

**JHARKHAND STATE ELECTRICITY REGULATORY COMMISSION,
RANCHI**

**Jharkhand State Electricity Regulatory Commission (Energy
Conservation and Demand Side Management) Regulation, 2024**

In exercise of the powers conferred by clause (zp) of sub-section (2) of section 181 of the Electricity Act, 2003 (36 of 2003), the Jharkhand Electricity Regulatory Commission hereby makes this regulation namely Jharkhand State Electricity Regulatory Commission (Energy Conservation and Demand Side Management) Regulations, 2024.

1. Short Title, Commencement and Interpretation

- 1.1.** These Regulations shall be called the Jharkhand State Electricity Regulatory Commission (Energy Conservation and Demand Side Management) Regulations, 2024.
- 1.2.** These regulations shall apply to all distribution licensees and entities engaged in the supply, distribution of electricity within the State of Jharkhand.
- 1.3.** These Regulations shall come into force on the date of its publication in the Jharkhand Gazette.

2. Definitions

- 2.1.** In these Regulations, unless the context otherwise requires:
- a) **‘Act’** shall mean the Electricity Act, 2003 and subsequent amendments thereof;
 - b) **‘Baseline data’** means the initial base level consumption and/or demand for electricity before a DSM program begins to provide a starting point for comparison for assessing program impact;
 - c) **‘Bureau’** or **‘BEE’** means the Bureau of Energy Efficiency established under subsection (1) of Section 2 of The Energy Conservation Act, 2001
 - d) **‘Commission’** or **‘JSERC’** shall mean the Jharkhand State Electricity Regulatory Commission;
 - e) **‘Cost Effectiveness Index’** shall mean an indicator of the attractiveness of any investment in DSM program or when compared to the costs of energy produced and delivered in the absence of such an investment;
 - f) **‘Demand Side Management’** or **‘DSM’** shall mean the planning, implementation, and monitoring of activities that modify the demand for electricity or influence the pattern of electricity consumption in a manner that results in lower overall electricity usage or cost savings;

- g) **‘Distribution licensee’** shall mean a licensee authorized to operate and maintain a distribution system for supplying electricity to the consumers in its area of supply;
- h) **‘DSM Resource Acquisition’** shall mean a mechanism to implement DSM projects through customers, Energy Service Companies, Non-Government Organizations, manufacturers/suppliers, or other private sector organizations, with payment made to them by the Distribution Licensee for the resultant energy and load reductions;
- i) **“Energy Services Company”** shall mean a company which is in the business of providing energy efficient and load management equipment and/or services to endues customers and is approved by Bureau;
- j) **‘Energy Conservation’** shall mean any action that leads to the reduction of energy consumption or enhances the efficient use of energy without affecting the level or quality of the output;
- k) **‘Energy Audit’** shall mean a detailed inspection, survey, and analysis of energy flows in a building, process, or system with the objective of identifying energy conservation and DSM opportunities;
- l) **‘Evaluation, Measurement and Verification’** shall mean activities which evaluate, measure and verify performance or other aspects of DSM or Energy Efficiency (EE) programs or their market environment;
- m) **‘Monitoring and Reporting’** shall mean activities which monitor and evaluate the progress of DSM/energy efficiency programs of the Distribution Licensee;
- n) **‘Peak Demand’** shall mean the maximum electricity demand during a specified period;
- o) **‘Time-of-use Tariff’** shall mean a tariff structure that varies the price of electricity based on the time of day and the day of the week;
- p) **‘Demand Response’** shall mean the modification of consumer electricity usage patterns in response to signals from the utility or market.
- q) **‘Year’** or **‘Financial Year’** shall mean a period commencing on April 01 of a calendar year and ending on March 31 of the subsequent calendar year;

2.2. Words and expressions used in this Regulation and not defined herein but defined in the Act shall have the meanings respectively assigned to them in the Act.

2.3. Reference to any Act, Rules, and Regulations shall include the

amendment(s), consolidation(s), or re-enactment(s) thereof.

