. The distribution licensee shall provide net metering arrangement to eligible consumers as long as the total capacity (in MW) does not exceed the target capacity determined by Commission;

Provided a maximum cumulative capacity of 3 MW shall be allowed to eligible consumers under net metering, on yearly basis, in the area of supply of the distribution licensee;

Provided that the cumulative capacity to be allowed at a particular distribution transformer shall not exceed 15% of the peak capacity of the distribution transformer;

- 6.2. The distribution licensee shall update distribution transformer level capacity available for connecting rooftop solar systems under net metering arrangement on yearly basis and shall provide the information on its website as well as to the Commission.

7. ELIGIBLE CONSUMER AND INDIVIDUAL PROJECT CAPACITY:

- 7.1. All eligible consumers of electricity in the area of supply of the distribution licensee can participate in the grid interactive net metering arrangement (reference to sub clause 2.1(i) of these Regulations).

- 7.2. The maximum Grid interactive system capacity to be installed at any eligible consumer premises shall be governed by the eligibility of interconnection with the grid for that eligible consumer and shall be limited between aggregate solar panel capacity of 1 KWp to 500 KWp. However, there shall be no restriction on state power utilities installing bigger plants, subject to their compatibility with the system and necessary safety measures taken.

Provided further that the installed capacity is aligned with the AERC Electricity Supply Code and Related matters Regulation , 2004 , provisions for permitting consumer connections and voltage of connection shall be as specified in the AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2014 .

8. INTERCONNECTION WITH THE GRID:

The interconnection of the grid interactive solar system with the network of the distribution licensee shall be made as per the provision of the ‘Technical Standards for Connectivity of Distributed Generated Resources Regulations, 2014’ of Central Electricity Authority.

Provided further that the system qualifies the technical requirements for grid interconnection with the network of the distribution licensee and general terms and conditions and technical requirement specify in the Annexure III (in model agreement format)

9. ENERGY ACCOUNTING AND SETTLEMENT:

- 9.1. For each billing period, the licensee shall show the quantum of injected electricity by eligible consumer in the billing period, supplied electricity by distribution licensee in the billing period, net billed electricity for payment by the consumer for that billing period and net carried over electricity to the next billing period separately;

Provided that in the event the electricity injected exceeds the electricity consumed during the billing period, such excess injected electricity shall be carried forward to next billing period as electricity credit and may be utilized to net electricity injected or consumed in future billing periods;

Provided further that in the event the electricity supplied by the distribution licensee during any billing period exceeds the electricity generated by the eligible consumer's rooftop solar system, the distribution licensee shall raise invoice for the net electricity consumption after taking into account any electricity credit balance remaining from previous billing periods;

Provided, in case the eligible customer is under the ambit of time of day tariff, as determined by the Commission from time to time, the electricity consumption in any time block (e.g., peak hours, off-peak hours, etc.) shall be first compensated with the electricity generation in the same time block. Any cumulated excess generation over consumption in any other time block in a billing cycle shall be accounted as if the excess generation occurred during the off-peak time block.

Provided also that the excess electricity measured in kilo-watt hour may only be utilized to offset the consumption measured in kilo-watt hour and may not be utilized to compensate any other fee and charges imposed by the distribution licensee as per the instructions of the Commission.

Provided also that the distribution licensee in addition to consumer tariff shall be eligible to raise invoice for any other charges as allowed by the Commission.

- 9.2. The electricity generated by the grid interactive solar system of an eligible consumer shall not be more than 90% of the electricity consumption by the eligible consumer at the end of the settlement period.

Provided that such injection of the above mentioned eligible consumer shall be settled only as per net metering arrangement at the end of each settlement period;

Provided further that in the event the electricity generated exceeds 90% of the electricity consumed at the end of the settlement period, no payment shall be made by the distribution licensee and shall not be carried forward to next settlement period and the same shall be treated as unwanted/ inadvertent injunction.

Provided also that at the beginning of each settlement period, cumulative carried over injected electricity will be reset to zero.

- 9.3. In case of any dispute in billing it would be settled by the consumer grievance redressal forum and if issue still remains unresolved shall be settled by the Assam

Electricity Regulatory Commission following appropriate procedure.

