



बेटी बचाओ
बेटी पढ़ाओ

भारतीय रिज़र्व बैंक
RESERVE BANK OF INDIA
www.rbi.org.in

नागपुर में बैंक के मुख्य कार्यालय भवन और अतिरिक्त कार्यालय भवन का ऊर्जा ऑडिट करना

भारतीय रिज़र्व बैंक, नागपुर निम्न कार्य के लिए सीलबंद निविदाएं (दो भाग) आमंत्रित करता है – 'नागपुर में बैंक के मुख्य कार्यालय भवन और अतिरिक्त कार्यालय भवन का ऊर्जा ऑडिट करना'।

2. निविदा के भाग-I में बैंक का निविदा दस्तावेज़, निविदाकर्ता का कवरिंग पत्र, निविदाकर्ता की अतिरिक्त शर्तें, यदि कोई हों, शामिल होंगी और इसे एक लिफाफे में सील किया जाएगा, जिस पर "भाग-I नागपुर में बैंक के मुख्य कार्यालय भवन और अतिरिक्त कार्यालय भवन का ऊर्जा ऑडिट करना" लिखा होगा।

3. निविदा के भाग-II में कोई शर्त नहीं होगी, बल्कि केवल निविदाकर्ता की मूल्य बोली (मात्रा का बिल) होगी और इसे एक अलग लिफाफे में सील किया जाएगा, जिस पर "भाग-II - नागपुर में बैंक के मुख्य कार्यालय भवन और अतिरिक्त कार्यालय भवन का ऊर्जा ऑडिट करना" लिखा होगा। इन दोनों सीलबंद लिफाफों को क्षेत्रीय निदेशक, भारतीय रिज़र्व बैंक, संपदा विभाग, चेन्नई को नाम से संबोधित एक अन्य लिफाफे में सील किया जाएगा और इसे **27 मई, 2026 को 14:00 बजे** से पहले संपदा विभाग में रखे गए कोटेशन बॉक्स में डाल दिया जाएगा।

4. जिन कार्यों के लिए बोलियां आमंत्रित की गई हैं, उनका मुख्य विवरण तथा बोलीदाताओं के लिए महत्वपूर्ण निर्देश निम्नानुसार हैं:

कार्य का नाम	नागपुर में बैंक के मुख्य कार्यालय भवन और अतिरिक्त कार्यालय भवन का ऊर्जा ऑडिट करना
निविदा का प्रकार	मैनुअल / ऑफ़लाइन
कार्य की अनुमानित लागत	₹50,886/- (जीएसटी सहित)
पार्टियों को डाउनलोड करने के लिए एनआईटी की उपलब्धता तारीख	07 मई, 2026; 14:00 बजे से आगे।
बोली-पूर्व बैठक	ऑफ़लाइन - 15 मई, 2026 को 11:00 बजे स्थान- भारतीय रिज़र्व बैंक, संपदा विभाग, नागपुर-440001



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बयाना राशि	<p>प्रत्येक बोलीदाता को ₹1,018/- जमा करने होंगे। हालांकि, सूक्ष्म और लघु उद्यमों (एमएसई) को उद्यम पंजीकरण प्रमाणपत्र (उद्योग आधार ज्ञापन) जमा करने के अधीन निविदा जमा करते समय ईएमडी राशि जमा करने से छूट दी गई है। हालांकि, अगर काम उन्हें दिया जाता है, तो इन विक्रेताओं को ईएमडी जमा करनी होगी। यह ईएमडी ऑडिट पूरा होने और अंतिम रिपोर्ट जमा करने के बाद वापस कर दी जाएगी। सफल बोलीदाता को काम दिए जाने के बाद असफल बोलीदाताओं की ईएमडी वापस कर दी जाएगी।</p> <p>NEFT details</p> <p>A/c No.: 8714295</p> <p>IFSC: RBISONGPA01 (5th & 10th digits are zero)</p> <p>कृपया हमें निम्नलिखित ईमेल आईडी पर ईएमडी जमा का प्रमाण प्रदान करें: prchaurasia@rbi.org.in / estatenagpur@rbi.org.in</p>
बयाना राशि प्रस्तुत करने की अंतिम तारीख	27 मई, 2026 को 14:00 बजे।
तकनीकी-वाणिज्यिक बोली और मूल्य बोली पीक्यू दस्तावेजों के साथ ऑनलाइन प्रस्तुत करने के लिए निविदा बंद करने की तारीख	27 मई, 2026 को 14:00 बजे।
निविदा खोलने की तारीख और समय	निविदा का भाग I (तकनीकी-वाणिज्यिक बोली) 27 मई, 2026 को 15:00 बजे खोला जाएगा। भाग-II (मूल्य बोली) बाद की तारीख को खोली जाएगी जिसकी सूचना योग्य बोलीदाताओं को दी जाएगी।