- 2.4.** All proceedings under these Regulations shall be governed by the JSERC (Conduct of Business) Regulations, 2016, as amended or re-enacted from time to time.

**CHAPTER I: ENERGY CONSERVATION AND DEMAND SIDE
MANAGEMENT (DSM) TARGETS**

3. DSM Targets and Objectives

- 3.1.** The Commission shall by Order, specify the year-wise DSM targets and objectives for distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity for energy and peak savings for, based on the proposed DSM Plan.
- 3.2.** The targets and objectives shall be set based on factors such as the potential for energy savings, power shortage mitigation, peak shifting, lowering the cost of electricity and reduction in emissions of greenhouse gases.
- 3.3.** The objectives may be consistent with the DSM objectives set out by BEE as a part of Energy Conservation Plan for the country.
- 3.4.** The targets and objectives shall be reviewed and revised periodically based on the progress towards achieving them and the changes in the energy landscape.

4. DSM Plans and Reporting

- 4.1.** Each distribution licensee shall carry out assessment of potential for DSM in the State one year before the start of every MYT Control Period.

Provided that the first assessment of technical potential for DSM shall be carried out within six months of the notification of this Regulations.
- 4.2.** Distribution Licensee shall be guided by methodology developed by the Bureau of Energy Efficiency while assessing of technical potential for DSM.
- 4.3.** The Licensees shall prepare and submit an annual DSM Plan showing DSM targets for energy and peak savings along with its Tariff Petition.
- 4.4.** The plans shall include details of the DSM measures and programs proposed to be implemented, the expected energy savings and cost savings, and the timelines for implementation.
- 4.5.** The DSM plans shall be updated periodically based on the progress towards achieving the targets and objectives and the changes in the energy landscape.
- 4.6.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall submit quarterly reports to the Commission on the progress towards achieving the DSM targets and objectives and the implementation of DSM measures and programs, along with its report on distribution system reliability indexes.

CHAPTER II: DSM CELL

5. Constitution of the DSM Cell, its roles & responsibilities

- 5.1.** Every Distribution Licensee shall constitute a DSM Cell, for the implementation of the DSM programs within three months of notification these Regulations.
- 5.2.** The DSM Cell so constituted by the Distribution Licensee shall be provided with necessary authority and resources, so as to execute the functions assigned to it under these Regulations.
- 5.3.** The DSM Cell shall be responsible for: -
- a) Assessment of Technical and economic potential of DSM or EE Program in the operational area of the distribution licensee for which, within three months of the notification of these Regulations, the Distribution Licensees of the State shall develop a common methodology for assessing the technical potential for DSM in the operational area of such licensee and submit a copy of it to the Commission for approval, and the assessment of such technical potential shall be as per clause **4.2** of these Regulations.
 - b) Carrying out Load research to identify the target consumer segment or segments and end-uses for DSM program and to build the necessary database;
 - c) Carrying out consumer and market surveys to estimate the market potential for specific energy efficiency technologies and applications, establish key performance indicators, and determine existing baseline market conditions;
 - d) Development of baseline data on the basis of the results of load and market research including design, development and implementation of initial DSM programs on the basis of available data, till the complete baseline data is prepared for its area of supply. However, establishment of base line data shall not be a pre-requisite for design of such initial DSM programs by the Distribution Licensees;
 - e) Capacity building in DSM for the employees of distribution licensee;
 - f) Providing inputs for Integrated Resource Planning that includes DSM as a key resource;
 - g) Formulation of DSM Plans;
 - h) Design and development of DSM projects including cost benefit analysis, plans for implementation, monitoring and reporting and for measurement and verification;
 - i) Seeking necessary approvals to DSM plans and individual programs;

- j) Implementation of DSM programs;
- k) Fulfilling the requirements of reporting as directed by the Commission;
- l) Performing DSM program level Evaluation, Measurement and Verification;
- m) Promoting consumer awareness and education; and
- n) Any other additional function that may be assigned by the Commission from time to time.

