

Notified on 09.09.2016

Madhya Pradesh Electricity Regulatory Commission

Dated: 02.09.2016

No. 1439/MPERC /2016 - In exercise of powers conferred by Section 181 read with Sections 13, 14, sub-section (h) of section 61, 66, clause (e) and (k) of sub-section (1) of section 86 of the Electricity Act, 2003 (36 of 2003) and all other powers enabling in this behalf, the Madhya Pradesh Electricity Regulatory Commission (MPERC) hereby makes the following Regulations, namely:

MPERC (Micro-Grid Renewable Energy Generation and Supply) Regulations, 2016

1. Short Title and Commencement:

- (1) These Regulations shall be called the MPERC (Micro-Grid Renewable Energy Generation and Supply) Regulations, 2016. (G-40 of 2016)
- (2) These Regulations shall apply to whole state of Madhya Pradesh.
- (3) These Regulations shall come into force from the date of publication of this notification in the M.P. Gazette.

2. Definitions and Interpretations :- In these Regulations, unless the context otherwise requires,

- a) "**Act**" means Electricity Act, 2003 (36 of 2003);
- b) "**Billing Cycle**" means the billing frequency for electricity bill raised by the Micro-Grid Operator to the consumer or to the Distribution Licensee;
- c) "**Commission**" means the Madhya Pradesh Electricity Regulatory Commission constituted under the Act;
- d) "**Detailed Project Report (DPR)**" means a detailed report consisting of technical, financial and environmental aspects, etc. related to the Micro-Grid project;
- e) "**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;
- f) "**Distribution Franchisee Agreement (DFA)**" means the Agreement between the Distribution Licensee or M.P. Power Management Co. Ltd. on behalf of Distribution Licensee and the Micro-Grid Operator for the services rendered by Micro-Grid Operator as DF;
- g) "**Distribution Franchisee Fees**" is the fee for services rendered by the Micro-Grid Operator on behalf of Distribution Licensee as per the DFA;
- h) "**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;

- i) "**Feed-in-Tariff**" (FiT) means the tariff for procurement of electricity by the Distribution Licensee from the Micro-Grid based renewable energy system as determined by Madhya Pradesh Electricity Regulatory Commission pursuant to Section 61(h) of the Act;
- j) "**Grid Arrival**" means extension of Distribution Licensee's system in the Micro-Grid area;
- k) "**Interconnection Point**" means the interface point for supply of electricity from the Micro-Grid Renewable Energy System to the Distribution Licensee's System;
- l) "**Micro-Grid Area**" means the areas where electricity would be supplied through Micro-Grid projects by the Micro-Grid Operator under these Regulations;
- m) "**Micro-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 Micro-Grid Renewable Energy System within the State of Madhya Pradesh for generation and supply of electricity in the Micro-Grid areas and has agreed to operate under these Regulations;
- n) "**Micro-Grid Project**" means the Micro-Grid Renewable Energy System generating and supplying electricity to consumers or selling electricity to Distribution Licensee;
- o) "**Micro-Grid Renewable Energy System (MRES)**" means the stand alone power plant generating electricity using renewable energy source in the Micro-Grid area for supply to consumers and/or to Distribution Licensee;
- p) "**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 MPERC (Cogeneration and generation of electricity from renewable sources of energy) (Revision-I) Regulations, 2010 and subsequent amendments thereof;
- q) "**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;
- r) "**Primary Distribution Network**" (PDN) means the distribution infrastructure owned by MGO for supplying electricity generated from the MRES to the consumers in the Micro-Grid area as per safety measures specified under Section 53 of the Act and technical standards in the implementation guidelines specified by CEA.
- 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 Renewable Energy Generation) Regulations, 2010 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 solid 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 Madhya Pradesh. As per the existing

arrangement MPUVNL shall act as the State Nodal Agency for Micro-Grid projects;

- w) "**Tariff Period**" means the period for which FiT is to be determined by the Commission for the 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:

- (1) These Regulations shall apply to new & existing Micro-Grid projects for generation and supply of electricity to consumers in the rural areas in the State of M.P. The existing Micro-Grid projects shall within six months of notification of these Regulations, comply the technical standards and safety measures as per the Regulations;
- (2) The Micro-Grid projects with installed capacity of 10kW or more shall be governed by these Regulations;

Part – B

General Principles

4. Model for Business Operations:

- (1) MGO may implement Micro-Grid projects for supply of electricity in Micro-Grid areas where grid is not in existence under following operational model or any subsequent model as approved by the Commission in future:
 - a) MGO shall construct, commission, operate and maintain Micro-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 Micro-Grid projects to the consumers at mutually agreed tariff. Upon grid arrival, MGO shall 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 MPERC Regulations regarding Renewable Energy.
 - c) MGO shall 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 MGO shall rectify the shortcomings as per CEA Standards, if pointed out by the Discom while taking over the PDN. The book value of the asset shall be determined by a third party agency appointed for a time period of three years by the Commission. The cost for valuation of assets shall be equally borne by the concerned MGO and the concerned Distribution Licensee.