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निविदा की वैधता	निविदा के भाग-I के खुलने की तिथि से तीन माह।
निविदा आमंत्रित करने वाले प्राधिकारी के कार्मिक के संपर्क विवरण	a) श्री बा कमाल नायक (सहायक महाप्रबंधक) 0712-2806327 / (kamalnayak@rbi.org.in) b) श्री रवींद्र खंडेलवाल (एएम-इलेक्ट्रिकल) 0712-2806334 (rkkhandelwal@rbi.org.in) c) श्री पलाश चौरसिया, (सहायक प्रबंधक (0712-2806332/ (prchaurasia@rbi.org.in))

5. अधिक जानकारी के लिए कृपया निविदा दस्तावेज तकनीकी-वाणिज्यिक बोली (भाग I) और मूल्य-बोली (भाग II) देखें। बैंक सबसे कम निविदा स्वीकार करने के लिए बाध्य नहीं है और किसी भी निविदा के पूर्ण या आंशिक रूप से स्वीकार करने का अधिकार सुरक्षित रखता है। बैंक बिना कोई कारण बताए किसी एक या सभी निविदाओं को अस्वीकार करने का अधिकार भी सुरक्षित रखता है।

क्षेत्रीय निदेशक
भारतीय रिज़र्व बैंक
नागपुर



**Reserve Bank of India
Estate Department
Nagpur**

Tender for
Conducting Energy Audit of Bank's Main Office Building and Additional
Office Building at Nagpur

PART I

Name of the Tenderer: _____

Address: _____

Date of Pre Bid Meeting	: 11.00 am on May 15, 2026
Due Date of Submission	: 2.00 pm on May 27, 2026
Date of opening of Part I of tender	: 3.00 pm on May 27, 2026
Venue	: Conference Hall Estate Department, Nagpur

CONTENTS

Sr. No.	Subject	Page No
1.	Section I – Form of Tender	
2.	Section II – Articles of Agreement	
3.	Section III- Commercial Conditions	
4.	Section IV- Technical Specifications	
5.	Annexure I	
6.	Annexure II	
7.	Bills of quantity	

Section I Form of Tender

Place _____

Date _____

To,

The Regional Director
Estate Department,
Reserve Bank of India
Nagpur

Madam/Dear Sir,

We have carefully examined the specifications, designs and schedule of quantities relating to the Energy Audit specified in the memorandum hereinafter set out and having visited and examined the site of the Energy Audit as specified in the said memorandum and having acquired the requisite information relating thereto as affecting the tender. We hereby offer to conduct the Energy Audit as specified in the said memorandum within the time specified in the said memorandum at the rates mentioned in the attached Schedule of Quantities and in accordance in all respects with specifications, designs and instructions in writing referred to in articles of agreement, general instructions to the tenderers and special conditions, conditions hereinbefore referred to, specifications, data sheet and schedule of quantities and with such equipments as are provided for, by and in all other respects, in accordance with such conditions so far as they may be applicable.

MEMORANDUM

(a)	Description of works	Conducting Energy Audit of Bank's Main Office Building and Additional Office Building at Nagpur
(b)	Estimated cost	₹ 50,886/- (inclusive of GST)
(c)	Terms of payment	As per clause 12 of Commercial Conditions.
(d)	Earnest Money	₹1018 /- to be submitted by each bidder. However, Micro and Small Enterprises (MSEs) are exempted from submission of EMD amount at the time of submission of tender subject to submission of Udyam Registration certificate (Udyog Aadhar Memorandum). However, EMD shall be submitted by these vendors, if the work is awarded to them. This EMD will be returned after completion of audit and

		<p>submission of final report. EMD of unsuccessful bidders will be returned after award of work to the successful bidder.</p> <p>NEFT details A/c No.: 8714295 IFSC: RBIS0NGPA01 (5th & 10th digits are zero)</p> <p>Kindly provide the proof of EMD deposit to us at following email id: prchaurasia@rbi.org.in / estatenagpur@rbi.org.in</p>
(e)	Time allowed for completion of work from tenth day after the date of letter advising acceptance of tender.	Four weeks
(f)	Insurance	Vendor is required to submit all risk & third party liability policy for working at site & before the commencement of the work

2. We also agree that our tender will remain valid for acceptance by the Bank for 90 days from the date of opening of Part I of the tender and this period of validity can be extended for such period as may be mutually agreed between the Bank and us in writing.
3. Should this Tender be accepted, I/we hereby agree to abide by and fulfill all the Terms and Conditions of the Tender and in default thereof, to forfeit and pay to you or your successors, or assignees or nominees such sums of money as are stipulated in the conditions contained in the tender together with the written acceptance of the Contract.
4. I/We understand that you reserve the right to accept or reject any or all the tender either in full or in part without assigning any reason therefor. We have deposited a sum of ₹1018 as earnest money with the Reserve Bank of India, which amount is not to bear any interest. Should we fail to execute the Contract when called upon to do so, we do hereby agree that this sum shall be forfeited by the Reserve Bank of India.
5. **The Tender is submitted in two parts in separate sealed envelopes as under:**
 - Part I shall have EMD and all commercial terms and conditions and technical particulars
 - Part II shall have the Price Bid in sealed cover in the Bank's proforma.

Dated this _____ day of _____ 2026.

For and on behalf of M/s _____

(Signature with seal)

Name _____
Designation _____
Place _____
Date _____

(Certified true copy of the Power of Attorney of the above signatory should be enclosed).

