

# ASSAM ELECTRICITY REGULATORY COMMISSION

## Notification

Dated Guwahati the 31<sup>st</sup> July, 2014

### CO-GENERATION AND GENERATION OF ELECTRICITY FROM RENEWABLE SOURCES OF ENERGY REGULATIONS, 2014

**No. AERC.299/2008/Pt-I/3** In exercise of the powers conferred under sub-section (1) of section 62 clauses (a), (b) and (e) of sub-section (1) of section 86 and sub-section (1) of section 181 of the Electricity Act 2003 and all powers enabling in that behalf, and after previous publication, the Assam Electricity Regulatory Commission makes the following regulations:-

#### REGULATIONS

##### 1. SHORT TITLE AND COMMENCEMENT:

- 1.1. These regulations may be called the “Assam Electricity Regulatory Commission (Co-generation and Generation of Electricity from Renewable Sources of Energy) 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:

Under Section 86(1) (e) of Electricity Act 2003 a State Regulatory Commissions has a mandate to -‘ promote cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with grid and sale of electricity to any person and also specify the percentage of renewable energy to be procured by licensees.....’

In keeping with the above mandate, the Commission made and notified the 'AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2009, covering all the matters mentioned under section 86(1)(e) of EA 2003 above.

During the year 2010 the CERC notified the (Terms and Conditions for recognition and issuance of Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2010 related to fulfillment of Renewable Purchase Obligation (RPO) of obligated entities through Renewable Energy Certificate (REC) mechanism. To comply with the provisions of the CERC (Terms and Conditions of issuance of Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2010 it was necessary for the AERC to make the (Renewable Purchase Obligation and its Compliance) Regulations, 2010. After notification of these Regulations the provisions related to RPO made in the AERC ‘Co-generation and Generation of Electricity from Renewable Sources of Energy Regulations 2009’ stands amended.

The AERC made the (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012, in the line of the CERC (Terms and Conditions for Tariff determination from Renewable Energy Sources) Regulations, 2012 and notified the same on 5<sup>th</sup> October 2012. With notification of the these Regulations the provisions related to determination of Tariff from Renewable Energy Sources in the AERC (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2009 stands repealed.

Further, during last five years there are a numbers of major developments in the renewable energy based power generation scenario in the Country particularly , of Solar Power, such as -

- (i) Launching of the ambitious Solar Mission (Jawaharlal Nehru National Solar Mission) during the year 2010.
- (ii) Notification of the ‘Technical Standards for Connecting of Distributed Generation Resources Regulation 2013’ by the Central Electricity Authority.
- (iii) Circulation of the Draft Model Regulation for ‘Rooftop Solar Grid Interactive systems based on Net metering Regulations’ for State ERC’s by the Forum of Regulators (FOR).

The present revision of the AERC ‘Co-generation and Generation of Electricity from Renewable Sources of Energy Regulations 2009’ is done duly taking into consideration all above developments.

With Notification of these Regulations the (Co-generation and Generation of Electricity from Renewable Sources of Energy) Regulations, 2009 shall stand repealed.

### 3. DEFINITIONS:

3.1. In these regulations, unless the context otherwise requires –

- (a) ‘**Act**’ means the Electricity Act, 2003 (Act 36 of 2003);
- (b) ‘**AEDA**’ means the Assam Energy Development Agency set up by the Government of Assam for coordinating activities relating to Renewable Energy Development and a nodal agency for renewable energy based power generation in the state.
- (c) ‘**AEGCL**’ means Assam Electricity Generation Company Ltd.
- (d) ‘**APDCL**’ means Assam Power Distribution Company Ltd. and a nodal agency for renewable energy based power generation in the state.
- (e) ‘**Banking**’ means the process under which a captive generating station supplies power to the grid not with the intention of selling it either to a third party or to a licensee, but with the intention of exercising his eligibility to draw back this power from the grid for its own use
- (f) ‘**Biomass**’ means wastes produced during agricultural and forestry operations (for example straws and stalks) or produced as a by-product of processing

operations of agricultural produce (e.g., husks, shells, deoiled cakes, etc); wood produced in dedicated energy plantations or recovered from wild bushes/weeds; and the wood waste produced in some industrial operations;

