

F. No.14/06/2021-UR&SI-II-Part(1)- (E-261576)
Government of India
Ministry of Power
Shram Shakti Bhawan, Rafi Marg, New Delhi

Dated: 17th February, 2023

To,

- i. Additional Chief Secretaries / Principal Secretaries / Secretary (Energy/Power) of all States/UTs
- ii. DG, BEE

Subject: Energy Accounting and Auditing of DISCOMs as per regulations notified by Bureau of Energy Efficiency – Guidelines for Energy Manager/Energy Auditor

Sir/Madam(s),

The Bureau of Energy Efficiency (BEE), with approval of Ministry of Power, Government of India, notified the regulations viz. 'Bureau of Energy Efficiency (Manner and Intervals for Conduct of Energy Audit in Electricity Distribution Companies) Regulations, 2021' vide Notification No.18/1/BEE/DISCOM/2021 dated 06.10.2021, and amendment issued thereof on 28.10.2022. The extant regulations specify the key aspects related to energy accounting and audit for Electricity Distribution companies. These regulations have been issued under the ambit of Energy Conservation Act, 2001, with an overall objective to reduce inefficiencies and losses in distribution sector thereby ensuring financial and economic viability of DISCOMs.

2. The regulation stipulates quarterly Energy Accounting by DISCOMs, through a certified Energy Manager and annual Energy Audit by an Independent Accredited Energy Auditor.

3. In order to facilitate effective Energy Audit by the Electricity Distribution Companies (DISCOMs), Guidelines have been approved for the Energy Managers and Energy Auditors for conducting the annual Energy Audit while ensuring adherence to the regulations. It covers aspects relating to data collection, verification and validation by Energy Auditor through field visits for metering (at feeder, DT and consumer level) and metered data, determination of energy flows including input energy, consumption, identification of areas related to energy leakage, high loss-making areas, overloaded segments of network, computation of loss, subsidy and preparation & submission of annual energy audit report. Approved Guidelines are enclosed herewith for further necessary action and strict compliance.

4. This issued with the approval of Hon'ble Minister of Power and NRE.

Encl.: As above


17/01/2023

(Jamiruddin Ansari)
Deputy Secretary to the Govt. of India
Tel: 011-23352913

contd...

Copy to:

- i. Secretary , all SERCs/JERCs/ FOR
- ii. CMD, REC
- iii. CMD, PFC
- iv. CMD/MD of DISCOMs of all States/UTs

Also copy to:

- i. PS to Hon'ble Minister of Power and NRE
- ii. PPS to Secretary (Power)
- iii. PPS to Joint Secretary (Distribution)
- iv. PIB, MOP

Energy Accounting and Auditing of DISCOMs as per regulations notified by Bureau of Energy Efficiency, Govt. of India, Ministry of Power

I. Background

The Bureau of Energy Efficiency (BEE), through Ministry of Power, Government of India, notified the regulations viz. ‘Bureau of Energy Efficiency(Manner and Intervals for Conduct of Energy Audit in Electricity Distribution Companies) Regulations, 2021’ vide Notification No.18/1/BEE/DISCOM/2021 dated 6th October 2021, and amendment issued thereof on 28th Oct. 2022. The extant regulations specify the following key aspects related to energy accounting and audit for electricity distribution companies.

- i. Intervals of time for conduct of periodic energy accounting and annual energy audit and report submission thereof.
- ii. Pre-requisites for annual energy audit and periodic energy accounting
- iii. Reporting requirements for annual energy audit and periodic energy accounting,
- iv. Manner of annual energy audit and periodic energy accounting
- v. Prioritization and preparation of action plan and
- vi. Structure of annual energy audit report

These regulations have been issued under the ambit of Energy Conservation Act, 2001, with an overall objective to reduce inefficiencies and losses in distribution sector thereby ensuring financial and economic viability of DISCOMs.

