

Uttar Pradesh Electricity Regulatory Commission

Notification No.:2260

Dated:04-03-2016

In exercise of powers conferred under section 181 read with Sections 13, 14, 61(h), 66, 86(1) (e) & (k) of the Electricity Act, 2003 (36 of 2003) and all other powers enabling in this behalf, the Uttar Pradesh Electricity Regulatory Commission (UPERC) hereby makes the following Regulations, namely:

Draft Mini-Grid Renewable Energy Generation and Supply Regulations, 2016 (MREG&S Regulations, 2016)

1. Short Title and Commencement

- 1.1 These Regulations shall be called the UPERC (Mini-Grid Renewable Energy Generation and Supply) Regulations, 2016 (hereinafter referred to as the Regulations, 2016).
- 1.2 These Regulations shall come into force from the date of official notification of these Regulations.
- 1.3 Words and expressions used in these Regulations and not defined herein but defined in the Electricity Act, 2003 (hereinafter referred to as 'the Act') or as amended from time to time, shall have the meaning as assigned to them under the Act.
- 1.4 These Regulations shall apply to whole state of Uttar Pradesh.

2. Definitions and Interpretations

In these Regulations, unless the context otherwise requires,

- a) '**Billing Cycle**' means the billing frequency for electricity bill raised by the concerned Distribution Licensee to the consumers;

- b) **‘Commission’** means the Uttar Pradesh Electricity Regulatory Commission constituted under the Act;
- c) **‘Detailed Project Report (DPR)’** means a detailed report consisting of technical, financial and environmental aspects, etc. related to the Mini-Grid project;
- d) **‘Distribution Franchisee (DF)’** means a person authorized by a Distribution Licensee to supply electricity on its behalf in a particular area within his area of supply;
- e) **‘Distribution Franchisee Agreement’ (DFA)** means the Agreement between the Distribution Licensee and the Mini-Grid Operator for the services rendered by Mini-Grid Operator as DF;
- f) **‘Distribution Franchisee Fee’** is the fee for services rendered by the Mini-Grid Operator on behalf of Distribution Licensee as per the DFA;
- g) **‘Distribution Licensee’s System’** means the system of wires and associated facilities between the delivery points on the transmission lines or the generating station connection and the point of connection to the installation of the consumers;
- h) **‘Feed-in-Tariff’ (FiT)** means the tariff for procurement of electricity by the Distribution Licensee from the Mini-Grid based renewable energy system as determined by Uttar Pradesh Electricity Regulatory Commission pursuant to Section 61(h) of the Act;
- i) **‘Grid Arrival’** means extension of Distribution Licensee’s system in the Mini-Grid area;
- j) **‘Interconnection Point’** means the interface point for supply of electricity from the Mini-Grid Renewable Energy System to the Distribution Licensee’s System;
- k) **‘Mini-Grid Area’** means the areas where electricity would be supplied through Mini-Grid projects by the Mini-Grid Operator under these Regulations;
- l) **‘Mini-Grid Operator’ (MGO)** means a person, a group of persons, local authority, Panchayat Institution, users’ association, co-operative societies, non-governmental organizations, a company that constructs, commissions, operates and maintains Mini-Grid Renewable Energy System within the State of Uttar Pradesh for generation and supply of electricity in the Mini-Grid areas and has agreed to operate under these Regulations;
- m) **‘Mini-Grid Project’** means the Mini-Grid Renewable Energy System generating and supplying electricity to consumers or selling electricity to Distribution Licensee;

- n) **‘Mini-Grid Renewable Energy System (MRES)’** means the stand alone power plant generating electricity using renewable energy source in the Mini-Grid area for supply to consumers and/or to Distribution Licensee;
- o) **‘Obligated Entity’** means the entity mandated under clause (e) of subsection (1) of section 86 of the Act to fulfil the Renewable Purchase Obligation and identified under UPERC (Promotion of Green Energy through Renewable Purchase Obligation) Regulations, 2010 and subsequent amendments thereof;
- p) **‘Power Purchase Agreement’ (PPA)** is an Agreement between Distribution Licensee and MGO for the purchase of electricity generated from the MRES upon interconnection with grid;
- q) **‘Primary Distribution Network’ (PDN)** means the distribution infrastructure owned by MGO for supplying electricity generated from the MRES to the consumers in the Mini-Grid area as per safety measures specified in the Act under Section 53 and technical standards in the implementation guidelines specified by CEA.
- r) **‘Regulations’** means the Mini-Grid Renewable Energy Generation and Supply Regulations, 2016.
- s) **‘Renewable Energy Certificates’ (REC)** means the Certificates issued in accordance with the procedures specified by the Central Electricity Regulatory Commission through Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 or as amended from time to time;
- t) **‘Renewable Energy Sources’** means renewable sources such as small hydro, wind, solar, biomass, bio fuel, urban or municipal waste and other such sources as approved by the MNRE from time to time for generation of electricity;
- u) **‘Renewable Purchase Obligation’ (RPO)** means the requirement as specified under clause (e) of sub-section (1) of Section 86 of the Act, for the obligated entity to purchase electricity generated from renewable energy sources;
- v) **‘State Nodal Agency’** means the nodal agency at the state level for promotion of grid connected and off-grid renewable energy in the state of Uttar Pradesh. As per the existing arrangement UPNEDA shall act as the State Nodal Agency for Mini-Grid projects;