5.4. The Distribution Licensees may include any relevant DSM programs (including multi-State program) developed by the Bureau of Energy Efficiency in its perspective plan as and when such programs are announced by the Bureau.

5.5. The DSM Program shall include measures for efficient use of electricity in Village and Panchayat level drinking water schemes, street-lighting retrofits/automation, agriculture energy use research or development, demonstration of projects promoting water or energy conservation, LED lighting and ceiling fans replacement schemes for households, energy sector research and development, capacity building initiatives, awareness campaigns, energy access-related solar-PV systems at end-uses, solar pumping and solar-street-lighting systems and any other program that is approved by the Commission.

5.6. The DSM program shall be implemented by the distribution licensee on its own or through Energy Service Companies [ESCOs] emplaned by the BEE.

5.7. Every Distribution Licensee shall submit to the Commission on a rolling basis, an annual DSM plan with quarterly targets [both physical and financial], not inconsistent with its perspective plan, for the forthcoming financial year, along with its Tariff Petition.

CHAPTER III: IMPLEMENTATION OF DSM PROGRAMS

6. DSM Programs and Measures

- 6.1.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall implement DSM programs and measures in accordance with the DSM targets and objectives set by the Commission.
- 6.2.** The DSM programs and measures shall include, but not be limited to:
- a) Energy audits and implementation of energy conservation measures in buildings, industries, and other establishments.
 - b) Promotion of energy-efficient appliances and equipment.
 - c) Demand response programs, including time-of-use tariffs and dynamic pricing.
 - d) Public awareness and education campaigns on energy conservation and DSM.
 - e) Implementation of energy-efficient street lighting and traffic signals.
 - f) Use of renewable energy sources in the supply and distribution of electricity.

7. Selection and prioritization of various DSM programs

- 7.1.** The Selection and prioritization of various DSM programs in the DSM Plan shall be guided by the following factors: -
- a) The Cost effectiveness guidelines issued by the Commission;
 - b) DSM Objectives specified as per Clause **3** of these Regulations;
 - c) Whether the proposed programs supplement National level efforts adopted by the Bureau; and
 - d) Programs with high visibility and therefore potential for creation of awareness within consumers.

8. Energy Audits

- 8.1.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall conduct energy audits of their facilities and premises.
- 8.2.** The energy audits shall be conducted by BEE emplaned ESCOs.
- 8.3.** The energy audits shall identify energy conservation and DSM opportunities and recommend measures to be implemented to achieve the DSM targets and objectives.

9. Measurement and Verification

- 9.1.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall establish a system for measurement and verification of the energy savings achieved through the implementation of DSM measures and programs.
- 9.2.** The system shall be consistent with the guidelines and standards set by the Bureau of Energy Efficiency or any other agency authorized by the Commission.
- 9.3.** The results of the measurement and verification shall be reported quarterly to the Commission.

10. Cost-Benefit Analysis

- 10.1.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall conduct cost-benefit analysis of the DSM measures proposed to be implemented as part of their DSM plans.
- 10.2.** The cost-benefit analysis shall consider the life cycle cost of the DSM measures, including the initial capital cost, operating and maintenance costs, and the energy savings over the life of the measure.
- 10.3.** The cost-benefit analysis shall also consider the non-energy benefits of the DSM measures, such as improved comfort and productivity, reduced environmental impact, and increased grid reliability and resilience.
- 10.4.** The Commission may empanel firms to provide guidelines and tools to assist the distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand in conducting the cost-benefit analysis of DSM measures.

11. Recovery of DSM costs

- 11.1.** Distribution Licensee shall identify the net incremental costs, if any, associated with planning, design and implementation of programs. Distribution Licensee may propose methodology for recovery of net incremental costs through tariff or any other mechanism.
- 11.2.** In order to qualify for cost recovery, each program must be:
 - a) Approved prior to implementation;
 - b) Implemented in accordance with the approved program plan;
and
 - c) Implemented cost effectively.
- 11.3.** Distribution Licensee shall provide all necessary assistance to the Commission, or third party assigned by the Commission in undertaking

Evaluation Measurement and Verification of DSM programs implemented by it.