Energy accounting for all energy inflows in the distribution system, including renewable energy generation, open access consumers, and energy consumption by the end consumers, shall be conducted on a periodic basis. This necessitates that energy accounting data is made available at a consumer, transformer, feeder and system level. Energy accounting will help to identify areas of high loss and pilferage, and thereafter, focused efforts can be made by DISCOMs to take corrective action.

The regulation stipulates quarterly energy accounting by DISCOMs, through a certified Energy Manager and annual energy audit by an Independent Accredited Energy Auditor. The periodic energy accounting (quarterly) report needs to be submitted within 60 days of completion of the respective Quarter while the annual energy audit report should be submitted within four months of the completion of the financial year. Up to 31st Dec. 2022, five (5) Quarterly Energy Accounting Reports (for Q2, Q3 and Q4 of FY 2022, and Q1 & Q2 of FY 2023) and two annual energy audit reports (for FY 2021 and FY 2022) should have been submitted by all DISCOMs.

The regulations also specify the Manner of periodic energy accounting and annual energy audit (*Regulation 7*), Prioritization and preparation of action plan (*Regulation 8*) and Structure of the annual audit report (*Regulation 9*). Relevant extracts of the regulations are annexed herewith as **Annexure-I** for reference. Further, indicative structure and contents of the annual energy audit report along with details to be captured in the report template and form for energy accounting to be completed by the accredited

Energy Auditor and Energy Manager are annexed as **Annexure-II** for reference. The Energy Manager will be held accountable for any substantive discrepancy/differences between the quarterly energy accounts/annual energy account and the annual Energy audit.

II. Guidance for Energy Auditor

This document has been prepared to serve as a guidance note for the Energy Auditors for conducting the annual energy audit while ensuring adherence to the regulations.

Objectives of Energy Audit: The objective of the Energy Audit is as follows:

- (a) Identify high loss areas so that corrective action can be taken.
- (b) Ensure that subsidy accounts are transparent; and the subsidy claims of the DISCOMs are on the basis of reliable data.
- (c) Help in Energy planning.

Accordingly, it covers aspects relating to data collection, verification and validation by Energy Auditor through field visits for metering (at feeder, DT and consumer level) and metered data, determination of energy flows including input energy, consumption, identification of areas related to energy leakage, high loss-making areas, overloaded segments of network and computation of loss, subsidy with stakeholder consultations and preparation and submission of annual energy audit report.

The annual energy audit should be conducted in the following three (3) phases.

1. Pre-audit phase

- i.** Discussion and review meeting(s) with DISCOMs and Energy Manager(s) to ensure reliable and timely data availability
- ii.** A review of the Macro level data in order to assess the areas of high losses and data gaps
- iii.** Planning field visits to verify and collect data
- iv.** Planning and phasing of various steps involved in audit exercise including data collection, manpower/team deployment,
- v.** Organizing the structure of the audit report in consonance with energy accounting regulations notified by BEE; and the output required for corrective action and decision making
- vi.** Undertake a review of the capacity of the centralized energy accounting and audit cell created at the DISCOM in terms of adequate representation from professional backgrounds of IT Manager, Energy Manager and Financial Manager