Part – C
Technical Framework

5. Technical Standards for Construction of PDN:

- (1) MGO shall be responsible for safe Operation and Maintenance of the PDN as per the relevant Rules/Regulations.
- (2) Technical Standards for construction of PDN shall be as per the Central Electricity Authority (Measures relating to Safety and Electric Supply) Regulations, 2010.
- (3) Technical Standards for Distribution Licensee's system shall be shared by the Distribution Licensee in public domain within one month from the date of official notification of these Regulations.
- (4) Micro-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) These Regulations shall be applied on all new and existing Micro-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:

- (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 Micro-Grid projects in future.
- (2) Central Electricity Authority (Technical Standards for connectivity of the Distributed Generation Resources) Regulations, 2012 shall be applicable for interconnection of the Micro-Grid project with the Grid till the proposed technical standards for Interconnection are approved by the Commission.
- (3) The cost for interconnection network from the MRES to the Interconnection point shall be borne by the MGO.

7. Safety Measures for Micro-Grid projects:

The installations of electrical equipment must comply with Central Electricity Authority (Measures of Safety and Electric Supply) Regulations, 2010

8. Metering Arrangement:

- (1) All the meters shall adhere to the standards and provisions specified in CEA (Installation and operation of meters) Regulations, 2006 .
- (2) Distribution Licensee shall install meter(s) at the interconnection point of MRES and Distribution Licensee's system.
- (3) The cost for installation of meter(s) at interconnection point shall be borne by the Distribution Licensee.
- (4) MGO shall install meter as per the following requirements:

- (a) Generation meter at the Micro-Grid project to record the generation of electricity. This shall also serve the purpose of RPO fulfillment for obligated entity(ies);and
- (b) Meter(s) at each of the outgoing feeder(s) from the Micro-Grid project.

Part – D

Operational Framework

9. Distribution Franchisee Framework

- (1) A DFA shall be executed between the MGO and concerned Distribution Licensee or M.P. Power Management Co. Ltd. on behalf of the Distribution Licensee.
- (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.
- (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:

MGO shall mutually decide with the consumers on billing and payment cycle of bills. The same along with projects details shall be submitted to the Commission one month before the commencement of Operation.

11. Energy Accounting and Settlement for supply to Distribution Licensee:

- (1) MGO shall raise bill 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.
- (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:

- (1) MGO shall raise bill to Distribution Licensee for Distribution Franchisee activities as per the DFA.
- (2) The other terms and conditions of payment and contract shall be covered in the DFA.

13. Renewable Purchase Obligation:

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

14. Renewable Energy Certificate mechanism:

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:

- (1) The capacity declared by MGO shall qualify for PPA.
- (2) For partial or entire sale of electricity generated from MRES, MGO shall enter into PPA with Distribution Licensee or M.P. Power Management Co. Ltd. on behalf of the Distribution Licensee.

16. Revocation of Agreements:

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:

- (1) MGO shall be allowed to exit the Micro-Grid area upon obtaining requisite clearance from the State Nodal Agency.
- (2) The Exit options will be governed by the Agreement(s) applicable to the MGO and Distribution Licensee.
- (3) In areas where Micro-Grid pre-exists, MGO shall mutually decide with Distribution Licensee for transfer of ownership of PDN on advent of grid.

Part – G Roles and Responsibilities of Stakeholders

18. State Nodal Agency:

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) To institute a process to keep track of Micro-Grid project development in the state;
- (c) To 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) To facilitate MGO in migration within an applicable supply model to operate the Micro-Grid project;
- (e) To support the Commission and furnish information sought from time to time in order to effectively implement the Regulations.
- (f) To administer exit and migration requests of MGO; and
- (g) To facilitate third party verification of PDN for confirmation of technical standards and safety measures for new Micro-Grid projects and existing projects willing to operate under specified Regulations.

19. Distribution Licensee:

Distribution Licensee shall be responsible for the following activities:

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

20. Micro-Grid Operator:

- (1) MGO shall generate and supply electricity to consumers in the Micro-Grid areas;
- (2) The Micro-Grid project shall conform to technical standards and safety measures specified in the Regulations.
- (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 Micro-Grid area:

- (1) Consumers in the identified Micro-Grid area shall regularly pay the electricity charges to the MGO, based on the mutually agreed tariff.
- (2) Consumers shall adopt Energy Efficient measures by using Energy Efficient appliances and reduce the overall electricity consumption.

Part - H

Miscellaneous

22. Payment Security

- (1) The Distribution Licensee shall prioritize making payments to MGO.
- (2) Compensation against FiT for purchase of green electricity from the Micro- 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

- (1) Technical Committee will be constituted at the state level, by the Commission.
- (2) The Committee will have representations from State Nodal Agency, Micro-Grid Operator and Distribution Licensee, not below the rank of Chief Engineer.
- (3) The Committee will supervise the overall progress of the proposed activities for effective implementation of the Regulations.

23. Grievance Redressal Mechanism:

- (1) The Commission shall resolve any conflict between MGO and the concerned Distribution Licensee(s).
- (2) Grievance of any consumer shall be redressed as per MPERC (Establishment of Forum and Electricity Ombudsman for Redressal of Grievance of Consumer) Regulations, 2009.

25. Implementation Guidelines:

- (1) Within three months of official notification of these Regulations, the Distribution Licensee shall develop Implementation guidelines governing the Micro-Grid project framework with following considerations:
 - (a) Technical standards for construction of PDN;
 - (b) Technical standards for interconnectivity of the Micro-Grid project with the grid;
 - (c) Migration options within a model;
 - (d) Principles of Distribution Franchisee agreement; and
 - (e) Any other relevant matter for implementation of the Regulations.

(2) The Implementation Guidelines shall be approved by the Commission.

26. Power to give directions:

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

27. Power to Relax:

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:

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 it to be necessary for removing such difficulty.

29. Power to amend:

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

By order of the Commission

Shailendra Saxena, Commission Secretary