10. SOLAR RENEWABLE PURCHASE OBLIGATION (RPO):

- (i) The quantum of electricity generated from the solar energy system of an eligible consumer and consumed by him, shall qualify for accounting towards the Renewable Purchase Obligation (RPO) of such eligible consumer if he is an obligated entity under Assam Electricity Regulatory Commission (Renewable Purchase Obligation and its Compliance) Regulation, 2010.
- (ii) The quantum of electricity generated from the solar energy system of an eligible consumer, shall qualify for accounting towards the Renewable Purchase Obligation (RPO) of the distribution licensee if the eligible consumer is not an obligated entity under Assam State Electricity Regulatory Commission (Renewable Purchase Obligation and its Compliance) Regulation, 2010.

11. APPLICABILITY OF OTHER CHARGES:

The grid solar system under net metering arrangement, whether self-owned or third party owned installed on eligible consumer premises, shall be exempted from wheeling and cross subsidy surcharges.

12. PARTICIPATE UNDER RENEWABLE ENERGY CERTIFICATE (REC) MECHANISM:

Grid interactive Net Metering injection will not be eligible for REC.

13. METERING ARRANGEMENT:

- 13.1. Net meter shall be installed at the interconnection points of the eligible consumers with the network of the distribution licensee.
- 13.2. Solar meter shall be installed at the delivery point of the solar energy system to measure the total solar electricity generated.
- 13.3. The solar meter and net meter shall be compatible with meter reading instrument (MRI) or with wireless equipment for recording meter readings:
- 13.4. Check meter shall be installed for the solar energy system having capacity more than 20KWp and for the solar energy system of capacity less than or equal to 20 KWp, the check meter would be optional:
- 13.5. The meters installed shall be jointly inspected and sealed on behalf of both the parties and shall be tested and installed only in the presence of the representatives of the consumer and the distribution licensee:
- 13.6. The meter reading taken by the distribution licensee shall form the basis of commercial settlement and a copy of the meter reading statement of the net meter and solar meter shall be handed over to the consumer as soon as meter reading is taken.
- 13.7. The metering and other connecting arrangement of a grid interactive systems

without and with battery backup shall be as provided in Annexure I & Annexure II respectively.

14. PENALTY OR COMPENSATION:

In case of failure of net metering system, the provisions of penalty or compensation shall be as per the provisions of the standard of performance regulations for distribution licensee.

15. AGREEMENT: an agreement will be signed between the eligible consumers and DISCOM regarding setting up of the system and net metering. A model draft Agreement format annexed as Annexure III.

16. OVERRIDING EFFECT:

Notwithstanding anything contained contrary –

- (a) In the AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2014 and
- (b) In the (Terms and Conditions for Determination of Tariff from Renewable Energy Sources) Regulations, 2012; and
- (c) In the AERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010 and
- (d) In the AERC (Electricity Supply Code and Related Matters) Regulations, 2004'

framed by the Commission under section 181 of the Electricity Act, 2003, these regulations will have overriding effect.

17. POWER TO REMOVE DIFFICULTIES:

If any difficulty arises in giving effect to any of the provisions of these regulations, the Commission may, either suo motu or on an application made to it, by general or special order, direct the licensee/ generator or any other person to take suitable action, not being inconsistent with the Act, which appears to the Commission to be necessary or expedient for the purpose of removing the difficulty.

18. ISSUE OF ORDERS AND DIRECTIONS:

Subject to the provisions of the Act and these regulations, the Commission may, from time to time, issue orders and practice directions with regard to the implementation of these regulations and procedure to be followed for such implementation and matters incidental or ancillary thereto.

19. SAVING OF INHERENT POWERS OF THE COMMISSION:

Nothing contained in these Regulations shall limit or otherwise affect the inherent powers of the Commission to adopt a procedure, which is at variance with any of the provisions of these regulations, if the Commission, in view of the special circumstances

of the matter or class of matters and for reasons to be recorded in writing, deems it necessary or expedient to depart from the procedure specified in these regulations.

20. INTERPRETATION:

All issues arising in relation to interpretation of these regulations shall be determined by the Commission and the decision of the Commission on such issues shall be final.

(By order of the Commission)

Secretary
Assam Electricity Regulatory Commission