Witnesses

(1) Signature with _____
name, address and date _____

(2) Signature with _____
name, address and date _____

Section II

Articles Of Agreement

ARTICLES OF AGREEMENT made the _____ day of _____ between the Reserve Bank of India, having its Central Office at Mumbai (hereinafter called "the Employer") of the one part and _____ (hereinafter called "the Auditor") on the other part.

WHEREAS the Employer is desirous of Conducting Energy Audit of Bank's Main Office Building and Additional Office Building at Nagpur and has caused drawings and specifications describing the work to be done AND WHEREAS the said specifications, and the schedule of quantities have been signed by or on behalf of the parties hereto.

AND WHEREAS the Auditor has agreed to execute upon the subject work to the conditions set forth herein and to the conditions set forth in the special conditions and in the schedule of quantities and conditions of Contract as modified and finally accepted by both the parties (all of which are collectively hereinafter referred to as "the said Conditions") the works shown upon the said drawings and/or described in the said Specifications and included in the Schedule of quantities at the respective rates therein set forth, amounting to the sum as therein arrived at or such other sum as shall become payable there under (**hereinafter referred to as "the said Contract Amount"**).

NOW IT IS HEREBY AGREED AS FOLLOWS -

- 2.1 In consideration of the said Contract amount to be paid at the times and in the manner set forth in the said conditions, the Auditor shall, upon and subject to the said conditions, execute and complete the work shown upon the said drawings and described in the said specifications and the schedule of quantities.
- 2.2 The Employer shall pay the Auditor the said Contract amount or such other sum as shall become payable at the times and in the manner specified in the said conditions.
- 2.3 The term "Architect" in the said conditions shall mean CGM, Premises Department, Central Office, Reserve Bank of India and on his ceasing to be the architect for the purpose of this Contract for whatever reason, such other person or persons as shall be nominated for that purposes by the Employer, not being a person to whom the Auditor shall object for reasons considered to be sufficient by the Employer PROVIDED ALWAYS that no person or perhaps persons subsequently appointed to be architect under this Contract shall be entitled to disregard or overrule any previous decisions or approval or direction given or expressed in writing by the architect for the time being.
- 2.4 The said Conditions and Annexures thereto shall be read and construed as forming part of this agreement and the parties hereto shall respectively abide by, submit themselves to the said conditions and perform the agreements on their part respectively in the said conditions contained.
- 2.5 The drawings, agreement and documents mentioned herein shall form the basis of this Contract.

- 2.6 This Contract is deemed to be lump sum Contract as described in the bill of quantities and specifications in part I and Part II of the tender documents.
- 2.7 The Auditor shall afford every reasonable facility for carrying out of all works relating to Energy Audit in the manner laid down in the said conditions, and shall make good any damages done to walls, floors, etc., after the completion of such works.
- 2.8 The Employer reserves to itself the right of altering the drawings and nature of the work by adding to or omitting any items of work or having portions of the same carried out at any time during the currency of Contract, without prejudice to this Contract.
- 2.9 Time shall be considered as the essence of this Contract and the Auditor hereby agrees to commence the work from the day of issue of works order/letter of acceptance as provided for in the said conditions and to complete the entire work **within four weeks** subject nevertheless to the provisions for the extension of time in writing by such form (i.e. by way of a deed of agreement or by exchange of letters/emails) as may be mutually decided by the parties.
- 2.10 All payments by the Employer under this Contract will be made only at Reserve Bank of India, Nagpur.
- 2.11 The auditor shall not disclose directly or indirectly any information, materials and of the Bank's infrastructure/ system/equipment's etc. which may come to the profession or knowledge of the auditor during the course of discharging its contractual obligations in connection with the agreement, to any third party and shall at all times hold the same in strictest confidence. The auditor shall treat the details of the contract as private and confidential, except to the extent necessary to carry out the obligations under it or to comply with applicable laws. The auditor shall not publish, permit to be publish, or disclose any particulars of the works in any trade or technical paper or elsewhere without the previous written consent of the Employer. The auditor shall indemnify the Employer for any loss suffered by the Employer as a result of disclosure of any confidential information. Failure to observe the above shall be treated as breach of contract on the part of the contractor and the Employer shall be entitled to claim damages and pursue legal remedies. The auditor shall take all appropriate actions with respect to its employees to ensure that the obligations of non-disclosure of confidential information under this agreement are fully satisfied. The auditor's obligations with respect to non-disclosure and confidentiality will survive the expiry or termination of this agreement for whatever reason.
- 2.12 Sexual Harassment of Women at Work Place - The Auditor / Agency shall be solely responsible for full compliance with the provision of "the Sexual Harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013". a. In case of any complaint of sexual harassment against its employee within the premises of the Bank, the complaint will be filed before the Internal Complaints Committee constituted by the Auditor / Agency and the Auditor / Agency shall ensure appropriate action under the-said Act in respect to the complaint. b. Any complaint of sexual harassment from any aggrieved employee of the auditor/agency against any employee of the Bank shall be taken

cognizance of by the Regional Complaints Committee constituted by the Bank. 7
 c. The auditor/agency shall be responsible for any monetary compensation that may need to be paid in case the incident involves the employees of the auditor/agency, for instance any monetary relief to Bank's employee, if sexual violence by the employee of the auditor/agency is proved. d. The auditor/agency shall be responsible for educating its employees about prevention of sexual harassment at workplace and related issues.

