

बैंक ऑफ महाराष्ट्र
(भारत सरकार का उपक्रम)



Bank of Maharashtra
(A Govt. of India Undertaking)

पुणे पश्चिम अंचल कार्यालय / PUNE WEST ZONE OFFICE

सूचना प्रौद्योगिकी विभाग / INFORMATION TECHNOLOGY DEPARTMENT

1ST FLOOR, JANMANGAL, NEAR FNOLEX CHOWK, PIMPRI PUNE 411018

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TENDER DOCUMENT

Electric and Energy Audit of PWZ Zone Branches (61) and zonal office.

Sr.No	DESCRIPTION	PARTICULARS
1	Ref. Number	AX-63/PWZ /Electric and Energy Audit/2021-22
2	Address for Communication	Bank of Maharashtra, PWZ ZONAL OFFICE, 1 ST Floor Near Finolex Chowk, Pimpri, Pune 411018
3	Contact Person	Milind Kawale/9860229467 Rohit Joshi/8093172353
4	Email ID	ritc_pwz@mahabank.co.in ; gad_pwz@mahabank.co.in

Bank of Maharashtra, Zonal office PWZ, Invites tender from Electric and Energy auditors to to conduct Electric and Energy audit for PWZ Zonal office and 61 branches as per attached guidelines.

Date of Commencement	28.06.2021
Last date for submission of tender	08.07.2021 up to 05.00 P.M.
Opening of Technical Bid	09.07.2021 at 11:00 A.M
Opening of Financial Bid	09.07.2021 at 1:00 P.M
Cost of Tender	Rs.500.00

1. SCOPE OF WORK

Bank of Maharashtra, PWZ ZONE intends to conduct electric and energy audit of PWZ Zone branches (61) & zonal office. **Guidelines & Format** for the Audit is attached with tender document.

2. TERMS OF EXECUTION OF WORK

The services would begin within a period of 5 days after acceptance of the work order issued by the Bank and shall be completed within 40 days. Any delay in services will attract penalty of 1% of the contract value per week subject to maximum of 4% of the contract value. Bank reserves its right to recover these amounts by any mode such as adjusting from any payments to be made by the Bank to the service provider. Part of week will be treated as a week for this purpose. However, the Bank may condone the liquidity damages for delay of less than a week. The decision to further continue/ discontinue the contract with the service provider lies fully with the Bank.

Eligibility Criteria:-

1. Government certified auditor who are registered with Bureau of Energy Efficiency with capable team having minimum educational qualification of Electrical Engineering degree & five year experience of electrical audit work.
2. The firm must be a registered company or firm in India and should have been in the business in India from the last 3 years.

General Terms and Condition:-

1. A non-Refundable Processing Fee of Rs. 500/- through DD/Pay order in favor of Bank of Maharashtra at Pune, must be submitted along the application form. Tender document to be collected from BANK OF MAHARASHTRA PUNE WEST ZONAL OFFICE, NEAR FINOLEX CHOWK, PIMPRI PUNE -411018.
2. The vendors should submit all the relevant supporting documents as a part of Submission. All such documents should be sealed and signed by the Authorized Signatory.
3. If, any information furnished by the vendors is found incorrect at a later date, he shall be liable to be debarred from participating in any of the bidding process of the bank. The bank reserves the right to verify the particulars furnished by the applicant independently.
4. Response to tender should be submitted in Sealed Envelope. The sealed envelope should be super scribe " Tender for Electric and Energy Audit for PWZ Zone Branches and office " and addressed to :-BANK OF MAHARASHTRA PUNE WEST ZONAL OFFICE, NEAR FINOLEX CHOWK, PIMPRI PUNE - 411018.
5. The last date of submission is **08/07/2021 up to 05.00 P.M.** No tender will be accepted after this date. In case the designated day gets declared as a public holiday, the period for submission of tender may be extended to the next working day.
6. The Bank reserves the right to scrap the order at any time, without assigning any reason. The Bank's decision in this regard shall be binding and final. Any decision in this regard by Bank shall be final, conclusive and binding on the firms.
7. If there will be any electric shut down required in branch or office for doing electric audit then

branch may give a suitable date/time for same (as per convenient) and may call /visit on holiday or Sunday for complete the job. No extra payment/ charge will be entertained by Bank.

