

The Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021

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Regulations

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The Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in electricity distribution companies) Regulations, 2021¹

Whereas the draft regulations namely, the Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit (Accounting) in Electricity Distribution Companies) Regulations, 2021, were published vide notification No. 18/1/BEE/DISCOM/2021, dated the 15th April, 2021 in the Gazette of India, Extraordinary, Part III, Section 4, as required under sub-section (1) of Section 58 of the Energy Conservation Act, 2001 (52 of 2001) inviting objections and suggestions from all persons likely to be affected thereby within forty-five days from the date of publication of the Notification in the Official Gazette;

And whereas objections and suggestions received with respect to the said draft regulations within the specified period aforesaid have been duly considered;

Now, therefore, in exercise of the powers conferred by clause (g) of sub-section (2) of Section 58, read with clause (q) of sub-section (2) of Section 13 of the Energy Conservation Act, 2001 (52 of 2001), the Bureau of Energy Efficiency, with the previous approval of the Central Government, hereby makes the following regulations, namely:—

1. Short title, application and commencement.—(1) These regulations may be called the Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in Electricity Distribution Companies) Regulations, 2021.

(2) These regulations shall apply to all electricity distribution companies specified as designated consumer.

(3) They shall come into force on the date of their publication in the Official Gazette.

2. Definitions.—(1) In these regulations, unless the context otherwise requires,—

- (a) “Act” means the Energy Conservation Act, 2001 (52 of 2001);
- (b) “annual energy audit” means the energy audit conducted by an accredited energy auditor on annual basis in accordance with these regulations;
- (c) “annual energy audit report” means the report on annual energy audit;
- (d) “circle” means the demarked area of the electricity distribution company in which electricity distribution company is divided.

1. Bureau of Energy Efficiency, Noti. No. 18/1/BEE/DISCOM/2021, dated 6-10-2021, published in the Gazette of India, Extra., Part III, Section 4, dated 7-10-2021, No. 436.

- (e) "consumer" shall have the meaning assigned to it under clause (15) of Section 2 of the Electricity Act, 2003 (36 of 2003);
- (f) "division" means an administrative unit in which an electricity distribution company is divided for the purpose of ease of operation;
- (g) "electricity distribution company" means a distribution licensee as defined in clause (17) of Section 2 of the Electricity Act, 2003 (36 of 2003);
- (h) "energy accounting" means accounting of all energy inflows at various voltage levels in the distribution periphery of the network, including renewable energy generation and open access consumers, and energy consumption by the end consumers;
- (i) "periodic energy accounting" means the energy accounting conducted on quarterly basis as mentioned in regulation 4;
- (j) "periodic energy accounting report" means the report on periodic energy accounting submitted and signed by the energy manager;

(2) Words and expressions used herein and not defined but defined in the Act shall have the meanings respectively assigned to them in the Act.

3. Intervals of time for conduct of annual energy audit.—(1) Every electricity distribution company shall conduct an annual energy audit for every financial year and submit the annual energy audit report to the Bureau and respective State Designated Agency and also made available on the website of the electricity distribution company within a period of four months from the expiry of the relevant financial year:

Provided that on the commencement of these regulations, the first annual energy audit of every electricity distribution company shall be conducted within six months from the date of such commencement, by taking into account the energy accounting of electricity distribution company for the financial year immediately preceding the date of the commencement of these regulations.

(2) Where a new electricity distribution company is established after the commencement of these regulations, such electricity distribution company shall conduct its first annual energy audit on completion of the first financial year from the date of being notified as designated consumer.

Explanation. —If any entity created as a result of merger, demerger, slump sale, acquisition, change of control or any other corporate restructuring of, or involving, any existing electricity distribution company, such entity shall not be considered as a new electricity distribution company for the purposes of this sub-regulation.

4. Intervals of time for conduct of periodic energy accounting.—(1) Every electricity distribution company shall—

- (a) ensure that all feeder wise, circle wise and division wise periodic energy accounting shall be conducted by the energy manager of the electricity distribution company for each quarter of the financial year; and

²[(b) Submit the periodic energy accounting report as per specified formats in paragraph (b) of the Second Schedule, to the Bureau and respective State Designated Agency and also made available on the website of electricity distribution company within forty-five days from the date of the periodic energy accounting.]