- (g) **‘Biomass gasification’** means a process of incomplete combustion of biomass resulting in production of combustible gases consisting of a mixture of Carbon monoxide (CO), Hydrogen (H<sub>2</sub>) and traces of Methane (CH<sub>4</sub>), which is called producer gas;
- (h) **‘Biogas’** means a gas created when organic matter like crop residues, sewage and manure breaks down in an oxygen-free environment(ferments);
- (i) **‘Capacity Utilization Factor or ‘CUF’** for a given period, means the total electricity sent out corresponding to actual generation during the reference period, expressed as a percentage of sent out electricity corresponding to installed capacity in that reference period and shall be computed in accordance with the following formula;  
$$\text{CUF} = \frac{\text{Gross generation over the reference period}}{\text{Installed capacity} \times \text{total hours during the reference period (including outage hours)}} \times 100\%$$
- (j) **‘Cogeneration’** means a process, which simultaneously produces two or more forms of useful energy (including Electricity)
- (k) **‘Capital cost’** means the capital cost as defined in relevant regulations
- (l) **‘Captive Generating Plant’** means a power plant set up by any person to generate electricity (which includes a power plant set up by any cooperative society or association of persons) primarily for his/their own use , where not less than twenty six percent of the ownership is held by the captive user(s), and not less than fifty one percent of the aggregate electricity generated in such plant, determined on an annual basis, is consumed for the captive ,fulfilling the requirements of the Rule 3 of the ‘ Electricity Rules ,2005 ‘made by the Central Government.
- (m) **‘Captive User’** means the end user of the electricity generated in a Captive Generating Plant primarily for his own use from a ‘Captive Generating Plant’
- (n) **‘CERC’** means the Central Electricity Regulatory Commission
- (o) **‘Commission’** means the Assam Electricity Regulatory Commission;
- (p) **‘Conduct of Business Regulations’** means the Assam Electricity Regulatory Commission (Conduct of Business) Regulations, 2004 as amended from time to time;
- (q) **‘DISCOM’** means a Power Distribution Company such as ,Assam Power Distribution Company(APDCL)
- (r) **‘Empowered Committee’** means a committee constituted under regulation.
- (s) **‘Firm Power’** means injecting of at least 700 units in to the grid by the

generator per hour per scheduled MW. [This calculation is based on a normative load factor of 70% (i.e. 1000 kWh x 70% Load Factor = 700 units per hour)].

- (t) **‘Infir Power’** means the energy supplied that is not firm power, which is interruptible on a very short notice
- (u) **‘Generator’** means the person(s) generating or intending to generate energy from a renewable sources.
- (v) **‘Grid Code’** means the grid code specified by the Central Commission under clause(h) of sub-section (1) of section 79 of the Act and includes the State Code specified by the State Commission under clause (h) of sub-section (1) of section 86 of the Act;
- (w) **‘Installed capacity’** or 'IC' means the summation of the name plate capacities of all the units of the generating station or the capacity of the generating station (reckoned at the generator terminals).
- (x) **‘Inter-connection Point’** shall mean interface point of renewable energy generating facility with the transmission system or distribution system, as the case may be:
  - a) In relation to Wind Energy Projects and Solar Photovoltaic Projects, inter-connection point shall be line isolator on outgoing feeder on HV side of the pooling sub-station;
  - b) In relation to small hydro power, biomass power and non fossil fuel based cogeneration power projects and Solar Thermal Power Projects the, inter-connection point shall be line isolator on outgoing feeder on HV side of generator transformer;
  - c) In case of Grid interactive projects’ shall mean interface point of renewable energy generating facility with the distribution system of a licensee as the case may be.
- (y) **‘licensee’** means a person who is granted a license or is a deemed licensee under section 14 of the Act;
- (z) **‘Interface line’** means the electric line between the interconnection point and the nearest point at which the electric line could technically be connected to the existing grid or distribution system.
- (aa) **‘MNRE’** means the Ministry of New and Renewable Energy of the Government of India.
- (bb) **‘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.