- w) ‘**Tariff Period**’ means the period for which FiT is to be determined by the Commission electricity generated from MRES;
- x) ‘**Wheeling Agreement**’ means the agreement signed by Distribution Licensee with MGO for supply of electricity through PDN;
- y) ‘**Year**’ means a Financial Year;

Part – A

Scope and Application

3. Scope of Regulations and Extent of Application

- 3.1 These Regulations shall apply to new & existing Mini-Grid projects for generation and supply of electricity to consumers in the rural areas in the State of U.P. The existing Mini- Grid projects shall within six months of notification of these Regulations, comply the technical standards and safety measures as per the Regulations;
- 3.2 The Mini-Grid projects with installed capacity ranging from 10kWp to 500kWp shall be governed by these Regulations;

Part – B

General Principles

4. Models for Business Operations

- 4.1 MGO may implement Mini-Grid projects for supply of electricity in Mini-Grid areas under following operational models or any subsequent model(s) as approved by the Commission in future:

4.1.1 Model A: No existence of Grid

- a) MGO shall construct, commission, operate and maintain Mini-Grid projects for generation and supply of electricity through PDN in areas where Distribution Licensee’s System doesn’t exist.

- b) MGO shall be entitled to supply entire quantum of electricity generated from the Mini-Grid projects to the consumers at mutually agreed tariff. Upon grid arrival, MGO may opt for one of the following electricity supply options:
- Continue to supply entire quantum of electricity generated to the consumers through PDN at mutually agreed tariff,
- Or
- Generate and supply electricity to the consumers at mutually agreed tariff and sell excess/surplus electricity to the Distribution Licensee at the interconnection point at generalized Mini-Grid FiT to be determined by the Commission separately,
- Or
- Generate and supply entire electricity generated to the Distribution Licensee at the interconnection point at FiT determined by the Commission and shall be governed by UPERC Regulations regarding Renewable Energy.
- c) MGO shall have the option to transfer ownership of PDN conforming to the standards of Distribution Licensee's system to Distribution Licensee with mutual consent based on book value of assets on the date of transfer. The book value of the asset will be determined by a third party agency appointed for a time period of three years by State Nodal Agency. The cost for valuation of assets shall be equally borne by the concerned MGO and the concerned Distribution Licensee.
- d) MGO shall be allowed to migrate to any of the options in a model as per the arrangement to be detailed out in the implementation guidelines.

4.1.2 Model B: Grid pre-exists

- a) MGO shall construct, commission, operate and maintain Mini-Grid projects for generation and supply of electricity through PDN in areas where Distribution Licensee's System pre-exists. Capacity of MRES shall be based on capacity declared by MGO.
- b) MGO shall be entitled to supply entire quantum of electricity generated from the MRES to the consumers through PDN at mutually agreed tariff. After supplying

electricity to consumers for a minimum term period of six months, which could be reviewed further by the Commission, MGO may opt for one of the following electricity supply options:

- Continue to supply entire electricity generated to the consumers through PDN at mutually agreed tariff,

Or

- Generate and supply electricity to the consumers at mutually agreed tariff and sell excess/surplus electricity to the Distribution Licensee at the interconnection point at generalized Mini-Grid FiT to be determined by the Commission separately,

Or

- Generate and supply entire electricity generated to the Distribution Licensee at the interconnection point at generalized Mini-Grid FiT to be determined by the Commission separately. MGO shall decide upon future use of PDN as the entire quantum of electricity generated is sold to the Distribution Licensee at the interconnection point at generalized Mini-Grid FiT based upon technology specific MRES;

- c) MGO shall be allowed to migrate to any of the options in the model as per the arrangement to be detailed out in the proposed implementation guidelines.

