



Premises & Estate Department
Local Head Office,
2nd Floor, III/1 Pandit Jawaharlal Nehru Marg,
Bhubaneswar- 751001.

Part – II

(Price Bid)

TENDER FOR ELECTRICAL SAFETY AUDIT OF OFFICES / BRANCHES (INCL. ON-SITE ATMS) UNDER BHUBANESWAR CIRCLE, ODISHA.

(Item Rate Tender)

Tender No. BHU/P&E/2023-24/05
Date: 30.08.2023

TENDER SUBMITTED BY : _____
NAME OF THE FIRM/COMPANY : _____
ADDRESS : _____
GSTN No. : _____
DATE : _____

PRICE BID

Sr. No.	Description of item	Rate per Branch/ Office per Audit (Rs.)
1	Electrical Safety Audit of Branch/ Office with LT connection up to 30kW sanctioned load with/ without on-site ATM. Audit to be conducted as per enclosed format given in Annexure-II	
2	Electrical Safety Audit of Branch / Office with LT connection having 31kW to 60kW sanctioned load with/ without on-site ATM. Audit to be conducted as per enclosed format given in Annexure-II	
3	Electrical Safety Audit of Branch / Office / Building with HT connection (Incl. Sub-Station) having over 60kW sanctioned load with/ without on-site ATM. Audit to be conducted as per enclosed format given in Annexure-II (for Branch) & III (for sub-station)	

Note:

- 1) The quoted rate should be inclusive of cost towards electrical safety audit, transportation, overheads, profit, statutory expenses, incidental charges and all related expenses required for the completion of the audit. However, GST shall be paid extra on quoted rate as applicable. Additional claims other than the quoted amount will not be entertained by the Bank.
- 2) The bidder(s) is/are to login in the e-Tendering portal and quote item wise rate/cost not exceeding per item estimated cost.
- 3) SBI reserves the right to increase or decrease the No. of Branches/ Offices (incl. On-Site ATMs) and assign Branch/ Offices located any part of Odisha at its own discretion. Bidder has to quote accordingly.
- 4) Currency Administrative Centers (CACs) are part of the Branches, hence the audit report for such CACs has to be attached as a separate report as per given Annexure-II. No separate billing shall be made for CACs.
- 5) The Electrical Auditor/ Consulting Firm should submit the duly signed Audit Report in triplicate (copy to Branch, Zonal Office & LHO) along with the requisite documents mentioned in the Annexure-II & III, on Bank's standard format mentioning the condition of existing electrical system and suggesting remedial measures in case of any fault/ shortcoming with supporting photographs.

Scope of work: The scope of work for the electrical safety audit shall include but not limited to:

- a. **Study of existing safety measures**, procedures and system for controlling electrical hazards being followed in the office with respect to statutory and regulatory requirements, electricity rules etc. and suggest for further measures in case of any gap.

b. **Preparation of single line diagram (SLD) of Electrical Installation** from HT panel to Floor panels, covering transformers, main LT panel, capacitor panel, DG set, UPS Panel etc. The SLD should indicate the ratings of the equipment, feeders (wherever possible) etc.

c. **Earth Resistance Testing:**

➤ The earth resistance testing shall be carried out to measure the earth resistance on all the earth pits and its compliance with respect to Indian Electricity Rules may be verified.

➤ The continuity of earth strip/conductor from the earth pit the earth terminal of the respective electrical equipment shall be checked and verified.

d. **Identification of any unbalancing of loads.** The unbalancing/overloading, if any, in the electrical installation viz. transformers, LT panels, Emergency panel, Floor Distribution Panels, Distribution Boards etc shall be identified with the help of measuring equipment.

e. **Identification of Hot Spots using thermal camera:** The hot spots, if any, in the electrical installation panels and distribution boards shall be identified with the help of thermal imaging/thermography and submit photographs along with the audit report.