2. Audit phase

- i. **Review** of present structure of energy flow in DISCOM at different levels - State level, transmission, sub-transmission, DT level, feeder level to end consumer etc.
- ii. **Capture details** of DISCOM infrastructure - no. of circles, divisions, sub-divisions, sections, Substations, total No. of Power Transformers with capacity in MVA, total No. of Capacitor Banks in Substations and capacity in MVAR, feeders, DTs with capacity in MVA, boundary meters, category wise consumers and Voltage level for each consumer category etc. (*Refer Regulation 5*)
- iii. **Stakeholder interactions** with DISCOM, Energy Manager, SE (Circle level), XEN (Division level) for data accuracy and other issues.
- iv. **Verify, check and validate** current metering status (operational/ faulty/ unmetered) and type (communicable/ static etc.) at various voltage levels (feeders, DTs, consumers) and Metering details (such as Meter Sl. Number, Meter reading date and the Multiplying Factor) through sample field visits and available records with DISCOM.
- v. **Verification of energy flow data** within DISCOM at all applicable voltage levels (*Refer Regulation 7*) of distribution network as specified in the regulations. The service level wise energy flow data is to be computed by the DISCOM on a monthly basis, and it would submit a consolidated Quarter wise report to the Energy Auditor, who would only verify the same.
- vi. **Validation through sample data checks and field visits:**
 - a. **Validation of feeder data:** Based on data available in 11 kV Feeder meter at substation for a sample size of 10% for which documentary evidence to be captured in the audit report.
 - b. **Validation of energy flow data and losses:** Based on field survey as per the following sample size:
 - Min. 10 or 1% (whichever is higher) of DISCOM's input energy metering points between Transmission and 66kV/33kV/11kV distribution feeders by checking functional and communication status of meters etc.
 - For all Divisions with AT&C losses greater than 25% or at-least 1/3 of the total Divisions of DISCOM, verify:
 - Total of min. 10 or 1% of metering points (whichever is higher) between 220-132-110- 66 /33 kV outgoing and 22kV-11kV-6.6kV-3kV incoming feeders/ direct end-consumer by checking functional and communication status of meters.
 - In an Urban High Loss Division, check 5 or 1% of Metering points (whichever is higher) at DTs where communicable meters were already installed under other schemes such as R-APDRP and IPDS.
 - Total of min. of 10 or 1% of metering points (whichever is higher) between 11kV/6.6kV feeders and DTs by checking functional and communication status of meters, foot survey of feeder to check for thefts/ hooking etc.

- Verify metering and connection status of min. of 10 or 2% consumers of the Division (whichever is higher) of the following category of consumers – Agriculture (Metered and Un-metered), Govt. category connection (ULB, RLB etc.), and LT Industrial
- c. **Field verification report** of the activities undertaken in a) and b) above to be included as an annexure to the energy audit report.
- vii. **Computation of AT&C losses for each division:**
 - a) **Input energy data:** Identification of all input points of transmission system, collection of input energy from recorded system meter reading including energy received and distributed by DISCOM, recorded meter reading at all DISCOM export points, system loading, source of energy supply including generation from RE, etc.
 - b) **Billing and collection data:** Division wise and category wise no. of consumers, Voltage Level for every consumer category, metered and un-metered, connected load, billed and un-billed energy, details of open access, EHT sale, HT sale, LT sale and transmission losses, computation of agriculture/ other unmetered consumer consumption (approved by SERC) etc.
 - c) **Computation of distribution loss, collection efficiency and AT&C loss at a division level.**
 - d) **Identify high-loss divisions and network segments:** Based on energy loss and AT&C losses, wastage or inefficient use of electricity etc. for initiating target based corrective action
 - e) **Identify overloaded segments/ infrastructure:** Based on sample assessment and data analysis, make recommendations on undertaking necessary capacity augmentations in substations, Feeders, Transformers and up to consumer end as observed.
- viii. **Computation of subsidy assessed based on energy accounting data:**
 - a) **Computation of category wise subsidy:** Verify and compute category/ sub-category/ slab wise subsidy assessment and received, based on energy sold to subsidized categories, multiplied by the per unit subsidy notified by the State Govt. This needs to be done on Quarter wise data (Books of the DISCOMs are to be also checked).
 - b) **Computation of Average Billing Rate (ABR):** Division and category wise Revenue billed/ assessment, ABR with and without tariff subsidy etc.
- ix. Revise the findings accordingly as per the field visits undertaken as mentioned above
- x. Trend analysis with quarterly audit findings, past data review
- xi. Exception analysis and aberrations if any observed in audit exercise