- 11.4.** The Commission may direct the Distribution Licensee to undertake DSM programs that may not be cost effective but is highly beneficial to the society.
- 11.5.** The tariff mechanisms for recovering the DSM costs shall be designed to incentivize the implementation of cost-effective DSM measures and ensure that the DSM costs are shared equitably among all consumers.

CHAPTER IV: DEMAND RESPONSE PROGRAMS

12. Demand Response Programs

- 12.1.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall implement demand response programs to manage the peak demand for electricity.
- 12.2.** The demand response programs may include, but are not limited to: -
- a) Time-of-use (TOU) rates that vary based on the time of day and the season;
 - b) Critical peak pricing (CPP) rates that vary during the high-demand periods;
 - c) Peak time rebates (PTRs) that provide incentives for reducing the consumption during the high-demand periods;
 - d) Interruptible load programs (ILPs) that provide incentives for the customers to reduce their consumption during the high-demand periods.
- 12.3.** The distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall develop and submit their demand response plans to the Commission for approval.
- 12.4.** The demand response plans shall include the program design, program targets and objectives, program costs and benefits, and the M&V protocols and procedures for measuring and verifying the demand reduction.
- 12.5.** For each DSM program included in the DSM Plan, a detailed description shall be provided in a separate Program Document. The description shall include general information, technology, schedule for deployment, budget, cost effectiveness assessment, detailed implementation plan, estimation of savings, etc.
- 12.6.** For each DSM program cost benefit analysis shall be carried out as per guidelines issued by the Commission on Cost effectiveness from time to time.

13. Approval of DSM Program Document

- 13.1.** Distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall implement demand response programs to manage the peak demand for electricity.
- 13.2.** Prior to implementing any DSM program, Distribution Licensee must obtain approval of the Commission.

13.3. Each Programme Document shall include the following: -

- a) Description of the programme;
- b) Objectives and rationale for the programme;
- c) Consumer segments and estimated level of participation;
- d) Estimate of baseline;
- e) Assessment of programme in line with Cost Effectiveness Guidelines issued by the Commission;
- f) Mechanism for recovery of cost and performance incentives; vii. Marketing, delivery strategy and Implementation schedule;
- g) Implementation mechanism e.g. Energy Service Companies, DSM Bidding, DSM Resource Acquisition, etc;
- h) Monitoring and evaluation plan; and
- i) Plan for Training/Seminars/Workshops to increase consumer awareness.

13.4. The Commission shall approve a DSM program in line with the Objectives set out in Clause **3** of the Regulations. The Commission may direct modifications to proposed or on-going program to ensure consistency with the DSM Objectives. However, the Commission shall allow Distribution Licensee adequate time to notify consumers of program modification.

14. Implementation of DSM Programs

14.1. Distribution Licensee shall undertake implementation of DSM programmes in line with the guidelines issued by the Commission from time to time.

14.2. The implementation of the programme shall be undertaken in the manner as approved by the Commission.

14.3. Distribution Licensee shall undertake implementation of quick gain DSM programmes.

14.4. Distribution Licensee shall carry out implementation of activities assigned to it either by itself or through engagement of appropriate independent entity.

While doing so, the Distribution Licensee shall ensure that continuity and consistency is maintained and interest of the consumers is not compromised.

CHAPTER V: MONITORING AND EVALUATION

15. Monitoring and Evaluation

- 15.1.** The Commission shall monitor and evaluate the progress towards achieving the DSM targets and objectives and the implementation of DSM measures and programs by distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand.
- 15.2.** The monitoring and evaluation shall include, but not be limited to:
- a) Regular review of the DSM plans and progress reports submitted by the distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand.
 - b) Verification of the energy savings and cost savings achieved through the implementation of DSM measures and programs.
 - c) Assessment of the effectiveness and impact of the DSM measures and programs on the energy system, environment, and society.
 - d) Identification of the barriers and challenges in the implementation of DSM measures and programs and the strategies to overcome them.
- 15.3.** The Commission shall publish periodic reports on the progress towards achieving the DSM targets and objectives and the implementation of DSM measures and programs.