f. **Checking Record of test reports** carried out by the OEMs or their authorized representatives for proper functioning of transformers, HT/LT switchgear and proper functioning of their protective relays, failsafe interlocking of Circuit breakers

g. **Checking of Elevators** for passenger and freight/bullion movement and passenger safety testing including testing of door safeties, alarms, overload protection and Automatic rescue devices, firemen control/switch, wiring in shaft and machine room etc. provided in the lift installations and gaps if any shall be identified and indicated in the audit report.

h. **Physical inspection of the sources of power supply** viz. Transformers, substation equipment, DG set, UPS installations and associated power distribution electrical installations including power supply systems & wirings for server rooms, IT equipment etc. shall be done with reference to applicable Indian standards, Indian Electricity Rules and other relevant codes of practice. Any leakage of oil in transformer, capacitor banks, and diesel/water/oil in DG sets, leakage of oil/refrigerant in AC plant, leakage of water in lift shaft, leakage of water over any electrical equipment etc. to be checked.

i. Checking provisions and sufficiency of AC services comprising AC units/ PAC systems and ventilation systems in areas housing electrical/IT equipment in 24 x 7 x 365 operations namely UPS systems, battery rooms, server rooms etc. as per existing circulars and guidelines issued by the Bank. **Checking of the alternate operation** of the standby fans/AC units through timers or any OEM installed logic circuits etc. for proper operation.

j. Verification of circulars, Records of Preventive maintenance of electrical installation and equipment maintenance, practices & documentations and compliance thereof as per SBI instructions.

k. Identification of Electrical hazards such as loose wire hanging, cables not dressed properly, broken switches, plugs and sockets etc. shall be done.

- l. Checking of the protection devices in upstream and downstream switchgears and their settings to ensure that the same are in the desired graded manner as designed as per the requirements of existing standards including setting/ adequacy of ELCB and their ratings for earth leakage protection.
- m. Checking of the Lightning protection system of the building and ensuring that lightning arrestors are connected to two isolated earth pits. These pits should not be connected to electrical system earth.
- n. Checking of the provision of electrical shock treatment chart in Hindi and local language near electrical equipment and substation. Checking the record of the training provided to the electrical staff on electrical safety, shock treatment and to handle emergencies and artificial respiration.
- o. Checking the log of electrical accidents maintained.
- p. Checking of the provision of Danger sign Boards indicating the voltage at a prominent location of electrical installation.
- q. Checking of the cable terminations at various panel and distribution boards to avoid phase and earth fault.
- r. Checking of the provision of protective guards and belt covers for all the rotating electrical equipment.
- s. Checking the provision of firefighting equipment and fire alarm system detectors near all the electrical installations. It is to be ensured that Fire buckets filled with free flowing sand and DCP/CO2 fire extinguishers are provided near electrical substation and electrical panel locations.
- t. Verifying that all the workmen engaged on electrical installation work has been provided Personal Protective Equipment (PPE) i.e. insulated gloves, safety shoes and insulated tools etc., and the same are being used. These equipment should be periodically checked for their proper functioning.
- u. Verifying provision of First Aid boxes and their periodic replacement of expired medicines.
- v. To check the provision of insulated mats of ISI mark in front of all the electrical panels.
- w. To check the provision and use of proper height, strong and properly insulated ladders for the maintenance work.
- x. To check the provision of proper ventilation of substation, transformer rooms, electrical panel rooms and battery rooms etc.
- y. In addition to above, checking for any shortfalls in the existing electrical systems which impact on human and fire safety.

Equipment/ Measuring Instruments:

All the equipment/instruments required for carrying out the Electrical Safety Audit will have to be arranged by the firm without any extra payment to the Bank. The firm should have the following minimum equipment/instruments for Electrical Safety Audit:

- Three-phase Power analyzer
- Thermography camera
- Earth tester
- Megger
- Any other equipment/instrument

Please note that the Bank will not provide any kind of assistance in the form of men/material and the firm will have to make their own arrangement for all assistance.