2.13 Minimum wages to the workman – The auditor/agency shall ensure that minimum wages as per statutory requirement i.e. as per Central Labour Commissioner’s Rates (C.L.C rates) to be paid to all the workmen.

2.14 Labour License: The auditor/agency shall adhere to various provisions of the Contract Labour (Regulation & Abolition) Act, 1970 and fulfill all the statutory requirements.

2.15 Force Majeure conditions – Neither party shall be responsible for any failure to perform due to unforeseen circumstances or due to causes beyond the defaulting party’s control even after exertion of best efforts to prevent such failure, which failure may include, but not limited to, acts of God, war, riots, embargoes, strikes, lockouts, acts of any Government authority, delays in obtaining licenses or rejection of applications under the Statutes, fire or floods.

2.16 All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in Nagpur and only courts in Nagpur shall have jurisdiction to determine the same.

2.17 That the several parts of this Contract have been read by the Auditor and fully understood by the Auditor.

If the Auditor is a partnership or an individual	IN WITNESS WHEREOF the Employer and the Auditor have set their respective hands to these presents and two duplicates hereof the day and year first herein above written.
If the Auditor is a company	IN WITNESS WHEREOF the Employer has set its hands to these presents through its duly authorised official and the Auditor has caused its common seal to be affixed hereunto and the said two duplicates hereof to be executed on its behalf, the day and year first hereinabove written.

Signature Clause :

SIGNED AND DELIVERED by Reserve Bank of India, _____

 (Name and Designation)

In the presence of -

Witness -

1. _____

Address _____

If the party is a partnership firm or individual

2. _____
Address _____

SIGNED AND DELIVERED BY _____

In the presence of -

Witness -
1. _____
Address _____

2. _____
Address _____

THE COMMON SEAL OF _____

was hereunto affixed pursuant to the resolutions passed by its Board of Directors at the meeting held on _____

In the presence of -
Witness –

1. _____
2. _____

If the Auditor signs under common seal, the signature clause should tally with the sealing clause in the articles of association.

Directors who have signed these presents in token thereof in the presence of -

1. _____
2. _____

If the Contract is signed by the hand of power of attorney, whether a company or an individual.

SIGNED AND DELIVERED BY -
the Auditor by the hand of
Shri _____
_____ and duly constituted attorney.

Section III

Commercial Conditions

1. Sealed tenders are invited from accredited energy auditors for conducting energy audit in Bank's Main Office Building and Additional Office Building at Nagpur.

2. Eligibility:

The intending tenderer for energy audit should be **qualified accredited energy auditor** by Bureau of Energy Efficiency.

In support of the above, the firms should submit the **letter of accreditation** issued by Bureau of Energy Efficiency.

3. **Earnest Money Deposit (EMD):** The Earnest Money Deposit shall be paid by the tenderer, in the form of crossed Demand Draft/NEFT. DD shall be drawn in favour of Reserve Bank of India payable at Nagpur drawn on a scheduled commercial bank. For NEFT- RBI A/c.No.-8714295, IFSC Code: RBISONGPA01(5th &10th digit is zero). The EMD shall be submitted along with Part I of the tender.

4. **Pre Bid Meeting:** A pre-tender briefing meeting of the intending tenderers will be held at 1100 hours on May 15, 2026 at Reserve Bank of India, Main Office Building, Conference Room, 1st Floor, Nagpur to clarify any point/doubt raised by them in respect of the tender. No separate communication will be sent for this meeting. All the intending tenderers are advised to be present and study the tender documents. They may indicate any points/conditions/specifications which need to be clarified during the meeting. These issues will be discussed, and all the tenderers will be advised suitably. The tenderers are expected to get all the issues clarified during this meeting and therefore should desist from deviating from the Bank's tender conditions/specifications in their technical (Part I) and Price bids (Part II).

5. The tenders and EMD for the above work shall be submitted in separate sealed covers addressed to The Regional Director, Reserve Bank of India, Nagpur, so as to reach him not later than 02.00pm on May 27, 2026. The envelopes shall be super-scribed "**Tenders for conducting Energy Audit for Bank's Office buildings at Nagpur (Part-I/ part-II)**". Part-I of the tenders will be opened on the same day at 3.00 pm.

6. Part-II of the tenders will be opened on a subsequent date under intimation to all the tenderers. Tenderers are advised to use only the forms supplied by the Bank and not to use any other forms. Incomplete tenders are liable for rejection. No terms and conditions or any other information/ enclosures shall be included in tender Part-II.

7. The tenders shall be valid for acceptance by the Bank for a period of 90 days from the date of opening of tender Part-I and shall be extended by such period as may be mutually agreed to.

8. **Prices:** The price quoted for the work shall be firm till completion of the work and shall include all taxes including service tax as applicable and cost of transportation/accommodation etc. of the equipments and persons deputed.