8. The Company/Firm shall be responsible for all injuries to the work or workmen, to persons, animals or things and for all damages to the structural and / or decorative part of property which may arise from the operations or neglect of himself or their, whether such injury or damage arise from carelessness, accident or any other cause whatsoever in any way connected with the carrying out the electrical audit of branch/office. Insurance is compulsory and must be in effect during electric audit.

Validity of offer

The price finalized shall remain valid for a period of one year from the date of such finalization.

Opening of offers

The technical bids will be opened on 09/07/2021 at 11:00 A.M in the presence of the service providers / their authorized representatives accompanied with valid ID proof and authority letter. No separate intimation will be given in this regard to the Service providers for deputing their representatives. The Price Bids / Commercial Offers will also be opened on 09/07/2021 at 01:00 P.M as stipulated above irrespective of the number of offers or their representatives present.

No commitment to accept lowest or any tender

The Bank shall be under no obligation to accept the lowest or any other offer received in response to this tender and shall be entitled to reject any or all offers without assigning any reasons whatsoever.

Splitting of order

The Bank reserves its right for splitting the order between the two service providers. The splitting of the order, provided the L-2 service provider agrees to match the prices quoted by L-1 service provider and agrees for all the terms and conditions. Or The Bank reserves its right to give full order to L-1.

Right to alter quantities

The Bank will be free to either reduce or increase the number of branches for audit on the same terms and conditions. The Bank also reserves the right to place further/repeat order on same terms and conditions within a period of 12 months.

Reports Submission

Vendor should submit the audit report of first branch immediately after visit for checking purpose, remaining branches can be carried out after confirmation from bank. Vendor should submit the electric audit report (softcopy/hardcopy) to us under copy to branches. **Summary/Consolidated of reports** of should be submitted separately (softcopy/hardcopy) to zonal office.

Payment terms

The terms of payment are as under:

1. No advance payment against work order.
2. 100 % Payment will be made after receiving the Audit reports (softcopy & hardcopy) of all Branches & separate Summary of reports (softcopy/hardcopy).and payment done by branches.
3. No additional payments will be considered for multiple visits.

Force Majeure.

If at any time during the period of the contract the performance in whole or in part by either party or any obligation under the contract shall be prevented or delayed by reasons of any war, hostilities, acts of God, public, enemy, civil commotion, sabotage, fires, floods, explosions, epidemics etc then, provided notice of the happening of the any such events is given by either party to the other within 15 days from the date of occurrence thereof, neither party shall by reason of such event be entitled to terminate their contract nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance. The whole or any part of the Party's obligations under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist. If force majeure event continues beyond the period of three (3) months the parties shall hold consultation to resolve the problem satisfactorily.

Dy. Zonal Manager

Pune West ZONE

Sd-

ANEXTURE I**Basic Information**

(To be filled)

Sr.	Particulars	Details
01	Name of the Company/Firm/Applicant and address of the registered office:- Phone No:- Fax No:- E-mail:- Mobile No:- Website, if any:-	
02	Date and year of establishment (enclose documentary evidence)	
03	Type of the organization (whether sole proprietorship, partnership, private ltd. or Cooperative body etc.)	
04	Name of the proprietor/partners/Directors of application with address and phone no. (in case) a. b. c.	
05	Details of registration- whether partnership firm, company etc. Name of registering authority, Date and Registration number. (enclose documentary evidence)	
06	Whether the firm has worked for the Government/Semi-government/Municipal Authorities or any other public organization Banks etc. if so, give details.	
07	No. of years of experience in the relevant field. (enclose certificate)	
08	Yearly turnover of the organization during last three years(year wise)- as certified by the chartered accounted (enclose copy of balance sheet of last year)	Rs. ----- for 2018-19 Rs.-----for 2019-20 Rs.----- for 2020-21 (Provisional)