3. Post Audit and Reporting phase

- i. **Detailed Energy Audit Report** preparation and submission as per BEE energy accounting regulations (*Refer Regulation 9*)
- ii. Audit report should include energy accounting data captured on a quarterly basis for the FY. The audit report should point out variances in quarterly and annual data and recommendations for alignment of periodic accounting and annual energy audit report, key data gaps, assumptions and exceptions.
- iii. Wherever available and feasible, **validate Energy Audit report** with the Energy Audit report generated by the DISCOM for smart meters – for this, the DISCOM would facilitate data/report availability from the respective AMISP.
- iv. **Submit an Action Plan in the Energy Audit Report**, which should necessarily capture the following:
 - a) Provide recommendations w.r.t energy accounting, loss reduction, subsidy accounting, consumption analysis etc. This should include cost-benefit analysis, payback periods etc., accompanied by a detailed implementation plan and a mechanism for regular review and monitoring so that desired objectives are achieved within stipulated timelines.
 - b) Develop a comprehensive action plan for monitoring of energy flow at each voltage level(*Refer Regulation 8*)
 - c) Recommendations to also include that energy accounts prepared and submitted to BEE to be used for financial audit reporting.
 - d) Auditor to obtain detailed action plan from the DISCOM to establish an IT enabled system to create energy accounting reports without any manual interference. This should include timelines for completion of Smart metering of Feeders and DTs, and generation of automated energy accounting reports through an IT platform/ solution. Detailed action plan to form part of energy audit report for regular review and monitoring.
 - e) Auditor should observe and compile various Energy Conservation options implemented by the DISCOM and prepare report containing details of expenditure done by DISCOM along with saving and payback period.
- v. Assessment details and recommendations related to annual energy audit of previous year.

Regulation 7 - Manner of annual energy audit and periodic energy accounting

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/66kV incoming feeders:
 - (iii) energy flow between 11kV/66kV 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.

Regulation 8 - Prioritization and preparation of action plan

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).

Regulation 9 - Structure of the annual audit report

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.

Annexure-II | Annual Energy Audit Report Template [to be completed by the Accredited Energy Auditor](See Regulation 4(1) b and 9(1))

a) Indicative structure and contents of the Annual Energy Audit Report

1. Executive Summary
2. Background
 - i. Extant Regulations and role of BEE
 - ii. Purpose of audit and accounting Report
 - iii. Period of Energy Auditing and accounting
3. DISCOM introduction and overview
 - i. Name and Address of DISCOM
 - ii. Name and contact details of energy manager (BEE Certified, if any) and Authorized signatory of DISCOM (Nodal Officer)
 - iii. Summary profile of DISCOM (Jurisdiction, Electrical circles/ divisions/ sub-divisions etc., Consumer base, Electrical infrastructure and assets voltage wise, Energy Flow, pattern of energy distribution, other salient features etc.)
 - iv. Energy Conservation measures already taken and proposed for future
4. Energy flow analysis
 - i. Energy flow across 5 Service Levels
 - ii. Validation of metered data
 - iii. Validation of energy flow data and losses
5. Loss and subsidy computation
 - i. Energy accounts analysis for previous years
 - ii. Energy accounts analysis and performance in current year (based on quarterly data)
 - a. Input energy, AT&C losses – aggregate, voltage-wise, Category-wise, division-wise, feeder wise etc.
 - b. Identify high loss divisions
 - c. Identify high loss feeders
 - d. Identify overloaded segments/ infrastructure
 - iii. Subsidy computation and analysis (based on quarterly data)
 - iv. Trend analysis and identification of key exceptions
6. Energy Audit findings
 - i. Review of capacity of DISCOM's energy accounting and audit cell
 - ii. Critical analysis - status and progress in compliance to prerequisites to energy accounting, data gaps, and summary of key responses of DISCOM management on Comments by Energy Auditor

- iii. Revised findings based on data validation and field verification
 - iv. Inclusions and Exclusions
7. Conclusion and Action Plan
- i. Summary of critical analysis by Energy Auditor
 - ii. Summary of key findings – energy balance and losses
 - iii. Recommendations and best practices – energy accounting, loss reduction, and energy conservation
 - iv. Action plan for monitoring and reporting
 - v. Action plan for automated energy accounting
8. Annexures: To be accompanied with the Report
- i. Introduction of Verification Firm
 - ii. Minutes of Meeting with the DISCOM team
 - iii. Check List prepared by auditing Firm. (check list items may be detailed out in annexure)
 - iv. Brief Approach, Scope & Methodology for audit
 - v. Infrastructure Details
 - vi. Electrical Distribution System
 - vii. Power Purchase Details
 - viii. Line Diagram (SLD)
 - ix. Category of service details (With Consumer and voltage-wise)
 - x. Field verification data and reports
 - xi. List of documents verified with each parameter
 - xii. Brief Description of Unit
 - xiii. List of Parameters arrived through calculation or formulae with list of documents as source of data
 - xiv. Detailed Formats to be annexed