- (cc) **‘Non-firm power’** means the power generated from renewable sources, the hourly variation of which is dependent upon nature’s phenomenon like sun, cloud, wind etc., that cannot be accurately predicted.
- (dd) **‘Non fossil fuel based co-generation’** means the process in which more than one form of energy (such as steam and electricity) are produced in a sequential manner by use of non fossil fuel.
- (ee) **‘Open Access’** means the non-discriminatory provision for the use of transmission lines or distribution system or associated facilities with such lines or system by any licensee or consumer or a person engaged in generation in accordance with the regulations specified by the Appropriate Commission;
- (ff) **‘Power Purchase Agreement or PPA’** means a long term agreement between a generating company and a distribution licensee for supply of power on the terms and conditions specified therein and with the provision that the tariff for sale of power shall be as determined by the Commission from time to time;
- (gg) **‘Project’** means a generating station or the evacuation system upto inter-connection point, as the case may be, and in case of a small hydro generating station includes all components of generating facility such as dam, intake water conductor system, power generating station and generating units of the scheme, as apportioned to power generation;
- (hh) **‘Renewable Energy’** means the grid quality electricity generated from renewable energy sources.
- (ii) **‘Renewable Energy Power Plants’** or **‘RE Power Plants’** means the power plants in which grid quality electricity is generated from renewable energy sources. such as small hydro, wind, solar. Biomass, bio fuel cogeneration, urban or municipal waste and other such sources as approved by the MNRE and shall also cogeneration from such sources.
- (jj) **‘Renewable Energy Generator’** or **‘RE Generator’** or **‘Generator’** means a person who generates electricity from renewable sources.
- (kk) **‘Small Hydro’** means Hydro Power projects with a station capacity upto and including 25 MW.
- (ll) **‘Solar Mission’** or **JNNSM** means- Jawaharlal Nehru National Solar Mission launched by the Govt. of India in the year 2010.
- (mm) **‘Solar PV power’** means the Solar Photo Voltaic power project that uses sunlight for direct conversion into electricity through Photo Voltaic technology.
- (nn) **‘Solar Thermal power’** means the Solar Thermal power project that uses sunlight for direct conversion into electricity through Concentrated Solar Power technology based on either line focus or point focus principle.

- (oo) **‘TRANSCO’** means a power distribution company such as, Assam Electricity Grid Distribution Corporation Ltd (AEGCL).
- (pp) **‘Tariff period’** means the period for which tariff is to be determined by the Commission on the basis of norms specified under these Regulations;
- (qq) **‘State’** means the State of Assam;

The words and expressions used and not defined in these regulations but defined in the Act shall have the meanings assigned to them in the Act; expressions used herein but not specifically defined in these regulations or in the Act but defined under any law, passed by a competent legislature and applicable to the electricity industry in the State shall have the meaning assigned to them in such law; expressions used herein but not specifically defined in the regulations or in the Act or any law passed by a competent legislature shall have the meaning as is generally assigned to them in the electricity industry.

#### **4. ELIGIBILITY CRITERIA:**

Power projects using the following renewable energy resources and technologies, and also using new plant and machinery shall be covered under these Regulations, provided these are based on Technologies approved by the Ministry of New and Renewable Energy (MNRE), Government of India –

- a) Small Hydro Projects upto 25 MW
- b) Solar PV Power Projects, including rooftop and other small plants
- c) Solar Thermal Power Projects
- d) Biomass based projects using gasification technology
- e) Biomass based projects using ranking cycle technologies.
- f) Biogas based Power Project that uses 100% Biogas fired engines
- g) Waste to Energy Project
- h) Cogenerating plants using non fossil based fuel
- i) Wind Power Projects.
- j) Hybrid projects such as Wind Solar, Diesel-Solar, Hydro-Solar etc.
- k) Any other new and techno-economically viable technology in the State as accepted by the MNRE

#### **5. APPLICABILITY:**

Only projects approved for implementation by the State Government (or a State Agency) or by the Govt. of Indian shall be covered under these Regulations

## **6. CATEGORY OF PROJECT:**

The Renewable Energy power projects under these Regulations cover the following categories-