09	Name of electrical auditor /engineer/inspector (full details and qualification) (enclose document)	
10	Income tax no:- Permanent A/c no: GST no: (enclose documentary evidence)	
11	Details of staff member who will execute the project (may attach separate sheet)	
12	License Number/ name of the Licensing authority	

List of important works completed

Sr.	Name of the project/work and employer	Nature of work	Work Order No & date	Present stage of work	Value contract (Rs.) of	Brief details of the dispute (if any)

Notes:

1. Information has to be filled up specifically in this format. Please do not write remark "As indicated in Brochure".
2. Indicate other points, if any, to show your technical and managerial competency to indicate any important point in your favour.

COMMERCIAL/ FINANCIAL
Annexure II

Quotations issued to-

Name of work: - Electric and Energy Audit of Branches & ZO of PWZ Zone

Sr.	Description & scope of work	Qty.	Rate	Amount In words
01	Electric audit of all branches & Zonal office under jurisdiction of PWZ Zone, Total 61 Branches & 01 Zonal office as per prescribed Guidelines & format attached with tender only. The rate shall include labor cost, travelling, equipment handling charges, etc. (Branches located in Junnar, Ambegaon, Rajgurunagar, Maval, Mulshi, Haveli, Pimpri and Chinchwad, Pune City)	Per branch		

Note: -

- A. Cost **exclusive of taxes** such as GST, service tax, sale tax etc. and **inclusive of expenses like travelling, labor cost, Equipment handling charge etc.**

Annexure II

Minimum Standards & Methodology for Detailed Electrical cum Energy and Safety Audit.

Background:

1. Energy cost is one of the significant contributors of production cost for most of the Buildings & offices. Hence, reduction in energy consumption in electrical, thermal or in any other form by efficient reliable electrical system by nullifying breakdown of system & fire hazards with least loss time injuries towards business operational & manpower cost always helps in business sustenance and growth

The need for Electrical cum energy & safety audit is gaining further importance with increasing energy. Operational manpower cost. The objective is to identify areas where excess energy consumption or wastage of energy is taking place due to insulation failure of under perform electrical gadgets, unbalance load, overloading, heating of gadgets, Distortion level of current and voltage harmonic in electrical system in order to minimize electrical fire hazard incident.

The electrical cum energy audit in branch/office building is a feasibility study to identify energy use among the various services, opportunities for energy conservation as well as technical & economic feasibility aspects. The audit will provide the data on the options available for reducing energy losses, the costs involved, energy consumption pattern, circuit breakdown and also assist with preparing an action plan based on severity of failures of equipment's.

It begins with a detailed, step-by-step analysis of the Electrical system installed in branch/office which includes electrical gadgets energy use factors and costs, such as insulation values, occupancy schedules, efficiencies, lighting levels. It gives trends to improve operations and maintenance practices of electrical gadgets under premature failures which in turn rises the incidences of fire at branches/offices on account of short circuit. The audit is mandatory once in 2 year as per bank Premises policy

2. Coverage of Electrical cum Energy & Safety Audit of Electrical System:

1. Schematic & layout plan for electrical system & Earthing system, Review of present electrical distribution like Single Line Diagram (SLD), transformer loading, cable loading, normal and emergency loads, electricity distribution in various areas/ floors etc.
2. Ensure the work of Electrical cum Energy & Safety audit must be carried out by Government certified auditor who are registered with **Bureau of Energy Efficiency** with capable team having minimum educational qualification of Electrical Engineering degree & five year experience of electrical audit work.
3. Listing out all electrical gadgets working condition & performance with remark.
4. Review of present lighting system, lighting inventories etc.
5. Estimation of lighting load at various locations like different floors, outside (campus) light,

pump house and other important locations.