(b) Form for Energy Accounting - to be completed by the Accredited Energy Auditor and Energy Manager of the Electricity Distribution Company

General Information			
1	Name of the DISCOM		
2	i) Year of Establishment		
	ii) Government/Public/Private		
3	DISCOM's Contact details & Address		
i	City/Town/Village		
ii	District		
iii	State	Pin	
iv	Telephone	Fax	
4	Registered Office		
i	Company's Chief Executive Name		
ii	Designation		
iii	Address		
iv	City/Town/Village	P.O.	
v	District		
vi	State	Pin	
vii	Telephone	Fax	
5	Nodal Officer Details		
i	Nodal Officer Name (Designated at DISCOM's)		
ii	Designation		
iii	Address		
iv	City/Town/Village	P.O.	
v	District		
vi	State	Pin	
vii	Telephone	Fax	
6	Energy Manager Details		
i	Name		
ii	Designation	Whether EA or EM	
iii	EA/EM Registration No.		
iv	Telephone	Fax	
v	Mobile	E-mail ID	-
7	Period of Information		
	Year of (FY) information including Date and Month (Start & End)	1st Apr, 20 – 31 ST March, 20	

Performance Summary of Electricity Distribution Company			
1	Period of Information Year of (FY) information including Date and Month (Start & End)	1st Apr, 20 - 31 st March, 20	
2	Technical Details		
(a)	Energy Input Details		
(i)	Input Energy Purchase (From Generation Source)	Million kwh	0.00
(ii)	Net input energy (at DISCOM Periphery after adjusting the transmission losses and energy traded)	Million kwh	0.00
(iii)	Total Energy billed (is the Net energy billed, adjusted for energy traded))	Million kwh	0.00
(b)	Transmission and Distribution (T&D) loss Details	Million kwh	0.00
		%	0.00
	Collection Efficiency	%	
(c)	Aggregate Technical & Commercial Loss	%	0.00
<p>I/We undertake that the information supplied in this Document and Pro-forma is accurate to the best of my knowledge and if any of the information supplied is found to be incorrect and such information result into loss to the Central Government or State Government or any of the authority under them or any other person affected, I/we undertake to indemnify such loss.</p>			
Authorized Signatory and Seal			
		Signature:-	
		Name of Energy Manager:	
Name of Authorized Signatory		Registration Number:	
Name of the DISCOM:			
Full Address:			
Seal			

Note: Aggregate Technical and Commercial Loss to be calculated in the manner and form as specified in the prevailing Guidelines for Computation of Aggregate Technical and Commercial losses published by the Central Electricity Authority.

Form-Details of Input Infrastructure

1	Parameters	Total	Covered during in audit	Verified by Auditor in Sample Check	Remarks (Source of data)
i	Number of circles				
ii	Number of divisions				
iii	Number of sub-divisions				
iv	Number of feeders				
v	Number of DTs				
vi	Number of consumers				
2	Parameters	66kV and above	33kV	11/22kV	LT
a. i.	Number of conventional metered consumers				
ii	Number of consumers with 'smart' meters				
iii	Number of consumers with 'smart prepaid' meters				
iv	Number of consumers with 'AMR' meters				
v	Number of consumers with 'non-smart prepaid' meters				
vi	Number of unmetered consumers				
vii	Number of total consumers				
b.i.	Number of conventionally metered Distribution Transformers				
ii	Number of DTs with communicable meters				
iii	Number of unmetered DTs				
iv	Number of total Transformers				
2	Parameters	66kV and above	33kV	11/22kV	LT
c.i.	Number of metered feeders				
ii	Number of feeders				

	with communicable meters				
iii	Number of unmetered feeders				
iv	Number of total feeders				
d.	Line length (ct km)				
e.	Length of Aerial Bunched Cables				
f.	Length of Underground Cables				