9. This contract is a fixed lump sum contract in respect of the entire energy auditing and to be paid for according to, at the rates contained in the schedule of rates and as provided in the said conditions.
10. The employer reserve to itself the right of altering the items to be executed by adding to or omitting any items without prejudice to this contract. However, the Auditor shall not be entitled to any payment for the works done exceeding the tender quantities unless specifically approved in writing by the Bank's engineer.
11. **Completion Period:** The time for completion of the entire work is four weeks from tenth day after the date of letter advising acceptance of tender. The site survey, data collection/measurements and draft report shall be completed in four weeks and the final report shall be submitted within seven days thereafter.

12. **Terms of payment**

The following terms of payment shall be applicable for the work:

- i) 80% of the quoted amount after completion of energy audit and submission of draft report to the Bank.
- ii) Balance 20% of the quoted amount on submission of the final report to the Bank

All payments for the work will be made after statutory deductions.

13. The Reserve Bank of India does not bind itself to accept the lowest or any tender and reserves to itself the right to accept or reject any or all the tenders, either in whole or in part, without assigning any reasons for doing so.
14. On receipt of intimation from the employer of the acceptance of his/ their tender, the successful tenderer shall be bound to sign the formal contract and within fourteen days thereof, the successful tenderer shall sign an agreement in accordance with the draft agreement and the schedule of conditions but the written acceptance by the Reserve Bank of India of a tender will constitute a binding contract between the RBI and the person so tendering, whether such formal Agreement is or is not subsequently executed. The cost of necessary stamp paper for execution of the agreement shall be borne by the successful tenderer.
15. If the Auditor being individual or a firm commits any act of insolvency or shall be adjudged an Insolvent or being an incorporated company shall have an order for compulsory winding up made against it or pass an effective resolution for winding up voluntarily or subject to supervision of the court and official Assignee or liquidator in such acts of solvency or winding up, as the case may be, shall be unable within seven days after notice of him requiring him to do so, to show to the reasonable satisfaction of the Bank's Engineer that he is able to carry out and fulfill the contract and to give security therefore, if so required by the Bank's Engineer. Or If the Bank's Engineer shall clarify in writing to the employer that the Auditor.

Date:
Place:

Signature of tenderer
Name and Address

List of clients

(For whom similar scope has been completed in the last 5 years.)

Sr. No.	Details	Name of client (1)	Name of client (2)	Name of client (3)
1	Address, fax and telephone numbers			
2	Establishment name, location and address.			
3	Brief details of the work			
4	Date of award of contract			
5	Date of completion of work			
6	Whether the Establishment is with central air-conditioning system			

Section IV

Terms and Conditions

1. Introduction

Reserve Bank of India Nagpur is desirous of undertaking Energy audit of the Electrical/Electromechanical installations provided in the Office buildings at Nagpur, Maharashtra. The office building receives power supply at 11 KV from the Electricity supply authorities. In addition, diesel generator sets of suitable capacities have been installed to meet critical applications during power outages.

2. Objective

- a. The objective of energy audit is to have Energy Performance Assessment of equipments and utilities in the electrical sub-station, Electric power distribution network, HVAC systems, Electric motors and drives, Fans and blowers, Water pumping systems, UPS systems, Lighting systems, Diesel generator sets etc. including study of energy consumption pattern and management of power demand in the building.
- b. Based on the above observations, to identify opportunities for energy saving and to have recommendations for the same along with cost benefit analysis.

3. Terms & conditions

A. Equipments/measuring instruments

i) All the equipments/instruments required for site measurements for carrying out the energy audit will have to be arranged by the firm without any extra payment to the Bank. The firm should have the following minimum equipments/instruments for energy audit:

1. Three-phase Power analyser
2. Ultra sonic flow meter
3. Pressure gauges
4. Thermometers
5. Anemometers
6. Thermography camera
7. Harmonic Analyzer

ii) All testing instruments/meters shall be accompanied with valid calibration certificate.

iii) The site measurements should be recorded in the presence of Bank's personnel.

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.

B. Work at site

The firm may visit the premises and ascertain site conditions. The work has to be carried out in a working office building without causing inconvenience to the normal working of the Bank. No power shut down will be provided during office hours. Power shut down required for the work will be given on holidays and after office hours at the discretion of the Bank. No extra claims will be admissible later on these grounds.

The firm should deploy only qualified and experienced Engineers/Technician having requisite licenses to carry out such works. Utmost care shall be exercised by the firm in carrying out the work to ensure that no damage is caused to persons and properties. The Bank will not be liable for any injury or damage to persons and any such happening will be entirely the responsibility of the firm

Scope of Work :

A. Methodology:

Energy audit activities shall include the following:

1. **Pre Audit:** Meeting with Bank's technical team, Visual inspection of the site & verification of various documents regarding energy consumption and electrical installation.
2. **Audit:** Auditing and performance analysis to determine the condition of electrical installation as detailed below.
3. Submission of **Draft report** to Bank and discuss the report with Bank's representative.
4. Submission of **Final report** to Bank after incorporating the changes as per discussions with the Bank.
5. Energy Audit should be conducted in conformity to the relevant BEE directives including Part III Sec4, 116 No.2/11(6)/05-BEE, dated 28-04-2010.