(2) After the commencement of these regulations, every electricity distribution company shall, notwithstanding anything in sub-regulation (1),—

- (a) conduct its first periodic energy accounting, for the last quarter of the financial year immediately preceding the date of such commencement; and
- (b) conduct its subsequent periodic energy accounting for each quarter of the financial year for a period of two financial years from the date of such commencement,

And submit the periodic energy accounting report within sixty days from the date of periodic energy accounting.

5. Pre-requisites for annual energy audit and periodic energy accounting.—Save as otherwise provided, every electricity distribution company shall undertake all actions as may be required for the annual energy audit and periodic energy accounting before the start of the relevant financial year, including the following actions, namely:—

- (a) the identification and mapping of all of the electrical network assets;
- (b) the identification and mapping of high tension and low-tension consumers;
- (c) the development and implementation of information technology enabled energy accounting and audit system, including associated software;
- (d) the electricity distribution company shall ensure the installation of functional meters for all consumers, transformers and feeders:
Provided that meter installation may be done in a phased manner within a period of three financial years from the date of the commencement of these regulations in accordance with the trajectory set-out in the First Schedule;
- (e) all distribution transformers (other than high voltage distribution system upto 25kVA and other distribution system below 25 kVA) shall be metered with communicable meters. And existing non-communicable distribution transformer meters shall be replaced with communicable meters and integrated with advanced metering infrastructure;

2. Subs. by Noti. No. 18/1/BEE/DISCOM/202, dt. 28-10-2022 (w.e.f. 31-10-2022). Prior to substitution it read as:

“(b) submit the periodic energy accounting report to the Bureau and respective State Designated Agency and also made available on the website of electricity distribution company within forty-five days from the date of the periodic energy accounting.”

- (f) the electricity distribution company shall establish an information technology enabled system to create energy accounting reports without any manual interference:

Provided that such system may be established—

- (i) within a period of three years from the date of the commencement of these regulations in case of urban and priority area consumers; and
 - (ii) within five years from the date of the commencement of these regulations in case of rural consumers;
- (g) the electricity distribution company shall create a centralized energy accounting and audit cell comprising of—
- (i) a nodal officer, an energy manager and an information technology manager, having professional experience of not less than five years; and
 - (ii) a financial manager having professional experience of not less than five years.
- (h) any other requisite that Bureau may direct for energy audit and accounting purpose.

6. Reporting requirements for annual energy audit and periodic energy accounting.—(1) Every electricity distribution company shall designate a nodal officer, who shall be a full time employee of the electricity distribution company in the rank of the Chief Engineer or above, for the purpose of reporting of the annual energy audit and periodic energy accounting and communicate the same to the Bureau.

(2) Every electricity distribution company shall ensure that the energy accounting data is generated from a metering system or till such time the metering system is not in place, by an agreed method of assumption as may be prescribed by the State Commission.

(3) Metering of distribution transformers at High Voltage Distribution System upto 25KVA can be done on cluster meter installed by each electricity distribution company.

(4) The energy accounting and audit system and software shall be developed to create monthly, quarterly and yearly energy accounting reports.

(5) Every electricity distribution company shall provide the details of the information technology system in place as specified in clause (f) of regulation 5 that ensures minimal manual intervention in creating the energy accounting reports and any manual intervention of any nature, in respect of the period specified therein, shall be clearly indicated in the periodic energy accounting report.

7. Manner of annual energy audit and periodic energy accounting.—(1) Every annual energy audit and periodic energy accounting under these regulations shall be conducted in the following manner, namely:—

- (a) verification of existing pattern of energy distribution across periphery of electricity distribution company; and
- (b) verification of accounted energy flow submitted by electricity distribution company at all applicable voltage levels of the distribution network,—
 - (i) energy flow between transmission and 66kV/33kV/11kV incoming distribution feeders;
 - (ii) energy flow between 66kV/33kV outgoing and 11kV/6.6kV incoming feeders;
 - (iii) energy flow between 11 kV/6.6kV feeders and distribution transformers, or high voltage distribution system;
 - (iv) energy flow between distribution transformer, or high voltage distribution system to end- consumer, including ring main system;
 - (v) energy flow between Feeder to end-consumer; and
 - (vi) energy flow between 66/33/11 kV directly to consumer.