3	Voltage level	Input Energy Particulars	MU	Reference	Remarks (Source of data)
i	66kV and above	Long-Term Conventional		Includes input energy for franchisees	
		Medium Conventional			
		Short Term Conventional			
		Banking			
		Long-Term Renewable energy		Includes power from bilateral/ PX/ DEEP	
		Medium and Short-Term RE			
		Captive, open access input			Any power wheeled for any purchase other than sale to DISCOM. Does not include input for franchisee.
		Sale of surplus power		As confirmed by SLDC, RLDC etc	
Quantum of inter-state transmission loss	0	Based on data from Form 5			
Power procured from inter-state sources	0				
Power at state transmission boundary	0				

3	Voltage level	Input Energy Particulars	MU	Reference	Remarks (Source of data)
ii	33kV	Long-Term Conventional			
		Medium Conventional			
		Short Term Conventional			
		Banking			
		Long-Term Renewable energy			
		Medium and Short-Term			

		Captive, open access input			
		Sale of surplus power			
		Quantum of intra-state transmission loss	0		
		Power procured from intra-state sources	0		
iii		Input in DISCOM wires network	0		
iv	33 kV	Renewable energy			
		Small capacity conventional/ biomass/ hydro plants Procurement			
		Captive, open access input			
v	11 kV	Renewable Energy Procurement			
		Small capacity conventional/ biomass/ hydro plants Procurement			
		Sales Migration Input			
vi	LT	Renewable Energy Procurement			
		Sales Migration Input			
vii		Energy Embedded within DISCOM wires network	0		
viii		Total Energy Available/ Input	0		

4	Voltage level	Energy Sales Particulars	MU	Reference	Remarks (Source of data)
i	LT level	DISCOM' consumers		Include sales to consumers in franchisee areas, unmetered consumers Non DISCOM's sales Demand from embedded generation at LT level	
		Demand from open access, captive			
		Embedded generation used at LT level			
		Sale at LT Level	0		
		Quantum of LT level losses	0		
		Energy Input at LT level			
4	Voltage level	Energy Sales Particulars	MU	Reference	Remarks (Source of data)
ii	11 kV level	DISCOM' consumers		Include franchisee sales, unmetered consumers Non DISCOM's sales Demand from embedded generation at 11kV level	
		Demand from open access, captive			
		Embedded generation at 11 kV level used			
		Sale at 11 kV Level	0		
		Quantum of Losses at 11 kV	0		
		Energy Input at 11 kV level			
iii	33 kV level	DISCOM' consumers		Include sales to consumers in franchisee areas,	

				unmetered consumers	
		Demand from open access, captive		Non DISCOM's sales	
		Embedded generation at 33 kV or below level		This is DISCOM and OA demand met via energy generated at same voltage level	
		Sale at 33 kV Level	0		
		Quantum of Losses at 33 kV	0		
		Energy input at 33kV Level			
iv	> 33 kV	DISCOM' consumers		Include franchisee sales, unmetered consumers Non DISCOM's sales	
		Demand from open access, captive			
		Cross border sale of energy			
		Sale to other DISCOMs			
		Banking			
		Sales at 66kV and above (EHV)	0		
Total Energy Requirement			0		
Total Energy Sales			0		

Energy Accounting Summary					
5	DISCOM	Input (in MU)	Sale (in MU)	Loss (in MU)	Loss %
i	LT				
ii	11 Kv				
iii	33 kv				
iv	> 33 kv				
6	Open Access, Captive	Input (in MU)	Sale (in MU)	Loss (in MU)	
i	LT				
ii	11 Kv				
iii	33 kv				
iv	> 33 kv				

