

Annexure -II

FORMAT FOR ELECTRICAL SAFETY AUDIT REPORT FOR ALL BUILDINGS

Branch/office Code & Name	
Address	
BM Name/Empl Nos	
Sanctioned load	----- KW/ KVA
Connected load	----- KW/ KVA
Monthly amount of energy bill (Approx.)	Rs...../- per month
Total tonnage of Air conditioners in branch/office	----- TR (Tonnage of Refrigeration)
Area of the Branch	Sq. feet/ Sq. Metres)

Sr.No	Description	Details	Remarks
1	Whether MCCBs / MCBs/ELCBs are provided with proper rating to cater the load. Check for loose/broken neutral at incomer. The incomer panels thermography report.	YES/NO	
2	Whether the Branch is provided with facility(switch) to switch off the premises power supply at close hours in branch before leaving the premises(if no to be provided immediately)auditor to ensure compliance.	YES/NO	
2	Whether light and emergency light are provided in electrical rooms/operating areas for easy operation & maintenance works	YES/NO	
3	Whether Pump room, DG set room, UPS room, electrical room etc. are maintained dry and in good condition and obsolete /hazardous / old items are not dumped there.	YES/NO	
4	Whether Water Seepage is observed near any of the Electrical Panel, Distribution Boards, Electrical equipment etc.	YES/NO	
5	Whether Earthing pits are provided and connected to the equipment Body of the connected equipment..	YES/NO	
6	Whether the Earthing Pits are properly maintained and earth values<1megaohm	YES/NO	
7	Whether proper exhaust fan for ventilation of panel room/electrical room/ UPS room is provided and paper, old material or any other scrap kept near DB/Panels/ UPS/ Batteries etc. are not kept there.	YES/NO	
8	Whether penalty is being imposed in electricity bills on account of higher load/ poor power factor etc. (It may be ascertained from the electricity bill of April / May/ June/ July). Additional electrical load required if any (from Power Distribution company).	YES/NO -----KW	
9	Whether Load is distributed in all three phases to avoid unbalancing of phases and no loose electrical connections/haphazard wirings observed in the Branch/ office premises	YES/NO	

10	Whether isolating switches are provided for the switching off of the non-essential loads premises during night and main switch to switch off the power supply to the Branch in case of fire/emergency.	YES/NO	
11	Whether electrical equipments of Pantry etc. are properly connected to Iron socket box with MCBs. MCBs or latest type switches are provided to switch on/ off the ACs and protect them from Overload.	YES/NO	
12	Whether Proper preventive maintenance after opening of Panel boards and distribution Boards are carried out by the license holder Electrician or skilled technicians of Equipment manufacturers/ service providers.	YES/NO	
13	Whether Appropriate timers used in the changeover of Air conditioners for server room ACs and for Signage Boards to make auto ON/OFF (for schedule timings). The thermostat of AC's at server rooms should be set to say 30 degree centigrade so they are not run only when the temperature is too high (to minimize chances of fire due to idle running of ACs during the night)	YES/NO	
14	Whether Preventive Maintenance of electric installation and equipment is carried out by skilled license holder electricians / skilled technician	YES/NO	
15	General Condition of electrical control panel, Main Switch, Electric Meter Board and change over switch, ACs, water cooler, water filter, wiring, cables etc. is good and all DB'S, Panels, switch boards are Properly covered	YES/NO	
16	Whether the contact numbers of persons, electricians, power distribution company, Generator service provider, vendor, UPS vendors, ACs etc. are available with Accountant/ Security guard and other staff and they are displayed in Electric room/ UPS room?	YES/NO	
17	Whether the Power factor Panel of appropriate rating is installed.	YES/NO	
18.	FIRE PREVENTION MEASURES		
(i)	All old disposable records, broken furniture etc. accumulated at the premises at the premises have been cleared.	YES/NO	
(ii)	Combustible leaf, litter/waste papers etc in and around the branch is removed/cleaned periodically.	YES/NO	
(iii)	No Stationary/Records/old obsolete items are stored/kept in the System/UPS room.	YES/NO	
(iv)	Storage racks in Stationery/Record room kept at a safe distance of at least 3 ft from electrical points/switch/junction boxes.	YES/NO	
(v)	In the pantry/canteen LPG is used(Yes/No)	YES/NO	
19	SERVER AND UPS ROOM		