(2) The accredited energy auditor, in consultation with the nodal officer of the electricity distribution company shall,—

- (a) develop a scope of work for the conduct of energy audit required under these regulations;
- (b) agree on best practice procedures on accounting of energy distributed across the network; and
- (c) collect data on energy received, and distributed, covered within the scope of energy audit.

(3) The accredited energy auditor shall—

- (a) verify the accuracy of the data collected in consultation with the nodal officer of the electricity distribution companies as per standard practice to assess the validity of the data collected; and
- (b) analyse and process the data with respect to—
 - (i) consistency of data monitoring compared to the collected data;
 - (ii) recommendations to facilitate energy accounting and improve energy efficiency; and
 - (iii) with respect to the purpose of energy accounting in reducing losses for the electricity distribution company.

8. Prioritization and preparation of action plan.—(1) The annual energy audit report submitted by accredited energy auditor in consultation with the nodal officer and periodic energy accounting report submitted by energy manager of the electricity distribution company shall include following activities, namely:—

(I) data collection and verification of energy distribution—

- (a) monthly energy consumption data of consumers and system metering from electricity distribution company at following voltage levels—

- (i) 33/66/132 kV levels, including 33/66/132kV feeder and Sub-station;
 - (ii) 11/22 kV levels, including 11/22 kV feeder and Distribution Sub-station;
 - (iii) 440 V level, including Distribution Transformer and low tension consumer;
 - (b) input energy details for all metered input points;
 - (c) boundary meter details;
 - (d) source of energy supply (e.g. electricity from grid or self-generation), including generation from renewables.
 - (e) review of the current consumption practices in order to identify the energy loss in the system;
- (II) data verification, validation and correction—
- (a) a monitoring and verification protocol to quantify on annual basis the impact of each measure with respect to energy conservation and cost reduction for reporting to Bureau and the concerned State designated agency;
 - (b) verification and correction of input energy, taking into account the following—
 - (i) recorded system meter reading by metering agency;
 - (ii) all the input points of transmission system;
 - (iii) details provided by the transmission unit;
 - (iv) relevant records at each electricity test division for each month;
 - (v) recorded meter reading at all export points (where energy sent outside the State is from the distribution system); and
 - (vi) system loading and corresponding infrastructure;
 - (c) energy supplied to Open Access Consumers which is directly purchased by Open Access Consumers from any supplier other than electricity distribution company; and
 - (d) verify and validate the system metering data provided by metering agency through random field visit (particularly for data irregularity).

9. Structure of the annual energy audit report.—(1) The structure of annual energy audit report shall be prepared in the format as set-out in the Second Schedule.

(2) It shall be mandatory to record the energy supplied separately for each category of consumers which is being provided a separate rate of subsidy in the tariff, by the State Government, so that the subsidy due for the electricity distribution company is quarterly calculated by multiplying the energy supplied to each of such category of consumers by the applicable rate of subsidy notified by the State Government.

(3) The annual energy audit report shall—

- (a) provide for monitoring of input energy and consumption pattern at various voltage levels;
- (b) identify the areas of energy leakage, wastage or inefficient use;
- (c) identify high loss-making areas and networks, for initiating target based corrective action; and
- (d) identify overloaded segments of the network for necessary capacity additions.

(4) The accredited energy auditor shall highlight the strengths and weaknesses of the electricity distribution company in the management of energy and energy resources in the annual energy audit report and recommend necessary action to improve upon method of reporting data, energy management system in detail along with their underlying rationale.

(5) The accredited energy auditor shall sign the energy audit report under the seal of its firm giving all the accreditation details along with details of manpower employed in conducting the annual energy audit.

10. Report of Bureau.—On receipt of the annual energy audit report, the Bureau may—

- (a) direct the electricity distribution company to take such actions as it may consider appropriate; and
- (b) make such recommendations to the Central Government as it may consider necessary.

SCHEDULES

[For Schedules *see* SCC OnLine]