16. Compliance

- 16.1.** The Commission shall monitor and evaluate the progress towards achieving the DSM targets and objectives and the implementation of DSM measures and programs by distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand.
- 16.2.** The distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall comply with the provisions of these regulations and the demand response plans approved by the Commission.
- 16.3.** Distribution Licensee shall make available necessary information/data to the Commission or third party assigned by the Commission to measure and verify the savings from DSM programs.
- 16.4.** The Commission may conduct audits or inspections to verify compliance with these regulations and the demand response plans.
- 16.5.** The distribution licensees and other entities engaged in the supply, distribution, and consumption of electricity within the jurisdiction of Jharkhand shall cooperate with the Commission in conducting the

audits or inspections.

17. DSM Plan and Program Completion Report

- 17.1.** The Commission shall monitor and evaluate the progress towards achieving the DSM targets and objectives and the implementation of DSM measures and programs by distribution licensees and other entities engaged in the supply, distribution.
- 17.2.** Reports on progress of DSM Plan and expenses incurred on implementation of DSM Plan shall be submitted by the Distribution Licensee every six months.
- 17.3.** The Distribution Licensee will prepare and submit a detailed Program Completion Report and submit the same to the Commission within one month of completion of such program.
- 17.4.** The Report shall cover the program expenses, achievements, outcomes and outputs, constraints and difficulties faced, conclusions, recommendations, lessons learned and way forward.

CHAPTER VI: INCENTIVE & ENFORCEMENT

18. Incentives

18.1. The Commission may provide incentives to Distribution Utilities for achieving or exceeding DSM Objectives as identified in chapter 3 of the Regulations.

19. Enforcement

19.1. The Commission shall disallow any expenditure incurred by any Distribution Licensee for non-achievement of DSM targets as specified by the Commission and the savings envisaged thereof or for failure to implement the program according to the approved plan.

CHAPTER VII: MISCELLANEOUS

20. Dispute Resolution

- 20.1.** All disputes and complaints shall be referred to the Commission for resolution, which shall decide the dispute after affording an opportunity to the concerned parties to represent their respective points of view. The decisions of the Commission shall be binding on all parties.

21. Inherent powers of the Commission

- 21.1.** Nothing in these Regulations shall be deemed to limit or otherwise affect the power of the Commission to make such orders as may be necessary to meet the ends of justice.
- 21.2.** Nothing in these Regulations shall bar the Commission from adopting in conformity with provisions of the Act, a procedure which is at variance with any of the provisions of these Regulations, if the Commission, in view of the special circumstances of a matter or a class of matters, deems it just or expedient for deciding such matter or class of matters.
- 21.3.** Nothing in these Regulations shall, expressly or implied, bar the Commission from dealing with any matter or exercising any power under the Act for which no Regulations have been framed, and the Commission may deal with such matters, powers, and functions in a manner, as it considers just and appropriate.

22. Power to Relax

- 22.1.** The Commission may by general or specific order, 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 the affected party.

23. Power to Remove Difficulties

- 23.1.** In case of any difficulty arises in giving effect to any of the provisions of these Regulations, the Commission may, by general or specific order, give directions, not inconsistent with the provisions of the Electricity Act, 2003, which appears to the Commission to be necessary or expedient for the purpose of removing difficulty.

24. Power to amend

- 24.1.** The Commission may from time to time add, vary, alter, modify or amend any provisions of these Regulations after following the necessary procedures.

25. Interpretation

- 25.1.** The decision of the Commission regarding the interpretation of these Regulations shall be final and binding.