Loss Estimation for DISCOM	
T&D loss	
D loss	
T&D loss (%)	
D loss (%)	

Form-Input energy(Details of Input energy & Infrastructure)			
A. Summary of energy input & Infrastructure			
S.No	Parameters	Period From....To....	Remarks (Source of data)
A.1	Input Energy purchased (MU)	0	
A.2	Transmission loss (%)	0%	
A.3	Transmission loss (MU)	0	
A.4	Energy sold outside the periphery(MU)	0	
A.5	Open access sale (MU)	0	
A.6	EHT sale	0	
A.7	Net input energy (received at DISCOM periphery or at distribution point)-(MU)	0.00	
A.8	Is 100% metering available at 66/33 kV (Select yes or no from list)		
A.9	Is 100% metering available at 11 kV (Select yes or no from list)		
A.10	% of metering available at DT	0%	
A.11	% of metering available at consumer end	0%	
A.12	No of feeders at 66kV voltage level	0	
A.13	No of feeders at 33kV voltage level	0	
A.14	No of feeders at 11kV voltage level	0	
A.15	No of LT feeders level	0	
A.16	Line length (ckt. km) at 66kV voltage level	0	

A.17	Line length (ckt. km) at 33kV voltage level	0	
A.18	Line length (ckt. km) at 11kV voltage level	0	
A.19	Line length (km) at LT level	0	
A.20	Length of Aerial Bunched Cables	0	
A.21	Length of Underground Cables	0	
A.22	HT/LT ratio	0	

B. Meter reading of Input energy at injection points																		
S.No	Zone	Circle	Voltage Level (KVA)	Division (KVA)	Sub-Division (KVA)	Feeder ID	Feeder Name	Feeder Metering Status (Metered/ unmetered/ AMI/AMR)	Status of Meter (Functional/Non-functional)	Metering Date	Feeder Type (Agricultural/ Industrial/Mixed)	Status of Communication				Period from...to...	Sales	Remarks (Source of data)
												% data received automatically if feeder AMR/AMI	Number of hours when meter was unable to communicate in period	Total Number of hours in the period	Meter S.No			
B.1																		
B.2																		
B.3																		
B.4																		
B.5																		
B...																		
B...																		
B...																		
B.1000																		
B.1001	Total (MU)														0.00	0.00		
B.1002	Net input energy at DISCOM periphery (MU)																0.00	

Details of Division Wise Losses (See note below **)																						
Division Wise Losses																						
S.No	Name of circle	Circle code	Name of Division	Period From...To...																		
				Consumer profile							Energy parameters				Losses		Commercial Parameter					
				Consumer category	No of connection metered (Nos)	No of connection Un-metered (Nos)	Total Number of connections (Nos)	% of number of connections	Connected Load metered (MW)	Connected Load Un-metered(MW)	Total Connected Load (MW)	% of connected load	Billed energy (MU)				T&D loss (MU)	T&D loss (%)	Billed Amount in Rs. Crore	Collected Amount in Rs. Crore	Collection Efficiency	AT & C loss (%)
													Input energy (MU)	Metered energy	Unmetered/assessment energy	Total energy						
1				Residential	0	0	0	0%	0	0	0	0%	0	0	0%			0.00%	100%			
				Agricultural	0	0	0	0%	0	0	0	0%								0.00%		
				Commercial / Industrial-LT	0	0	0	0%	0	0	0	0%								0.00%		
				Commercial / Industrial-HT	0	0	0	0%	0	0	0	0%								0.00%		
				Others	0	0	0	0%	0	0	0	0%								0.00%		
				Sub-total	0	0	0	100%	0	0	0	100%								0	0	0
2				Residential	0	0	0	0%	0	0	0	0%	0	0	0%			0.00%	100%			
				Agricultural	0	0	0	0%	0	0	0	0%								0.00%		
				Commercial / Industrial-LT	0	0	0	0%	0	0	0	0%								0.00%		
				Commercial	0	0	0	0%	0	0	0	0%								0.00%		
				Others	0	0	0	0%	0	0	0	0%								0.00%		
				Sub-total	0	0	0	100%	0	0	0	100%								0	0	0