- a) MW size renewable power generating units connected to the grid like any other power generating plant. Such projects may be taken up either by State agencies, private developer or implemented in public- private partnership mode.
- b) Grid interactive Small Solar PV power plants including Roof top plants (from 1KW to 500 KW).
- c) Captive power generating plants in industrial and other premises, running off grid or connected to grid.
- d) Grid quality RE power generated and supplied off grid in the Decentralised Distributed Generation (DDG) projects in Off Grid Rural areas under provision of section 5 of EA 2003. Such project may be set up and managed by Private Developers, Panchayati Raj Institutions, Users Associations, Co-operative Societies etc. Such projects may be connected to grid if such exigencies arises (such as extension of grid) fulfilling technical, safety, regulatory and commercial requirements as per these regulations.

## **7. NODAL AGENCY AND IMPLEMENTING AGENCY:**

The State Government may declare by notification one or more Nodal Agency for implementation of renewable energy power generation programmes in the state. Type / category of Project to be taken up by such agencies and their respective jurisdiction and responsibilities shall also be specified by the State Government.

## **8. ROLE OF NODAL AGENCY:**

- (i) The concerned Nodal Agency shall take all necessary action to promote renewable energy project and facilitate setting up such projects .
- (ii) The Nodal agency shall provide all assistants and support to the Project Developers and others for setting up and running R.E based projects as detailed under these Regulations.

## **9. BENEFIT OF SUBSIDY, FINANCIAL SUPPORT AND INCENTIVES:**

The benefit of subsidy, financial support and incentives for any project shall be available only from one source and similar benefit would not be available from two sources.

## **10. TECHNICAL PARAMETERS AND OTHER TECHNICAL CONSIDERATIONS:**

The guiding technical parameter of such projects are underlined below-

### **a) Evacuation power and connectivity**

The DISCOM/TRANSCO will determine the voltage at which the RE Generators installation shall be connected to the Grid .

The DISCOM/TRANSCO will also determine the specifications of the interconnecting facilities required upto the interconnecting point and the same would be provided by the RE Generator at its own cost . Such facility with all control, metering & safety devices and equipments should be installed by the RE Generators at their own cost to the full satisfaction of the concerned DISCOM/ TRANSCO.

**b) Interface line**

The DISCOM/TRANSCO will construct the interface line (line between the interconnection point and the existing grid or distribution system) if the line is 5 Km or less. The cost of the interface line in excess of 5 km shall be borne by the DISCOM/TRANSCO and the generators on 50: 50 basis. The DISCOM/ TRANSCO will construct such lines and also maintain the same.

**c) Metering**

Metering equipments for the power generation and sale will be installed at site by the power generator at their own cost as per specifications of power utility or the same may be provided by the utility at the cost of the generator. Testing of these equipments will be carried out by power utility at a cost. The meter and metering arrangement shall be as per CEA Metering Regulations. Net metering shall be allowed for grid interactive SPV plants of capacity up to 500KW and such metering arrangement shall be as per provisions of the AERC ‘Grid Interactive Solar PV systems Regulation 2014’.

**d) Safety aspects**

- i) All Control, Protective and Safety Devices shall be as approved by the concerned TRANSCO/DISCOM. The installation of the Developer will be tested by the TRANSCO/DISCOM before connecting to their system.
- ii) The Developer is to obtain the necessary clearance/approval for charging the electrical system from the State Electrical Inspectorate before commissioning

**11. REGULATORY ISSUES:**

**a) Sale of Power :**

The state distribution licensee shall have first claim to the renewable power generated from a power plant or excess power generated from a captive plant.

The power available after meeting the need of the distribution license for meeting R.P.O. obligation may be sold to 3rd party.

A RE Generator may also sell power to a DISCOM at average pooled price and participate in the REC Mechanism as provided in the AERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010 and the CERC (Terms and Condition of Issuance of Renewable Energy Certificates for Renewable Energy Generation) Regulations, 2010.



**b) Tariff**

- (i) Tariff for Power generated through Renewable Energy Sources shall be as determined by the AERC as per provisions of the AERC (Terms and conditions for determination of Tariff from Renewable Energy Sources) Regulations, 2012 with latest amendment and notifications on these Regulations.
- (ii) For Projects under the Solar Mission, the tariff will be as specified in the Project Document for a specific programme under which a Project sanctioned.