Part – C

Technical Framework

5. Technical Standards for Construction of PDN

- 5.1 MGO shall be responsible for safe Operation and Maintenance of the PDN; as per the EA & rules regulations made there under.
- 5.2 Technical Standards for construction of PDN shall be issued in the implementation guidelines; or shall be the guidelines issued by the Distribution Licensees.

- 5.3 Technical Standards for Distribution Licensee's system shall be shared by Distribution Licensee in public domain within one month from the date of official notification of these Regulations;
- 5.4 Mini-Grid Projects with project capacity of 10 KW and above shall be required to construct PDN conforming to the technical standards of Distribution Licensee's system;
- 5.5 These Regulations shall be applied on all new and existing Mini-Grid projects, State Nodal Agency shall appoint third party agency for verification of technical standards of PDN;

6. Technical Standards for Interconnection with the Grid

- 6.1 Technical Standards for Interconnection with the Grid shall be issued in the implementation guidelines by the State Nodal Agency in consultation with Distribution Licensee and approved by the Commission. State Nodal Agency can also follow the standards issued by the Authority for Mini-Grid projects in future;
- 6.2 Central Electricity Authority (Technical Standards for connectivity of the Distributed Generation Resources) Regulations, 2013 or as amended from time to time, shall be applicable for interconnection of the Mini-Grid project with the Grid till the proposed technical standards for Interconnection are approved by the Commission.
- 6.3 The cost for interconnection network from the MRES to the Interconnection point shall be borne by the MGO.

7. Safety Measures for Mini-Grid projects

- 7.1 The installations of electrical equipment must comply with Central Electricity Authority (Measures of Safety and Electricity Supply) Regulations, 2010 and subsequent amendments thereof;

8. Metering Arrangement

- 8.1 All the meters shall adhere to the standards and provisions specified in CEA (installation and operation of meters), Regulations 2006 and subsequent amendments thereof;
- 8.2 The installation and operation of meters shall be in conformity with the relevant Regulations notified by the Authority from time to time;
- 8.3 Distribution Licensee shall install meter(s) at the interconnection point of MRES and Distribution Licensee's system;
- 8.4 The cost for installation of meter(s) at interconnection point shall be borne by the Distribution Licensee;
- 8.5 MGO shall install meter as per the following requirements:
 - a. Generation meter at the Mini-Grid project to record the generation of electricity. This will also serve the purpose of RPO fulfillment for obligated entity(ies);
 - b. Meter(s) at each of the outgoing feeder(s) from the Mini-Grid project;

Part – D

Operational Framework

9. Distribution Franchisee Framework

- 9.1 The Commission will issue model DFA which shall be executed between the MGO and concerned Distribution Licensee;
- 9.2 MGO may undertake role of DF provided MGO fulfils the modalities to be specified in the implementation guidelines for the appointment of DF by the Distribution Licensee. In such case, MGO shall enter into DFA with Distribution Licensee for undertaking operations on behalf of the Licensee and shall be compensated through a distribution franchisee fee mechanism;
- 9.3 Distribution Franchisee Fee and other terms and conditions shall be covered in the DFA;

Part – E

Commercial Framework

10. Energy Accounting and Settlement for supply to consumers

- 10.1 MGO shall mutually decide with the consumers on billing and payment cycle of invoices. The same alongwith projects details shall submitted to UPERC within one months of commencement & Operation.

11. Energy Accounting and Settlement for supply to Distribution Licensee

- 11.1 MGO shall raise invoice against the electricity injected to the Distribution Licensee's system at the interconnection point based on the billing period of the Distribution Licensee and shall be reimbursed by the Distribution Licensee based on the FiT determined by the Commission;
- 11.2 The other terms and conditions of payment and contract shall be covered in the PPA;

12. Energy Accounting and Settlement for Distribution Franchisee activities

- 12.1 MGO shall raise invoice to Distribution Licensee for Distribution Franchisee activities as per the DFA;
- 12.2 The other terms and conditions of payment and contract shall be covered in the DFA.

13. Renewable Purchase Obligation

- 13.1 The quantum of electricity generated from the MRES shall qualify towards compliance of RPO for the Discom.

14. Renewable Energy Certificate mechanism

- 14.1 Applicability of REC shall be based on the Central Electricity Regulatory Commission (Terms and Conditions for recognition and issuance of Renewable

Energy Certificate for Renewable Energy Generation) Regulations, 2010 or as amended from time to time

Part – F

Contractual Framework

15. Power Purchase Agreement

- 15.1 The capacity declared by MGO shall qualify for PPA;
- 15.2 For partial or entire sale of electricity generated from MRES, MGO shall enter into PPA with Distribution Licensee;

16. Revocation of Agreements

- 16.1 In case of termination of Agreement(s), the Distribution Licensee and MGO shall follow the process specified in the PPA and DFA (as may be applicable).