				Industrial-HT																
				Others	0	0	0	0%	0	0	0	0%							0.00%	
				Sub-total	0	0	0	100%	0	0	0	100%	0	0%	0	0	0	0	0.00%	100%
				...	0	0	0	0%	0	0	0	0%	0	0%					0.00%	100%
				...	0	0	0	0%	0	0	0	0%	0	0%					0.00%	100%
75				Residential	0	0	0	0%	0	0	0	0%	0	0	0%			0.00%	0%	
				Agricultural	0	0	0	0%	0	0	0	0%								0.00%
				Commercial / Industrial-LT	0	0	0	0%	0	0	0	0%								0.00%
				Commercial / Industrial-HT	0	0	0	0%	0	0	0	0%								0.00%
				Others	0	0	0	0%	0	0	0	0%								0.00%
				Sub-total	0	0	0	100%	0	0	0	100%								0
76	Total			Residential	0	0	0	0%	0	0	0	0%	0	0	0%			0.00%	100%	
				Agricultural	0	0	0	0%	0	0	0	0%								0.00%
				Commercial / Industrial-LT	0	0	0	0%	0	0	0	0%								0.00%
				Commercial / Industrial-HT	0	0	0	0%	0	0	0	0%								0.00%
				Others	0	0	0	0%	0	0	0	0%								0.00%
				Sub-total	0	0	0	100%	0	0	0	100%								0
77	At company level																			

** Note - 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.

“A. Details of Distribution Transformer (DT) Level information

a. Division-wise status of DT level metering (please add more rows as per requirement)
(Please fill in the data for each division during the reporting period)

Zone name	Circle name	Division name	Feeder name	Total no of DT on feeder	No of unmetered DTs	No of metered DTs			No. of DTs with functional meters	
						AMR metered (communicable)	AMI metered (communicable)	Non-AMR / AMI metered (non-communicable)	Communicating (Total No out of 7 and 8)	Non-communicating (Total No. out of 7,8 and 9)
1	2	3	4	5=(6+7+8+9)	6	7	8	9	10	11

b. Details of DT-wise losses (please add more rows as per requirement)

Sub-station ID	Feeder ID	Feeder Name	DT Id no.	DT Capacity (kVA)	Predominant consumer type of DT (Domestic/Industrial/Agriculture/Mixed)	Type of metering (Unmetered/AMI/AMR /Other)	Status of meter (functional/non-functional)	% of data received automatically (if AMI/AMR)	No. of connected consumers	Input Energy (MU)	Billed Energy (MU)	Loss of Energy (MU)	% Loss
		(1)	(2)						(3)	(4)	(5)	(6)= (4)- (5)	(7)= [(6)/(4)]*100

B. Details of Consumer Category-wise Subsidy Billed/Received/Due for period: fromto.....

Consumer Category (Separate for each subsidized consumer category)	Billed Energy	Subsidized Billed Energy	Applicable rate of Subsidy as notified by State govt.	Subsidy Due from State Govt.	Subsidy Actually Billed / claimed from State Govt. (As against col.12)	Subsidy Received from State Govt. (As against col.13)	Balance Subsidy yet to be Received from State Govt.

1	Metered		Total 4=2+3	Metered (out of col.2)		Total 7=5+6	Metered Energy**		Metered Energy	Un-metered Energy**		Un-metered Energy	Total	(in Rs. Cr.)	(in Rs. Cr.)	(in Rs. Cr.)
	2	3		5	6		8	9		10=5X8	11=6x9					
	(in kWh)			(in kWh)			(in Rs/kWh)		(in Rs. Cr.)			(in Rs. Cr.)	(in Rs. Cr.)	(in Rs. Cr.)		
Residential																
Agricultural																
Commercial/Industrial – LT																
Commercial/Industrial - HT																
Other (specify)																
Total																

*Basis of assessment of energy to be provided in the notes along with relevant Government Orders

**Provide copy of relevant Government Orders”