**c) Open access:**

- (i) Non-discriminatory Open access in State Transmission/Distribution System shall be allowed to all RE based Generating stations as per the provisions of the AERC (Terms and Conditions for Open Access) Regulations, 2005 subject to the availability of surplus capacity in the State Transmission/ Distribution System.
- (ii) If any question arises as to the availability of surplus capacity in the State transmission system or the State distribution system, the matter shall be adjudicated and decided by the Commission.

**d) Charges for Open Access.**

All open access charges shall be payable as per AERC (Terms and Condition of Open Access) Regulations, 2005 and Tariff Regulations except that

**i) Transmission Charges:**

Transmission charges payable for open access availed by renewable energy power generation shall be two-third of the rate of such charges applicable for open access customers for long term and short term open access as determined in relevant tariff order.

**ii) Wheeling Charges:**

Wheeling charges applicable for use of distribution system or associated facilities of a licensee by open access customers for conveyance of electricity from renewable energy power generation shall be either one-third of the wheeling charges calculated as per tariff order under Tariff Regulations or cost of 7.5% of the energy fed to the grid irrespective of the distance of wheeling, whichever is higher.

No Wheeling/ Transmission charges are applicable in case all saleable power (i.e. power generated less auxiliary consumption less captive use) is sold to the State DISCOM/TRANSCO.

The TRANSCO/DISCOM will prepare a standard transmission/wheeling and banking agreement draft in consistent with these Regulations, as per AERC (Terms and Conditions for Open Access) Regulations, 2005.

**e) Banking of Power:**

The Generator shall be allowed to bank power within a period of one calendar year, for the purpose of withdrawal of the banked power in the event of emergency or shut down or maintenance of the plant, subject to following conditions:

- (i) Banking of energy upto 100%, as agreed between the plant and the distribution licensee, shall be allowed during the period declared by the Commission as peak hours from time to time.
- (ii) Withdrawal of power shall be allowed only during the period other than the period declared by the Commission as peak hours from time to time in its Tariff Orders.
- (iii) The plants shall provide ABT compliant Special Energy Meters and the monthly settlement of energy sales shall be done based on Power supplied during the peak hours as per SEM meter readings shall be considered as banked power.
- (iv) Banking charges shall be 10% of the energy banked.

Provided that for Small Hydro Projects shall be allowed to bank power for a period upto six months as provided in the Assam 'Small Hydro Policy, 2007'

**f) Third party sale:**

Third party sale to RE generators shall be allowed to a party within the State, at a Tariff determined by the AERC

**g) Promotional Incentives to Cogenerating Plants:**

Provisions of Regulations 15(c) and 15(f) shall also be available to all co-generating plants irrespective of fuel used subject to fulfillment certain eligibility conditions to be specified by the Commission.

**h) Start up and auxiliary consumption power:**

The power generator shall be entitled to draw start up Power and also auxiliary consumption power from the Distribution Licensee's network. The drawal of energy by the generator during the start up from the DISCOM shall be adjusted against the generated energy.

Provided that, supply of such power will be subject to prior intimation of the requirement to the supplier and availability of required power.

**i) Drawing of power during shut down:**

The solar PV and solar thermal power generator shall be entitled to draw power from the DISCOM's network during shutdown period of its plant or other emergencies. The energy consumed shall be billed at the temporary rate applicable to HT Industrial category. The drawal of such power shall not normally exceed 10 % of the peak MW capacity it delivers to the DISCOM.

Provided that, supply of such power will be subject to prior intimation of the requirement to the supplier and availability of required power.

**j) Sharing of CDM benefit :**

CDM benefits between Developer and Beneficiaries will be as follows:

- i) The CDM proceedings to be taken up by the Developer. 100% of gross proceeds on account of CDM benefits to be retained by the project developer in the first year after the date of commercial operation of the generating station.
- ii) In the second year, the share of the beneficiaries shall be 10 % which shall be progressively increased by 10% every year till it reaches 50%, where after the proceeds shall be shared in equal proportion, by the generating company and the beneficiary.