B. Equipment details

The energy audit of the electrical / electromechanical installation as detailed in annexure-I shall be conducted. The major list of equipments is as under:

1. Electricity Supply and Distribution
2. Air Conditioning System
3. Air Handling Units
4. Split / Package Air Conditioners
5. UPS
6. Lighting, fans
7. Kitchen Equipment's
8. Water Pumps, Fire Pumps
9. Lifts
10. DG sets
11. CVPS and SBS machines
12. Any other existing electrical system not mentioned above
13. Grid Interactive Solar power System

C. The energy audit of the electrical installation shall cover, in particular, the following activities:

i) Building Energy Bills Analysis

.Analysis of energy consumption pattern in the building with respect to peak demand, load pattern, power factor for the last 3 years

ii) Electricity Supply and Distribution network-

Distribution Transformer(s)

Study and analysis of the utility pattern of transformer(s), checking no load loss of the transformers, measuring all Day Efficiency for each transformer etc..

LT Distribution Panels

1. General inspection of the LT distribution panel(s) for its maintenance and working including checking all the meters mounted on it.
2. Performing thermography for the cable termination wherever required and analysis of the observations
3. Measurement and analysis of demand and power factor, suggestions to reduce the demand and improve the power factor.
4. Study on Metering system and suggestion for improvement.
5. Study on V, I, KW fluctuation and profiling, V & I imbalances in the network.
6. Detailed examination of the existing energy use of the facility with break up.
7. Study and examination of use of electric energy, cost balance with break up.
8. Performance evaluation of installed capacitors to ensure deliverance of desired output, level of losses, management of system power factor and operation of capacitors.

iii) Air Conditioning Systems–

Centralised Air Conditioning System

1. Performance evaluation of existing central air conditioning system(s) in all the areas, measurement and analysis of indoor temperatures and suggest to optimise the energy utilisation.

Chillers -

1. Measuring all the operating parameters such as water flow (If the actual flow found to be in variation with the designed flow, the same needs to be adjusted to match designed flow before taking observations) inlet & out water temperatures, gas suction & discharge pressure, Power Consumption etc. after stabilising the parameters.
2. Calculation of operating Input KW per TR (IKW / TR) of Chiller(s) at minimum three different available load conditions for each chiller.
3. Comparison of actual parameters with the design values, and suggestion for corrective actions to be implemented.

Pumps -

1. Measuring all the operating parameter such as water flow, suction & discharge head, power consumption etc.
2. Performance Evaluation of chilled water & Condenser water pumps and compare the same with the design or generally expected efficiency of such pumps.

Cooling Towers -

1. Measurement of various parameters for cooling tower fans, water flow rate, air flow rate, dry bulb temperature (DBT) wet bulb temperature (WBT) sump temperature, relative humidity etc.
2. Evaluation of cooling tower performance (Range, approach, and effectiveness) and comparing it with designed data.

Air Handling Units

1. Measurement of airflow, Relative Humidity(RH), Supply air temperature (T_{sa}), Return air temperature (T_{ra}), Chilled Water Inlet and outlet temperature i.e. T_{in}, T_{out} through cooling coil and energy consumption of Air Handling Units (AHUs).
2. Examination of Air Handling Units for air delivery capacity, capacity utilization, temperature pattern, pressure drop and operational pattern with respect to time to identify potential energy saving measures.
3. Calculation of actual tonnage of AHUs and Measurement of operating zone temperatures under each unit. Comparison of actual parameters with the design values.

Package/ precision Air Conditioners / Split or window air conditioners.

1. Evaluation of operating Coefficient of Performance (COP) of Precision and package Air Conditioner. Identification and suggestions for performance improvement and energy saving potential.
2. Calculation of actual tonnage and comparison of actual parameters with the design values and corrective actions.

iv) UPS

1. Measurement and analysis UPS loading, redundancy, operating efficiency, load pattern to suggest measures for energy cost reduction, Measurement and analysis of Harmonics as per standards.

v) Lightning and fans

1. Examination of the performance of existing lighting system in all the areas, measurement of illumination levels, etc
2. To look possibilities to reduce energy use by incorporating energy efficient lighting system.
3. Study of operating electrical parameters like voltage, current etc in the lightening circuits.

vi) Diesel generator sets

1. General Inspection of DG set.
2. The DG sets are to be tested for operational performance and parameters including fuel consumption, power generated, Voltage, Ampere, KW, KWh, KVA should be recorded during the audit.

vii) Kitchen equipments

1. Examination of the performance of the existing kitchen equipments, measurement of power consumption etc to improve efficiency and optimizing power consumption.
2. To look possibilities to reduce energy use by incorporating energy efficient equipments.

viii) Fire Hydrant Pumps and Domestic water Pumps

1. Performance analysis of all major motors (above 10 HP) needs to be studied for possible energy savings opportunities by the application of following items.
 - a. Possibility of on /off control
 - b. Interlocking
 - c. Downsizing motors etc.