17. Exit Options

- 17.1 MGO shall be allowed to exit the Mini-Grid area upon obtaining requisite clearance from the State Nodal Agency;
- 17.2 The Exit options will be governed by the Agreement(s) applicable to the MGO and Distribution Licensee;
- 17.3 Under Model A in areas where Mini-Grid pre-exists, MGO shall mutually decide with Distribution Licensee for transfer of ownership of PDN.

Part – G

Roles and Responsibilities of Stakeholders

18.State Nodal Agency:

18.1 In order to facilitate smooth and effective implementation of these Regulations, the State Nodal Agency shall have following roles and responsibilities:

- a. Provide inputs to the Commission in determination of FiT for MRES as and when required;
- b. Institute a process to keep track of Mini-Grid project development in the state;
- c. Submit technical standards for interconnection in consultation with Distribution Licensee to the Commission within three months from the date of official notification of these regulations;
- d. Facilitate MGO in migration within an applicable supply model to operate the Mini-Grid project;
- e. Support the Commission and furnish information sought from time to time in order to effectively implement the Regulations.
- f. Administer exit and migration requests of MGO.
- g. Facilitate third party verification of PDN for confirmation of technical standards and safety measures for new Mini-Grid projects and existing projects willing to operate under prescribed regulations.

19.Distribution Licensee:

19.1 Distribution Licensee shall be responsible for the following activities:

- a. Specify and share the technical standards of Distribution Licensee's system;
- b. Enter into PPA with MGO within one month of receiving application from MGO;
- c. With Mutual consent, enter into DFA upon receiving application from MGO.

20.Mini-Grid Operator:

20.1 MGO shall generate and supply electricity to consumers in the Mini-Grid areas;

- 20.2 The Mini-Grid project shall conform to technical standards and safety measures specified in the Regulations;
- 20.3 Execute the functions as outlined under PPA and DFA (as applicable) with the Distribution Licensee of the area upon interconnection with grid.

21. Consumers in the Mini-Grid area:

- 21.1 Consumers in the identified Mini-Grid area shall regularly pay the electricity charges to the MGO, based on the mutually agreed tariff;
- 21.2 Consumers shall adopt Energy Efficient measures by using Energy Efficient appliances and reduce the overall electricity consumption.

Part – H Miscellaneous

22. Payment Security

- 22.1 The Distribution Licensee shall prioritize making payments to MGO.
- 22.2 Compensation against FiT for purchase of green electricity from the Mini-Grid project, Asset fee (if payable) and the Distribution Franchisee Fee shall form part of ARR for the Distribution Licensee.

23. Formation of Technical Committee

- 23.1 Technical Committee will be constituted at the state level, by the Commission.
- 23.2 The Committee will have representations from SNA and Distribution Licensee, not below the rank of Chief Engineer;
- 23.3 The Committee will supervise the overall progress of the proposed activities for effective implementation of the regulations.

24. Grievance Redressal Mechanism

- 24.1 State Nodal Agency to resolve/facilitate any conflict between MGO and the concerned Distribution Licensee(s).
- 24.2 If dispute is not resolved within 3 months any of the parties can approach the Commission.
- 24.3 Grievance of any consumer shall be redressed as per UPERC(CGRF & Electricity Ombudsman) Regulations, 2004.

25. Implementation Guidelines

- 25.1 Within three months of official notification of these Regulations, State Nodal Agency shall develop Implementation guidelines governing the Mini-Grid project framework with following considerations:
- a. Technical standards for construction of PDN,
 - b. Technical standards for interconnectivity of the Mini-Grid project with the grid,
 - c. Migration options within a model,
 - d. Principles of Distribution Franchisee agreement,
 - e. Any other relevant matter for implementation of the Regulations.
- 25.2 The Implementation Guidelines shall be approved by the Commission.

26. Power to give directions:

- 26.1 The Commission may from time to time issue such directions and orders as considered appropriate for implementation of these Regulations.

27. Power to Relax:

- 27.1 The Commission may by general or special order(s), for reasons to be recorded in writing, and after giving an opportunity of hearing to the parties likely

to be affected, may relax any of the provisions of these Regulations on its own motion or on an application made before it by an interested person.

28. Power to remove difficulties:

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

29. Power to amend

29.1 The Commission may from time to time add, vary, alter, suspend, modify, amend or repeal any provisions of these Regulations.

29.2 Review Commission shall review the regulation after 5 years if necessary.

(Secretary)