**k) Scheduling:**

The wind, solar PV and solar thermal power projects shall be out of the purview of 'scheduling' and 'merit order dispatch principles' as the generated power is Non-firm power.

**12. COMMERCIAL ISSUES:**

**a) Power purchase agreement**

After allotment of a Project the RE Generator intending to sell power to TRANSCO/DISCOM, to wheel/to bank shall execute a Power Purchase Agreement (PPA) for a minimum period as mutually agreed upon.

**b) Metering and billing**

The metering and communication arrangements shall be provided in accordance with the

AERC (Terms and conditions for open access Regulations), 2005 and subsequent amendments there of, and Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 in consultation with DISCOM/ TRANSCO. The periodicity of testing, checking, calibration etc., will be governed by the Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006.

Main and Check Meters shall have facility to communicate its reading to State Load Dispatch Centre on real time basis or otherwise as may be specified by the Commission. Meter reading shall be taken as per the procedure devised by the Distribution Licensee/State Load Despatch Centre. The term 'Meter' shall include Current transformers, voltage/potential transformers, wiring between them and meter box/panel etc.

Billing of the metered energy shall be carried out on a monthly basis.

**c) Payment mechanism**

The settlement period should not be more than 30 days from the date of presentation of the bill for the net energy sold after deducting the charges for start up power and reactive power to the concerned Distribution Licensee where the power is injected, in order to ensure that the generating company has an assurance of cash inflow for the energy delivered to the grid.

In case of delay beyond the 30 days payment period, the Distribution Licensee shall pay a late payment surcharge at the rate of 1.25% per month to the generating company.

In case the DISCOM makes the payment within 15 days from the date of presentation of bills by the generating company, a rebate of 1% billed amount shall be allowed by the generating company.

In case where payments of bills of the generating company are made through letter of credit, a rebate of 2% shall be allowed to the Distribution Licensee.

After allotment of a Project the RE Generator intending to sell power to TRANSCO/DISCOM to wheel/to bank shall execute a Power Purchase Agreement (PPA) for a minimum period as mutually agreed to.

**13. RENEWABLE PURCHASE OBLIGATION (RPO):**

The Distribution licensee and the other obligated entities are required to fulfill Renewable Purchase Obligation as per the provision of the AERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010.

**14. OBLIGATIONS AND DUTIES OF THE GENERATING STATION:**

- (1) The RE Generators and Captive Generators will have to fulfill requirements, duties and obligations applicable to such entities respectively prescribed under Section 10 and 9 of the EA 2003.

The RE Generator shall submit to the Commission the progress report of construction and details regarding commissioning of the generating plant or any other related information in such form and manner as may be required by the Commission, during progress of setting up of a project.

The RE Generator shall also submit the technical details concerning the generation and/or transmission as may be specified by the Commission for carrying out studies relating to cost and efficiency.

- (2) The RE Generator shall submit to the Commission the information in respect to generation, demand met, capacity availability, capacity utilization factor, auxiliary consumption, specific heat rate and specific oil consumption or on any other parameters etc. as may be directed by the Commission.
- (3) The RE Generator shall establish a communication and data transfer system with State Load Dispatch Centre and Co-ordinate with State Load Dispatch Centre and the Regional Load Dispatch Center.

- (4) The RE Generator shall establish, operate and maintain generating station and the associated substation in accordance with the provision of :
- (a) The technical standards for construction of electrical plants, electric lines and connectivity with the grid as specified in-
    - i) Central Electricity Authority (Technical Standard for Connectivity to the Grid) Regulations, 2007 for connectivity and voltage 33 KV and above. or
    - ii) Central Electricity Authority (Technical Standard for Connectivity of Distributed Generation Resources) Regulation, 2013 for the connectivity and voltage below 33 KV, as may be applicable.
  - (b) Safety requirements for construction, operation and maintenance of electrical plants and electric lines shall be as specified by the Central Electricity Authority's (CEA) (Measures Relating to Safety in Electrical installation) Regulations, 2010.
  - (c) Grid standards for operation and maintenance of transmission lines as specified by Central Electricity Regulatory Commission/Central Electricity Authority or the State Transmission Utility (section 73 (d) of the EA 2003).
- (5) The RE Generating Stations shall be under obligation to comply with the directions issued to it by the State Load Dispatch Centre failing which the plant shall be liable to a penalty as may be fixed by the Commission for each such non-compliance.
- (6) In case of dispute with reference to quality of electricity or safe, secure and integrated operation of the grid or in relation to any direction issued by the State Load Dispatch Centre, the matter shall be referred to the Commission for adjudication.