6. Detail lux level survey at various locations and comparison with acceptable standards.
7. Study of present lighting control system and recommend for improvement.
8. Study of Reactive Power Management and option for power factor improvement.
9. Study of power quality issues like Harmonics, current unbalance, voltage unbalance etc.
10. Review of present HVAC system like central AC, Window AC, Split AC, Package AC, Water coolers and air heaters.
10. Performance assessment of window AC, split AC and package AC system.
11. Analysis of air-conditioning system Performance like estimation of Energy Efficiency Ratio (EER i.e. KW/TR) & insulation level.
12. Area wise calculations are done based on Temperature, RH, room size, equipment load, lighting load, occupancy and compared with details of existing Air-conditioning equipment.
13. Review of DG set operation.
14. Performance Assessment of DG sets in terms of Specific Fuel Consumption (SFC i.e. KWH/Liter).
15. Review, Performance, Safety measures assessment for UPS system & Batteries.
17. Review of water pumping, storage and distribution systems.
18. Performance assessment of all major water pumps i.e. power consumption vs. flow delivered.

Estimation of pump efficiency etc.
19. Review of present maintenance practice, replacement policies and building safety practices as applicable to high rising buildings and recommend for Improvements.
20. Safety/statutory compliance.
21. Safety Measures for Electrical Installation.
22. O&M measures including housekeeping.
23. Detail review of present energy monitoring and accounting system in terms of metering, record keeping, data logging, periodic performance analysis etc.
24. Applicable Codal compliance such as Building Code and Energy Conservation Code.
25. Suggestions for Power Quality improvement (including Harmonics).
26. Formulation of conclusion and recommendation of Electrical cum Energy & safety audit and its Compliance for rectification by certified Electrical cum Energy Auditor.

3. Electrical Measurement:

The instrument used for measuring electrical parameter such as KVA, KV, PF, Hz, KVAR, Amp and Volt which are applied online. The details are such as Voltmeter/Ammeter (Millimeter), Contact - Thermometer, Infrared Thermometer, Leak detector, Lux meter, Analyzer etc.

1. Measurement of illumination levels.
2. Measurement of Electrical Parameters for Lighting System.
3. Measurement of Electrical Parameters for Air-conditioning system (For Fans, Compressors, Total) & UPS System.
4. Measurement of Electrical Parameters such as Voltage, Current, kVA, kVAR, THDv, THDi, Current harmonics for Capacitor Banks and non-linear loads such as UPS.
5. Analysis of Current Harmonics for feeders with high harmonic content.
6. Measurement of Temperature and RH.
7. Thermal imaging for identifying hot spots with possibility of safety risks,

Electrical cum Energy & Safety Audit Format

1. General Information.

1	Name Of Branch/Office & Zone			
2	Type of Branch/office(Metro/Urban/D Semi urban/Rural			
3	Staff strength detail of Branch/Zonal Office/Building	Officers-	Clerk-	Sub Staff -
4	Name of designated Security/GAD officer of branches/Office & Zonal office with contact no			
5	Name of Electrical Auditor and contact no Registration No./License No.			

2. Last Audit

Sr. No	Date of last electric audit	Electric risk rating <u>(High/Medium/Low)</u>	Compliance date	Closure Date

3. Electrical Supply Details

Sr.No	Electric supply company/Dept	Sanction Load	Maximum Load (in last one year)	Average Load (in last one year)	Any penalty (in last one year)

3.1 Electric supply (Single phase/Three phase) (please tick)

Phase-I	Phase-II	Phase-III

3.2 Electric Load Distribution (in Volts)

R-phase(R-N)	Y-phase (Y-N)	B- phase(B-N)

4 .Earthing System.

Sr.No	Separate earthing for UPS anti raw power (Yes/No)	Type of earthing (chemical/ Normal)	Earth resistance (in ohm)	Earth pit identified (Yes/No)
	Earthing System review	Status (Functional/Non functional)	Observations	Recommendations

5. Protective & Switching Device.

Sr. No	Equipment's	Quantity/ Rating/ Parameter	Status (Functional/ Nonfunctional)	Observations	Risk Level	Remarks
1.	Air Circuit Breaker/					

2.	(MCB) Miniature					
3.	(MCCB) Molded Case					
4.	(ELCB) Earth Leakage Circuit Breaker					
5.	RCCB (Residual current Circuit breaker)					
6.	Electrical Cable/Wir es					

6. Details of Electrical Equipment

Sr. No	Equipment's	Quantity/ Rating/ Paramete	Status (Functional/ Nonfunctional	Observati ons	Risk Level	Remarks
1.	Computers					
2.	Printers					
3.	Scanner/Col or Printer					
4.	Public administrat ion System					
5.	Split ACs/Windo w!			Cassettes/ Tower		
6.	Fans					
7.	Router					
8.	Fire alarm and burglar alarm					

9.	CCTV					
10.	DG Sets					
11	UPS System					
12.	Battery System					
13.	Gate pass machine					
14	Flap barrier					
15	Baggage Scanner					
16	Door Scanner					
17	Motor Pump					
IS	Others					

7. Lightning System.

Sr.No.	Fittings (Conventional/LED/CFL)/ LUX Level	Quantity/ Rating/ Parameter/ Observations	Status (Functional/ Nonfunctional)	Comparison with acceptable standards	Recommendations

8. Performance Assessment

1.	<p>UPS & Batteries</p> <ul style="list-style-type: none"> > AMC Vendor & Expiry date >UPS Connection (Three Phase/Single Phase) <ul style="list-style-type: none"> Any overload in UPS (Yes/No) (if yes give reason/details) (Overload- <ul style="list-style-type: none"> more than 80% of UPS capacity) >Any battery bypassed with UPS (Yes/No) (if yes give details) >Any chemical rust or loose connection on battery terminal/ lug (Yes/No) (if yes give reason/ details) 					Review/Status/ Details
	Equipment's Study Review &	Quantit y/ Rating/	Status (Functional /	Observations	Risk Level	Remarks

2. A.C UNITS.

	<p>AMC vendor & expiry date (if any)</p> <p>Proper electric connection with compressor. Contactor. relay and capacitor</p> <p>%Auto timer (functional/non- functional) (if provided)</p>					
	Equipment's Study Review & analysis	Quantity / Rating/ Paramet	Status (Functional! Nonfunction	Observations	Risk Level	Remarks
.	<p>Diesel Generator</p> <ul style="list-style-type: none"> AMC Vendor & expiry date (if any) >Date of last engine oil and filter replacement (Not more than 06 months or 250 running hrs.) All gauges like temp. meter. Voltmeter, ammeter, wattage, KWH. hour meter etc. are working properly (Yes/No) (If no 					Review/Status) Details

11. Other Electrical Works.

Sr No	Electrical Risk	Category (High/Medium/Low)	Observations	Reason/detail and recommendation (For High only)
1	Any hanging electrical wire/temporary electric connection etc. in premises			
2.	Any multi pin plug or extension cable/board use in premises			
3.	Any danaline /loose electric connection or portion of live wire with damage jacket/insulation			
4.	Flammable combustible material dumped near electric panel(Those electrical equipment run on 24x7 basis)			
5.	Voltage fluctuation			
6.	Any MCB/Fuse etc. by pass from the electrical system			
7.	Any other electrical risk			

(Stamp & Signature of Electrical Auditor)

(Stamp &. Signature of Zonal/Branch head/ In charge)

Date -

Compliance Certificate

This is to certify that Electrical Audit of Zonal office & its control Branches with total no (As per List) Currency chest has been

Carried out on Date & Compliance wherever required has been made as per Circular No. AX1/CSD/Annexure/AKR/Methodology for detailed Electrical cum Energy Audit/2019-20 dated 03rd September 2019. The certified electric auditor has verified the same & has recommended for closure report.

(Stamp & Signature of Zonal Head/In charge)

Date -