D. Energy Audit Report

The report shall contain complete building information, inventory of all equipments. It should include the log sheet data collected/measured at site, analysis of data (Log sheet and actual measured), observations of operational performance of various equipment's, findings and recommendations for achieving energy and cost saving.

The recommended energy saving measures shall be categorized as (i) short term, (ii) medium term and (iii) long term measures for energy conservation. The report should also include energy use indices and comparison with industry averages.

The report should provide the estimated cost, estimated savings and simple pay back for each recommended energy saving measures in a chart. A detailed description of each energy conservation measure and supporting calculation with energy use and savings calculations, economic analysis and any assumptions that are made regarding operation or equipment efficiency shall be included. The recommendations for energy efficiency shall include the technical particulars of the equipment, life expectancy and details of manufacturer etc.

Date:

Place:

Seal & Signature of Agency

Report

on

Energy Audit of Bank's Main Office Building and Additional Office Building

at Nagpur

Duration of Energy Audit:

Name of the Energy Audit Agency: _____

Address: _____

Summary of Recommendations

Remarks

Details existing Electrical Systems

Details of Power Supply :

Sanctioned Load (KVA)	
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	Capacity (KVA)	Voltage ratio	Type of cooling (oil / air)
Transformer No. 1 Rating			
Transformer No. 2 Rating			
Transformer No. 3 Rating			

Details of Major Power Equipments:

Central A C Plant Data	Capacity (TR)	compressor Motor 1 (KW)	compressor Motor 2 (KW)	Chilled Water Flow (LPM)	Condenser Water Flow (LPM)
Chiller No. 1					
Chiller No. 2					
Chiller No. 3					

Chilled Water Pumps

	Flow (LPM)	Head (M)	Motor (KW)
Chilled Water Pump 1			
Chilled Water Pump 2			
Chilled Water Pump 3			
Chilled Water Pump 4			

Condenser Water Pumps

	Flow (LPM)	Head (M)	Motor (KW)
Condenser Water Pump 1			
Condenser Water Pump 2			
Condenser Water Pump 3			
Condenser Water Pump 4			

Cooling Towers

	Capacity (TR)	Flow (LPM)	Motor (KW)
Cooling Tower 1			
Cooling Tower 2			
Cooling Tower 3			

Air Handling Units (AHUs)	Location	Capacity (TR)	Air Flow (CFM)	Motor (KW)	Area catered (M ²)
AHU 1					
AHU 2					

AHU 3					
AHU 4					
AHU 5					
AHU 6					
AHU 7					

Hot Water Generator

	Make	Capacity (KW)
Hot Water Generator 1		
Hot Water Generator 2		

Lightening

Internal Lightening (Floor wise)

Sr. No.	Floor	Type of fitting	Wattage	Qty.	Total carpet area covered (M ²)

External Lightening

Sr. No.	Location	Type of fitting	Wattage	Qty.	Total ground area covered (M ²)

Lifts

Lifts No.	Location	Make	Passenger Capacity	Speed (M/S)	No. of floors served	Whether controller V3F or not
1						
2						
3						
4						

Standalone A. C. units where central AC is also provided (Area wise)

Sr. No.	Location	Type of AC (window / split / package etc.)	Qty	Capacity of each AC (TR)	Area catered (M ²)	Expected per day operating hours

Standalone A. C. units where central AC is not provided (Area wise)

Sr. No.	Location	Type of AC (window / split / package etc.)	Qty	Capacity of each AC (TR)	Area catered (M ²)	Expected per day operating hours

DG Sets

	Location	Make	Rating (KVA)
DG SET No. 1			
DG SET No. 2			
DG SET No. 3			
DG SET No. 4			

Special Equipment viz. Shredding & Briquetting Machine, CVPS machine etc.

Sr. No.	Name of the machine	Make	Power Rating of the machine (KW)	Expected per day operating hours

UPS Details

Sr. No.	Location	Make	Capacity (KVA)

Performance Evaluation of Main Equipments-Sample Formats**Central AC Plant**

Chiller No. _____

Sr. No.	Chilled water inlet Temp. (Tin)°C	Chilled water outlet Temp. (Tout)°C	Chilled Water Flow (LPM)	Suction Pressure	Discharge Pressure	Capacity (TR)	Input Power (KW)	IKW/ TR	Remarks/ Comments/ Suggestions

Capacity of the Chiller (TR) = (Tin -Tout)*Water Flow rate (LPM)*60/3024

Efficiency of Chiller in KW/TR = Total Power input (in KW)/Total Tonnage

Air Handling Units

Air Handling Unit (AHU) No. _____

Sr. No.	Return / Inlet Air		Supply / outlet Air		Air Flow (CFM)	Tons of Refrigeration (TR)	Input KW	IKW/ TR	Remarks/ Comments/ Suggestions
	Dry Bulb Temp. Tdb (°C)	Wet Bulb Temp. Twb (°C)	Dry Bulb Temp. Tdb (°C)	Wet Bulb Temp. Twb (°C)					

AHU TR = 1.699*Air Flow (CFM)* Density of Air (Kg/M³)*(Hin-Hout)/(4.18*3024)

Where :

Hin = Enthalpy of inlet Air at AHU (KJ/Kg)
Enthalpy of outlet Air from AHU

Hout = (KJ/Kg)

Density of Air = 1.18 Kg/M³ at standard Temperature and Pressure

Note: Enthalpy is to be read from Psychrometric Chart corresponding to DB and WB Temp.