## **15. GRID INTERACTIVE SOLAR POWER PLANTS (GISPP) INCLUDING ROOF TOP PLANTS:**

### **15.1. Promotion of Grid Interactive System:**

The Government of Indian has now assigned high priority on Grid Interactive Solar Power Plants (GISPP) including Rooftop Plants. Number of States have taken initiatives to setup such systems.

Grid interactive plants can contribute a significant amount of energy for meeting day time load, reducing day time peak system demands in urban homes. As between 40% to 70% of day time electrical load in offices, Educational Institutes, Commercial establishments etc. can be met from grid interactive Solar systems, setting up of such systems shall be encouraged, even outside the Solar Mission.

### **15.2. Capacity Limits & Interconnection Voltage:**

The inter-connecting voltage level of the GIP for various capacity ranges shall be as follows

Capacity of System	Voltage Level
1. Upto 4 KW	Single Phase (230 Volt)
2. 4 KW and above upto 100 KW	3 Phase ( 400 Volt)
3. Above 100 KW up to 500 KW	11 KV

The maximum permissible capacity for GIP shall be 500 KW for a single net-metering point. However, there shall be no restriction on state power utilities installing bigger plants, subject to their compatibility with the system.

### 15.3. Technical and Operational aspects of GISPP:

- i) Excess power generated to be injected to the grid, with power credits accruing to the Photovoltaic energy producer. However, number and capacity of systems to be provided shall be as per limits and norms specified in the AERC Grid Interactive Solar PV Systems Regulation, 2014’.
- ii) 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’.
- iii) Grid interactive SPV Plants of 1KWp to 500KWp will be allowed.
- iv) However, Grid Interactive Plant with Net Metering facility may be initially provided to non domestic consumers such as Government and other offices, educational institutes, commercial establishments etc. in which major energy demand is during the day time. Further, for the first year of implementation (taking the date of Notification of these Regulations as the ‘zero date’), for facilitating proper monitoring, the scheme may be restricted to solar PV systems connected in 3 phase within the Guwahati City .The Distribution Licensee will prepare a detailed Report of the experience and feedback of systems installed during this period to the Commission.

### 16. PROMOTIONAL INCENTIVES AND PREFERENTIAL TARIFF FOR GISPP:

Under the National Solar Mission, subsidy between 30% to 90 % on benchmark capital cost of a GISPP is available. The State Government may consider providing appropriate capital subsidy to promote GISPP.

The Commission may determine suitable tariffs for GISPP (separate Tariff for Projects with and without capital subsidy) as per guidelines provided by the MNRE, Government of India.

### 17. OVERRIDING EFFECT:

Notwithstanding anything contained contrary—

- (a) In the AERC (Terms and Conditions for Determination of Tariff from Renewable Energy Sources) Regulations, 2012; and
- (b) In the AERC (Terms and Conditions for Open Access) Regulations, 2005;

- (c) In the AERC (Renewable Purchase Obligation and its Compliance) Regulations, 2010 and framed by the Commission under section 181 of the Electricity Act, 2003,

these regulations will have overriding effect.

**18. REPEAL AND SAVING:**

The Assam Electricity Regulatory Commission (Cogeneration and Generation of Electricity from Renewable Sources of Energy) Regulations, 2009, issued under Notification dated 3rd July 2009 and published in the Assam Gazette Extraordinary dated 22.01.2010 are hereby repealed.

Notwithstanding such repeal, anything done or any action already taken under the repealed Regulations, shall in so far as it is not inconsistent with these Regulations, be deemed to have been done or taken under the corresponding provisions of these Regulations.

**19. 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.

**20. 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.

**21. 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.

**22. 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