(i)	Server Room Server room have dual AC units having timer circuit device with independent circuit.	YES/NO	
(ii)	Whether Exhaust fan installed in UPS Room	YES/NO	
20	ELECTRICAL SAFETY		
	Power supply to Record/Stationary room is made through Plug and Socket arrangement?	YES/NO	
21	FIRE PROTECTION/FIRE CONTROL EXTINGUISHERS AND FIRE ALARM SYSTEM		
	Are fire extinguishers available in the following area and clearly marked and accessible? A. System/UPS Room: CO2(3 Kg/4.5 Kg) X2 B. Banking Hall: Water CO2 type C. Stationary Room: Water CO2 type	YES/NO	
22.	DG SET/GENERATOR IF PROVIDED OWNED/RENT		
	At least two 6 kg ABC capacity fire extinguishers are placed near the Diesel Generator	YES/NO/NA	

Energy Audit

- Sanctioned load and utilized load.(Billing Demand)
- Electricity Consumption for financial year period (eg: 01.04.2024 to 31.03.2025) and comparison with previous year.
- Corresponding meter readings also to be recorded.
- Energy Bill analysis for 12 months including tariff analysis.
- Illumination and lighting lux levels, type of fixtures LED.
- Identification of energy savings opportunities: list of all equipment's, gadgets, UPS, AC pumps, heaters etc. installed in premises.
- AC star rating or ISEER ratings, type of gas enviro-friendly (R410 or R 404), any machine still with R-22 to be specifically mentioned.

Signature

Name of Electrical Engineer/ Consultant/ Contractor

Supervisor's Valid License No.

(In case of Electrical Contractor) Contractor's License

Contact No:-

Date:

Place:

Only where HT (11kv/33kv substation is in premises)

ANNEXURE-II-A

ADDITIONAL POINTS FOR BUILDINGS HAVING OWN H.T. SUBSTATION

Name of Branch/Office/Building	
Address	
Billing Demand	-----KW/KVA
Maximum Demand (MD) of (preferably April / May / June months)	KW/KVA
Power factor and Peak Load as mentioned in the electricity bill (preferably April / May / June months)	P.F: Peak Load:
Capacity of substation and voltage:	----- KVA -----KV

S.No	Description	Details	Remarks
1	Whether the permission for Sub-Station and DG Sets, Electric shock treatment chart, Electrical & Fire safety Charts, Single line diagram etc. are displayed in substation	YES/NO	
2	Whether emergency contact numbers of Fire station, Health center, Power Distribution Co., main contractor etc are displayed at substation and control room	YES/NO	
2.1	Whether electrical danger plate (fig of skull & cross bones, 11KV/33KV/440V/230V) is provided on Main Electrical Panel / electrical room / operating areas	YES/NO	
3	Safety Materials like Fire extinguishers, Sand buckets, Rubber Mats, Hand Gloves, First aid box etc. are available in substation?	YES/NO	
4	Whether the inspection of substation/DG Set/Lifts is done by the Concerned Electrical Inspector at least once in a year and the required inspection fees paid well in time?	YES/NO	
5	Whether the observations by Electrical Inspector during his last visit have been attended? Date of his compliance report.	YES/NO	Copy of letters in this regard should be enclosed
6	Whether Preventive Maintenance of Breakers, Transformer, HT & LT Panels etc. is carried out as per schedule and the contract for maintenance of Transformer/Breakers/ Panels etc. are given to respective manufacturer/ service Providers?	YES/NO	Attach the report

7	Whether (i) The maintenance Contractor has "A" Class Electrical contractors license and comply the requirement of the guidelines of the Concerned State/ Central Govt.? (ii) The Workmen/ Technicians possess the wireman/ electrician/s license?	YES/NO	Copies should be available with the concerned official
8	In case of outdoor substation, (i) Whether the stone gities provided in substation yard? (ii) Whether the Substation structure fencing boundary is provided, painted and well maintained?	YES/NO	
9	Whether Earthing Test reports are provided by the Electrical Contractor / Maintenance contractor? Whether Proper nomenclature and painting is done on Electric Panels and Earthing pits?	Yes/No	
10	Whether Transformer oil level and breather condition is checked at least once in a week? Check last date of transformer oil BDV test and confirm the BDV value whether it is permissible or not?	YES/NO	
11	Whether mechanical and electrical interlocks of critical equipment are provided and maintained in working condition? Operating manuals for critical equipment like transformer, breakers should be available at site?	YES/NO	
12	Whether Automatic Power Factor Control (APFC) Panel is provided and Power Factor value is maintained higher than prescribed value (say 0.90. It may be confirmed / verified from the electricity bill & APFC Panel meter)	YES/NO	
13	Whether Lightening Arrestor and Aviation light is provided (Applicable only in case of Multi storied Building)	YES/NO	
14	Whether the Maintenance staff wear shoes and they are well mannered and well dressed	YES/NO	
15	Whether Some training/ Meeting with Maintenance Staff is conducted for discussion on energy conservation opportunities, challenges in Electrical safety etc.	YES/NO	
16	Thermography: Observations on thermo graphic images at Electric Panels, Distribution Boards. (Please also upload the thermo graphic images on the system)		

Signature

Name of the Auditor:

Name of Agency:

Supervisor's Valid License No.

Date:

Place

Annexure –I

Points to be covered in Electrical Safety Audit(ESA) and Energy Audit of /Premises Branches of the Bank

Objective

•The objective of conducting Electrical safety is to review the condition of the existing electrical installation and to recommend measures for further strengthening the system in order to eliminate/reduce the electrical/fire hazards and to improve the safety of the personnel.

The audit shall mainly focus on:

- Identifying the potential electrical/fire hazards
- Boosting employee morale by providing safe working environment.
- Smoothering the operation and maintenance of electrical installation
- Avoiding loss of properties, human life and costly equipment.
- Ensuring the compliance with relevant codes and practice, statutory rules and regulations.
- Establishing procedures and process of safe working in electrical installation

Pre-Qualifying (PQ) Criteria for ESA.

1)The intending tenderer for conducting Electrical Safety Audit should be electrical engineer with five years of experience as Electrical Safety Auditor. A certified accredited energy auditor from BEE (Bureau of Energy Efficiency) will be preferred.

2) The firm must have team of skilled staff and requisite tools and tackles to conduct electrical safety and energy audit. (Provide details)

3) The firm must be a registered company or firm in India and should have been in the business in India from the last 5 years.

4) Agency/firm must have average turnover of Rs10.00lac for last three years

5) The firm should have the experience of carrying out at least one contract in (Zonal/region territory area) electrical safety audits in Banks, Financial institutions, major hotels or multi-storeyed office buildings or any other electrical installations of similar nature (work). Provide work order and completion certificates.

6) Agency/individual must have valid GST No.&.Agency/individual must have PAN No and must be an Income Tax Assesse for the last three years.

7) The firm must have an office in the each of ZO /RO. Please specifies the address, contact person .and contact nos.

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SCOPE OF WORK

THE ELECTRIC SAFETY AUDIT SHALL BE CARRIED OUT TO SPECIFICALLY COVER THE FOLLOWING ASPECTS.

A) Electrical

- Physical inspection of the office premises with reference to applicable Indian standards, Indian Electricity Rules and other relevant codes of Practice & identifying electrical hazards (shocks, fires, etc.).
- Review of protection devices / system of the electrical installation including fuses, ELCB, MCB, MCCB, master electrical switch, etc.
- Review of adequacy of cables based on actual load current measurements and cable current carrying capacities.
- To evaluate the earthing system (installation and maintenance) based on IS 3043 including availability, upkeep and testing of earth pits and to suggest recommendations.
- Display of danger signboard.
- Use of electrical rubber mats, rubber gloves, etc.
- Provision of identification tag of cables, cable glands, sealing of cable entry and unused holes
- Upkeep and housekeeping of electrical installations
- Provision of indicating lamps on the control panels
- Use of 3-pin plug and socket
- Fire protection of electrical installations
- Arrangement for repair and maintenance of electrical installations, equipment and appliances including qualified maintenance personnel, accessibility, and maintenance practices, etc.
- Adequacy of rating of electrical equipment and installation
- Adequacy of isolation of current carrying parts
- Lightening protection
- Weather protection of outdoor electrical equipment and fittings

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•Cables –dressing, routing, identification tags, glands, lugs, armoured earthing, sealing of cable entry and used holes, adequacy for current carrying capacity, colour coding

•DG Set –emergency switch, oil leakage, stack and noise monitoring,

•UPS and battery room

•Review of the following test records, (if any) evaluating the test results and to suggest recommendations as per applicable standards. o Insulation resistance tests o Earth resistance tests.2.ACTUAL TESTS/ANALYSIS TO BE PERFORMED DURING THE AUDIT:

•Infrared Thermography: HT/LT panels where applicable, DBs, MCBs, SMDB (Light & Power), MDB (Light & Power), Wall & Floor Sockets, Stabilizers, UPS, A/C Units, Exposed Terminations of Cables, exposed cables/wiring, etc.

•Earth pit Resistance tests

B) Energy Audit

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- Identification of energy savings opportunities: list of all equipment's, gadgets, UPS, AC pumps, heaters etc. installed in premises.
- AC star rating or ISEER ratings, type of gas enviro-friendly (R410 or R 404), any machine still with R-22 to be specifically mentioned.

(The above scopes of work are to be mentioned in the work order to the agency conducting the electrical safety Audit)