Chilled Water Pumps

Chilled Water Pump No. _____

Sr. No.	Discharge Pressure (Pdisc) Kg/cm ²	Suction Pressure (Psuc) Kg/cm ²	Chilled Water Flow (LPM)	Developed Hydraulic Power (KW)	Measured Input Power (KW)	Pump efficiency	Remarks / Comments / Suggestions

Developed Hydraulic Power (KW) = Flow (LPM) * (Pdisc-Psuc) Kg/cm² *9.81/6000

Pump Efficiency =_Developed Hydraulic Power (KW)/ Input Electric KW

Condenser Water Pump

Condenser Water Pump No. _____

Sr. No.	Discharge Pressure (Pdisc) Kg/cm ²	Suction Pressure (Psuc) Kg/cm ²	Condenser Water Flow (LPM)	Developed Hydraulic Power (KW)	Measured Input Power (KW)	Pump efficiency	Remarks/ Comments/ Suggestions

Developed Hydraulic Power (KW)= Flow (LPM)*(Pdisc-Psuc)*9.81/6000

Pump Efficiency =_Developed Hydraulic Power (KW)/ Input Electric KW

COOLING TOWER

Sr. No.	Water inlet Temp. (Tin)°C	Water outlet Temp. (Tout)°C	Water Flow (LPM)	Wet Bulb Temp. Twb (°C)	Cooling Tower Capacity (TR)	Cooling Tower Efficiency	IKW/ TR	Remarks/ Comments/ Suggestions

Range= Tin-Tout

Approach= Tout-Twb

Cooling Tower Efficiency = Range*100/(Range+Approach)

Cooling Tower Capacity (TR) = (Tin -Tout)*Water Flow (LPM)*60/3024

Internal Lightning (Floor wise)

Sr. No.	Floor	Type of fitting	Calculated Wattage per Fitting	Qty	Total Wattage (KW)	Total carpet area covered (M ²)	Light Power Density (W/M ²)	Measured Average Light Level (Lux)	Light Efficiency (Lux/LPD)

DG set

1. Run the DG set at available load
2. The initial and final reading of the diesel tank and Energy meter needs to be recorded.

Sr. No.	Rating of DG set (KVA)	Make of DG set	Start Time	Stop Time	Period of Operation (Hrs.)	Diesel Consumed (Ltrs.)	Generated Energy (KWH)	Specific fuel Consumption (KWH/Ltr)	Remark /Observation

UPS

1. Measurement on each UPS needs to be recorded

Sr. No.	Rating of UPS (KVA)	Make of UPS	Input Voltage			Input Current			Total current Harmonic Distortion THDi	Total Voltage Harmonic Distortion THDv	Remarks
			Vrn	Vyn	Vbn	Ir	Iy	Ib			

LT Panels: LT Panels at Substation including capacitor

Panel Name:

Sr. No.	Input Voltage			Input Current			Input KW	Input KVA	P.F.	Total current Harmonic Distortion THDi	Total Voltage Harmonic Distortion THDv	Remarks
	Vrn	Vyn	Vbn	Ir	Iy	Ib						

**Reserve Bank of India
Estate Department
Nagpur**

Bill of Quantity

**Tender for Conducting of Electrical Energy Audit for Main Office Building &
Additional Office building, RBI, Nagpur.**

Sr.No.	Description	Qty	Rate in Rs	GST approximate	Total rate with GST
01	Rate for conducting energy Audit and submitting energy audit reports as per the scope specified in the tender for Main Office Building.	LS			
02	Rate for conducting energy Audit and submitting energy audit reports as per the scope specified in the tender for Additional Office Building.	LS			
	Total				

Date:

Seal and Signature of the Agency

Place:



**Reserve Bank of India
Estate Department
Nagpur**

Tender for
Conducting Energy Audit of Bank's Main Office Building and Additional
Office Building at Nagpur

PART II

Name of the Tenderer: _____

Address: _____

Date of Pre- Bid Meeting	: 11.00 am on May 15, 2026
Due Date of Submission	: 2.00 pm on May 27, 2026
Date of opening of Part I of tender	: 3.00 pm on May 27, 2026
Venue	: Conference Hall Estate Department, Nagpur

**Reserve Bank of India
Estate Department
Nagpur**

Bill of Quantity

**Tender for Conducting of Electrical Energy Audit for Main Office Building &
Additional Office building, RBI, Nagpur.**

Sr. No.	Description	Qty	Rate in Rs	GST approximate	Total rate with GST
01	Rate for conducting energy Audit and submitting energy audit reports as per the scope specified in the tender for Main Office Building.	LS			
02	Rate for conducting energy Audit and submitting energy audit reports as per the scope specified in the tender for Additional Office Building.	LS			
	Total				

Date

Seal and Signature of the Agency

Place: