भारतीय रिजर्व बैंक

संपदा विभाग, कानपुर

निविदा आमंत्रण सूचना

भारतीय रिजर्व बैंक, कानपुर बैंक के मुख्य कार्यालय भवन, कानपुर के लिए 250 टीआर जल-शीतलित स्क्रू चिलर्स के डिजाइन, आपूर्ति, स्थापना, परीक्षण एवं कमीशनिंग (DSITC) के लिए ई-निविदा आमंत्रित करता है। कार्य की अनुमानित लागत ₹3,23,00,000/- (जीएसटी सहित) है।

निविदा सरकारी ई-मार्केटप्लेस – केंद्रीय सार्वजनिक खरीद पोर्टल (GeM – CPPP) के माध्यम से की जाएगी, जो केंद्रीय सार्वजनिक क्षेत्र के उद्यमों के लिए एक ई-खरीद पोर्टल है। पोर्टल को निम्न लिंक से देखा जा सकता है:

https://etenders.gov.in/eprocure/app

निविदा सभी योग्य विद्युत ठेकेदारों/एजेंसियों/फर्मों के लिए खुली है। सभी रुचि रखने वाले एवं योग्य बोलीदाताओं से अनुरोध किया जाता है कि वे उपरोक्त लिंक पर जाकर GeM – CPPP पोर्टल पर अपना पंजीकरण करें, ताकि निविदा प्रक्रिया में भाग ले सकें। ई-निविदा का कार्यक्रम निम्नानुसार होगा:

निविदा कार्यक्रम		
i.	ई-निविदा संख्या	**2026_RBI_295465**
ii.	निविदा का तरीका	CPP पोर्टल के माध्यम से ई-खरीद https://etenders.gov.in/eprocure/app भाग I – तकनीकी-वाणिज्यिक बोली भाग II – मूल्य/वित्तीय बोली
iii.	निविदा मूल्य (कार्य की अनुमानित लागत)	₹3,23,00,000.00 (केवल तीन करोड़ तेईस लाख रुपये) (जीएसटी सहित)
iv.	तिथि जिस दिन से निविदा दस्तावेजों को CPP पोर्टल और RBI वेबसाइट पर देखने/डाउनलोड करने के लिए उपलब्ध कराया जाएगा।	23 अक्टूबर 2026 (शाम 05:00 बजे से)
v.	रुचि रखने वाले निविदाकर्ताओं के साथ प्री-बिड बैठक की तिथि और समय (प्रश्नों पर स्पष्टीकरण प्रदान करने के लिए)	12 नवंबर 2026 को सुबह 11:00 बजे ऑफलाइन स्थान: संपत्ति विभाग, RBI कानपुर

vi.	प्री-बिड बैठक के मिनट्स, स्पष्टीकरण, सुधार, अतिरिक्त यदि कोई, का प्रकाशन	13 नवंबर 2026
vii.	ई-निविदा के लिए तकनीकी-वाणिज्यिक बोली और मूल्य बोली जमा करने की शुरुआती तिथि	14 नवंबर 2026 (सुबह 09:00 बजे से)
viii.	ईमानदारी राशि (EMD)	**₹6,46,000/- (केवल छह लाख छियालीस हजार रुपये)** प्रत्येक बोलीदाता द्वारा EMD जमा किया जाना चाहिए। जमा करने का तरीका NEFT/ RTGS/ मांग ड्राफ्ट/ बैंक गारंटी/ बैंकर्स चेक हो सकता है **NEFT/RTGS के लिए खाता विवरण** लाभार्थी: RBI कानपुर खाता: 186003001 IFSC: RBIS0KNPA01 (5वां और 10वां अंक शून्य हैं) EMD के सबमिशन के प्रमाण को CPP पोर्टल पर अपलोड किया जाना चाहिए और estatekanpur@rbi.org.in पर ईमेल किया जाना चाहिए estatekanpur@rbi.org.in **मांग ड्राफ्ट/बैंक गारंटी/बैंकर्स चेक भारतीय रिजर्व बैंक के पक्ष में जारी किए जाने चाहिए और समय सीमा से पहले भौतिक रूप से आरबीआई कानपुर के संपदा विभाग में सौंपे जाने चाहिए।** (नोट: उपरोक्त उल्लिखित अलग तरीके से भुगतान किया गया या किसी अन्य खाते में जमा किया गया EMD वैध EMD नहीं माना जाएगा)
ix.	टेंडर शुल्क	शून्य
x.	EMD सबमिशन की अंतिम तिथि	25 नवंबर 2026 (11:00 बजे तक)
xi.	ई-टेंडर के लिए तकनीकी-वाणिज्यिक बोली और मूल्य बोली के सबमिशन की अंतिम तिथि	25 नवंबर 2026 (12:00 बजे तक)
xii.	टेंडर भाग I के खोलने की तिथि और समय	26 नवंबर 2026 (12:30 बजे) **भाग II (मूल्य बोली) बाद की तिथि पर खोली जाएगी, जो योग्य बोलीदाताओं को सूचित की जाएगी।**

भारतीय रिजर्व बैंक

संपदा विभाग, कानपुर

नोट:

1. आवेदन करने की इच्छा रखने वाले आवेदकों को बैंक को आवश्यक योग्यता रखने के समर्थन में दस्तावेजी साक्ष्य प्रस्तुत करके संतुष्ट करना होगा और ऐसा न कर पाने की स्थिति में, बैंक को उनकी बोलियों को अस्वीकार करने का अधिकार सुरक्षित है। किसी भी परिस्थिति में EMD रहित निविदाएं स्वीकार नहीं की जाएंगी।
2. प्रत्येक निविदाकर्ता के अधिकतम 2 प्रतिभागी (कर्मचारी) निर्धारित तिथि और समय पर प्री-बिड बैठक में भाग ले सकते हैं। प्रतिभागियों का विवरण इच्छुक निविदाकर्ता द्वारा 10 नवंबर 2026 को सुबह 10:00 बजे तक ईमेल द्वारा estatekanpur@rbi.org.in पर भेजा जाना चाहिए, ताकि आवश्यक प्रवेश पास जारी किया जा सके। estatekanpur@rbi.org.in
3. बैंक सबसे कम निविदा स्वीकार करने के लिए बाध्य नहीं है और पूर्ण या आंशिक रूप से किसी भी निविदा को स्वीकार करने का अधिकार सुरक्षित रखता है। बैंक बिना किसी कारण बताए सभी निविदाओं को अस्वीकार करने का अधिकार भी सुरक्षित रखता है।
4. भविष्य में यदि निविदा में कोई संशोधन / सुधार जारी किया जाता है, तो वह केवल उपरोक्त RBI वेबसाइट और CPP पोर्टल पर सूचित किया जाएगा और अखबार में प्रकाशित नहीं किया जाएगा।
5. यह सूचना केवल जानकारी के लिए प्रकाशित की जा रही है। जो ठेकेदार निविदा में भाग लेना चाहते हैं, वे प्रक्रिया के अनुसार आवेदन कर सकते हैं। अनुरोध रहित प्रस्तावों को अनदेखा किया जा सकता है।

क्षेत्रीय निदेशक

भारतीय रिजर्व बैंक

कानपुर

Reserve Bank of India
Estate Department
Kanpur

E-Tender for

Design, Supply, Installation, Testing and commissioning (DSITC) of 3 no's of 250 TR water cooled screw Chillers for the Bank's Office Building at Kanpur

Part – I

(Techno commercial bid)

Regional Director
Reserve Bank of India, Kanpur

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Section-I

Notice Inviting E-Tender (NIT)

Design, Supply, Installation, Testing and commissioning (DSITC) of 3 no's of 250 TR water cooled screw Chillers for the Bank's Office Building at Kanpur

The Reserve Bank of India, Kanpur Regional Office, invites open E-tender in two parts for captioned work. The estimated cost of the work is ₹ 3,23,00,000/- and is to be completed within 16 weeks from 14th day of date of letter of award of work.

2. **Eligibility Criteria: Bidders must be Original Equipment Manufacturer (OEM) of chillers/ authorized dealer/ system integrator of equipment as per Section III Clause 4.**

3. The e-tender will be carried out by **Central Public Procurement Portal (CPPP)** https://etenders.gov.in/eprocure/app as third party on behalf of RBI. Therefore, interested firms are required to register on the CPP portal to participate in the tendering process. The detail regarding the registration on CPPP and procedure of e tendering has been attached at **Annexure II.** E-Tender shall be submitted online in two parts. Part I of the e-tender will contain the standard technical and commercial conditions for the proposed work and Part II of the e-tender will contain the price bid. All required annexures along with documentary proofs will also be uploaded along with Part I of the tender. This is an e-tender bid and the bidders are not required to be present for opening.

4. The Bank is under no obligation to accept the lowest bid and reserves the right to accept any tender either in whole or in part. The Bank reserves the right to reject any or all tenders at its sole discretion, without providing any reason therefor.

5. The Bank reserves the right to issue addendum / corrigendum/ minutes/ pre-bid meeting, which shall be published solely on the official website of RBI and CPPP. Such updates shall form an integral part of the tender document, and no separate notification will be sent to the individual bidders. It is the sole responsibility of the bidder to monitor these portals for any amendment/s.

6. The schedule for the tender (SOT) is as follows:

	E-Tender No.	2026_RBI_295465
i.	Mode of Tender	e-Procurement System (Online Part I – Techno-Commercial Bid and Part II - Price Bid through CPP Portal https://etenders.gov.in/eprocure/app
ii.	Estimated Cost	₹ 3,23,00,000/-
iii.	Time period for completion of the work	16 weeks from 14th day of date of letter of award of work
iv.	Earnest Money Deposit (Only through NEFT/Demand Draft/Bank Guarantee)	**₹ 6,46,000/- (**to be deposited by all the tenderers) **a) NEFT / RTGS** Bank's account No.- **186003001** IFSC - **RBIS0KNPA01 (Please read 0 as zero)** **b) Demand Draft/Banker's Cheque/Bank Guarantee:** In favour of Reserve Bank of India to be delivered in physical form at Estate Department, RBI Kanpur
v.	Date of availability of E-Tender Document for download on CPP portal /RBI website	23 October 2026 from 05:00 PM onwards
vi.	Starting date of e-tender for submission of Part I (Techno-Commercial Bid) and Part II (Price Bid)	14 November 2026 from 09:00 AM onwards
vii.	Date and time of pre-bid meeting	12 November 2026 at 11:00 AM **Venue**: Offline meeting to be held at Estate Department, RBI Kanpur
viii.	Date of Publishing minutes of pre-bid meeting on RBI website/CPPP	13 November 2026
ix.	Last date and time of submission of EMD	25 November 2026 till 11:00 AM (amount must reflect in our account)
x.	Last Date and time of submission of Tender	25 November 2026 till 12:00 PM

xi.	a. Date and Time of opening of Part I (Techno-Commercial Bid) b. Date of opening of Part II (Price Bid)	26 November 2026 (12:30 PM) Part II of the tender will be opened only for those bidders who are found eligible upon scrutiny of the Part I submissions. The eligible bidders will be informed separately through email
xii.	Name of officers regarding any clarification on this tender/ forwarding the detail of EMD etc.	Name: Ms. Mansi Jain Email: mansij@rbi.org.in Name: Sagar Singh Jadon Email: sagarsinghjadon@rbi.org.in

Regional Director
Reserve Bank of India
Kanpur

Section II

Form of Tender

The Regional Director
Reserve Bank of India
Estate Department,
Kanpur, UP-208001

Madam / Dear Sir,

Having examined the drawings, specifications, designs and Bill of Quantities relating to the works specified in the Memorandum hereinafter set out and having visited and examined the site of the works specified in the said Memorandum and having acquired the requisite information relating thereto as affecting the Tender, I/we hereby offer to execute the works specified in the said memorandum within the time specified in the said memorandum at the rates mentioned in the attached Bill of Quantities and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in the General Instructions to Bidders, Articles of Agreement, special condition of contract, general condition of contract hereinbefore referred to, specifications, data sheet and Bill of Quantities and with such materials as are provided for, by and in all other respects in accordance with such conditions so far as they may be applicable.

MEMORANDUM

i.	Name of works	Design, Supply, Installation, Testing and commissioning (DSITC) of 3 no's of 250 TR water cooled screw Chillers for the Bank's Office Building at Kanpur
ii.	Estimated cost	3,23,00,000/-
iii.	Payment Terms	As per clause 3 of Section V Part I of tender

iv.	Earnest Money Deposit	**₹ 6,46,000/-** (to be deposited by all the tenderers) Bank's account No.**186003001 IFSC RBIS0KNPA01 , (Please read 0 as zero)** for NEFT Payment
v.	Performance Bank Guarantee	As per clause 4 of Section V Part I of tender
vi.	Time of completion	16 weeks from 14th day of date of letter of award of work
vii.	Amount to be deducted from each bill	@ 5% is to be recovered from each on-account bill till the total recovery amounts to 5% of the contract value as stipulated in the tender document as per clause 2 of section V

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. We also agree to keep the **Bank Guarantee towards earnest money deposit (EMD)** valid during the entire period of validity of tender and the extended period, if any, as per enclosed proforma **(Annexure VII).**

3. Should our tender be accepted, we hereby agree to abide by and fulfil all the terms and conditions of the contract. In the event of any default on our part, we acknowledge the Bank's right to forfeit our Earnest Money Deposit [EMD] and agree to pay the Bank or its successors, or assignees or nominees, any such sums of money as are stipulated in the said conditions.

4. Should our Tender be accepted, we hereby agree to abide by and fulfil all the terms and conditions of the Tender. In the event of any default thereof, we acknowledge the Bank's right to forfeit and agree to pay to the Bank or its 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.

5. We acknowledge that you reserve the right to accept or reject any or all the tenders, either in whole or in part, without assigning any reason thereof. If we fail to execute the Contract when called upon to do so, we hereby agree that EMD deposited shall be forfeited by the Reserve Bank of India.

6. We hereby declare that we shall treat the tender documents and other records connected with the work as secret/confidential documents. We undertake not to communicate any information/derived therefrom to any person other than a person to whom I/We am/are authorized to communicate the same nor shall we use the information in any manner that could be prejudicial to the safety, security or interests of the Reserve Bank of India.

Dated this ……..day of …….. 2026.

For and on behalf of M/s ……..

_____

(Signature of authorized signatory with seal)

Name _____

Designation _____

Place _____

Date _____

(Certified true copy of Board Resolution or mandate or Power of Attorney of the above signatory as authorized signatory should be enclosed as per format Annexure I.)

Section III
General Instructions to the Bidders

This is an open e-tender enquiry in two parts i.e. Part I (Techno Commercial) I & Part II (Price bid). Only those bidders who are qualified for the work as per pre-qualification / eligibility criteria stipulated in the tender are eligible to participate in this tender.

2. **Brief Scope of work**: A brief scope of the work is as below:
   - Dismantling the existing Chiller along with all allied equipment and accessories in phased manner as per the requirement in consultation without damaging existing equipment and as directed by the Bank's Engineer. As the work of dismantling and installation is to be done in working building, minimum one 250 TR (mcquay make) should be always in working condition.
   - Designing of three (03) Nos 250 TR screw chiller package unit /with single/ multiple compressors complete with all accessories /components/ VFD/ATS devices, cabling interconnection.
   - Pre-Dispatch, 4-point factory testing and other tests (as per tender or OEM recommendations) of all the chillers may be carried out at factory by the Banks's Engineer, at the discretion of the Bank. However, this clause **do not exempt the OEM from its liability** to perform recommended factory testing before dispatch.
   - Delivery of water-cooled Chiller equipment's to site, Kanpur including packing, handling, transporting, clearing, loading / unloading at ports in India and unloading at site in Kanpur.
   - The onus of delivery and complete installation shall be responsibility of the Contractor. Any damage during the transportation, commissioning, installation shall be the responsibility of the Contractor.
   - Installation, Erection, testing & commissioning of water-cooled chiller equipment as per technical specifications, and handing over the chiller to Bank after providing necessary training to Bank's engineer. The work includes connection of the new chiller with existing pipelines of Chilled water and condenser water circuits including supplying, welding of ISI mark MS pipelines as per existing items with insulation.
   - Providing and installing the workstation for SCADA, control cables from each chiller along with terminations, for online viewing of chiller Parameters of equipment shall be included under the scope of work of the contractor.

- Bank will cast the foundation slab in the presence of vendor's representative at its own cost but minor civil works and repairing existing foundation for proper alignment and ensuring vibration free installation will be done by vendor. The successful firm will have to give physical marking along with the GA drawing for the foundation for the installation of the chillers.
- Providing **all-inclusive onsite service** with supply of all spares including microprocessors/display etc. during warranty period and subsequent Comprehensive Annual Maintenance Contract for the committed period of **14 years (minimum) from the date of expiry of 1-year Defect Liability Period (DLP) to the Bank.** The DLP will commence after virtual completion of entire work of 03 chillers in all respect. After completion of DLP, Chillers will be under Comprehensive AMC contract. **The work during DLP and AMC shall include filling/topping of refrigerant, replacement of compressor oil /other spares at regular intervals or any other maintenance related activities as recommended by OEM for optimum running of chillers, without any additional cost. (Note: The AMCs in the Bank are co-terminus with the financial year i.e., April to March, therefore, first and last AMCs may be for a period of less or more than a year.)**
- Any other work, not mentioned above, but required for completion of the job should also be included under the scope. In addition to the above works, following works shall be deemed to be included within the scope of work to be done by the contractor. Contractor shall also provide temporary barricades with caution boards at each site during execution of work. The contractor will make his own arrangement for long shank cranes etc. during unloading. The Bank is situated in "no entry area" where special permission is required for entry of vehicles from Government Authorities, which shall be obtained by the Contractor in advance.
- Removal of debris, sand, left over material, cover paper; plastic etc., will be part of scope of the work of the bidder.
- Bidder must remove scrap, debris, waste, equipment/buyback material from the construction sites or otherwise post completion of work within **3 days** from completion of the work. It is to be noted that failure of removal of debris may attract **penalty of Rs. 10,000/- per day or as per actual cost of removal , whichever is higher , that may be deducted from the payable dues of the vendor.**

- Any other work, related to but not mentioned above, required for completion of the job will be under the scope of work of contract.

2.1 The Tenderer should complete technical details while submitting the tender.

2.2 The Tenderer shall carefully check the specifications and shall satisfy himself that the equipment offered is suitable as per the Bank's Technical Specifications.

2.3 Tenderer shall supply all tools, plants, scaffolding, labor and consumables etc. as required for installation, testing and commissioning of the Chillers as per the technical specifications mentioned in the tender.

2.4 The works may be carried out in extended hours if required for timely completion with prior permission of bank and no extra claim is admissible in this regard.

However, detailed scope of the work is mentioned at **Section VIII** of this tender.

3. **E-Tender on CPPP**: The procedure for e -tendering has been detailed at Annexure II. The details of firms required to be furnish in format specified at Annexure III. The estimate cost of the work with completion period has been mentioned in section I.

4. **Eligibility Criteria**:

Only OEMs (original equipment manufacturer) /Authorized Dealer/ System Integrator who fulfill following criterion.

4.1 **Duration of past experience**: Should have minimum 5 years of experience of executing similar works* (during last 5 years ending last day of month previous to the one of which tenders are invited). Bidder should furnish their client list showing the details of work carried out by them during the last 5 years. The list shall include details such as Name of the Client, Value of work executed, Date of Start and Finish of the work, Reasons of delay, if any, etc. The bidder should submit documentary evidence in support of minimum experience of 5 years (Any one work order of said work completed on or before September 30, 2021).

And

4.2 **Minimum value of each completed work (qualifying)**: Experience of having successfully completed similar works during last 5 years ending last day of month previous to the one of which tenders are invited should be either of the following:

i. Three similar completed works each costing not less than the amount equal to 40% of the estimated cost.

or

ii. Two similar completed works each costing not less than the amount equal to 50% of the estimated cost.

or

iii. One similar work costing not less than the amount equal to 80% of the estimated cost.

*** Similar work**: Ssimilar type of work viz. Supply, installation testing commissioning /maintenance of large, centralized air conditioning system for large office buildings / commercial Estate / industrial houses/Government organization/PSU's

and

4.3 **Yearly turnover**: Minimum yearly turnover of 100% of estimated cost or more during the last three financial years ending 31st March.

and

4.4 **Solvency:** Should furnish solvency certificate issued by the bidder's banker, specifically for the purpose of the work, for an amount equal to the estimated cost of the work.

and

4.5 **Service setup:** Full-fledged service setup should be available for the specified job at UP/Delhi/Delhi NCR division.

4.6 **Make in India:** As per the Public Procurement (Preference to Make in India) Order, 2017, as amended by the Order dated March 27, 2026, only 'Class-I local supplier' (having minimum local content of 55%) and 'Class-II local supplier', as defined under the Order, are eligible to bid. Bidders shall submit a self-certification of local content as required under the Order as per Annexure XIX. Bidders may note that in procurement of all goods, services or works in respect of which the Nodal

Ministry / Department of Government of India has communicated that there is sufficient local capacity and local competition, only 'Class-I local supplier', as defined under the Public Procurement (Preference to Make in India), Order 2017 (Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry Order No. P-45021/2/2017-B.E. II dated 15 June 2017) and its subsequent amendments, shall be eligible to bid irrespective of purchase value.

4.7 The Bidders should invariably furnish the following information/documents along with the tender documents to satisfy the Bank about their eligibility for participation in the e-Tendering process Eligibility.

i.	Details of bidder	Full particulars (whether Bidder is an individual, or a partnership firm, or a company etc.,) of the composition of the firm of bidders in details should be uploaded along with name(s) and address (es), of the partner's copy of the Articles of Association/ Power of Attorney/ other relevant document. **Refer: Annexure I & III**
ii.	Work experience & Completion of similar works of specified value during the specified period	(i) Bidder should fill up the information in **Annexure IV** annexed hereto indicating client-wise names of Similar Services awarded and actual cost(s), completion date stipulated in Contract and actual date of completion, etc. and should submit along with the documentary evidence as proof of minimum five years of experience of completed Similar Services* viz. a) Copies of detailed work order/s and agreement, indicating date of award, Contract amount, scope of the work/services, time given for completing the work, etc. and the corresponding completion certificate(s) indicating actual date of completion and actual value of executed similar work/s issued by the client(s). For works executed for government /public sector companies and copies of work order, agreement, work completion certificate along with

		Tax Deducted at Source (TDS) certificate(s) issued by the client(s) for works executed for private companies. (ii)The details along with documentary evidence of previous experience, if any, of carrying out works for the Reserve Bank of India at any other office should also be given.
iii.	Credit worthiness of the bidder and their turnover during the specified period	Income Tax Assessment Orders along with the latest final accounts of the business of the firm duly certified by a Chartered Accountant should be enclosed in proof of their creditworthiness and turnover for last three years.
iv.	Service setup	Certificate from the manufacturers/any other valid document in support of having a full-fledged service setup at UP/Delhi/Delhi NCR division should be enclosed. **(Annexure III)**
v.	Client certificates	In the format **Annexure V** **from each client.**
vi.	Solvency/ Banker Certificates	In the format of **Annexure VI**

4.8 Bidder, intending to apply, will have to satisfy the Bank by furnishing documentary evidence in support of their possessing required eligibility. The bank reserves the right to reject the candidature of any bidder who fails to do so. While the Bank retains the right to request clarification or missing administrative certificates and independently verify them, any document found to be fabricated, forged, or altered will lead to immediate rejection of the bid and potential debarment.

4.9 The Bank shall obtain reports on the past performance of the bidders from their clients and bankers alongside validating submitted solvency certificates. Evaluation of the said reports shall be completed before opening of the Part – II of the tenders. If any bidder is not found to possess the required eligibility at any stage of the process, or if his performance reports received from his clients/bankers are found unsatisfactory, the Bank reserves the right to reject his offer even after opening of Part - I of the tender.

Consequently, his Part II bid will not be opened and the EMD shall be returned to him in its original form. The Bank is under no obligation to assign any reason for such actions.

5. **Tendering Process**:

a. The tenders for the above work in **two parts** i.e., **Part I** containing commercial-technical bid of captioned tender, and the terms and conditions (Rates and amounts of items shall not appear anywhere in this part) and **Part II** containing only rates need to be uploaded at CPP portal as per NIT.

b. Part I of the tender will be opened at the date and time mentioned in the NIT.

c. Part II of the eligible bidders will be opened on a subsequent date under intimation to all the bidders. The detail evaluation criteria is mentioned at **Section III (A)**

Note: All the information/Annexures called for, shall be complete in all respects and to be uploaded in CPP portal with supporting documents. Information furnished on sheets other than those supplied may not be considered. However, the bidders can upload only the relevant catalogues/leaflets/brochures of the manufacturers of the equipment offered.

6. **Earnest Deposit Money (EMD):** Intending bidders shall pay an Earnest money a sum of mentioned at section-I NIT by way of NEFT to the Bank or by a Demand Draft or Banker's Cheque drawn on any scheduled commercial bank in favour of Reserve Bank of India payable at Kanpur. Alternatively, the bidder may also furnish an irrevocable Bank Guarantee/ **eBG** (electronic BG) from any scheduled commercial bank for an equivalent amount towards EMD in the proforma enclosed (Annexure – VII). The Bank Guarantee submitted towards EMD shall remain valid minimum up to 90 days (matching the tender validity period at Clause 9 of Section III) from the last date of submission of tenders. The proof of NEFT/DD/Bank Guarantee details should be uploaded along with technical bid/ Part I and also to be sent by email as mentioned in NIT. No interest shall be paid on EMD. A tender, which is not accompanied by EMD in the form as mentioned above, shall be treated as non-responsive, and will be summarily rejected by the Bank.

i. The EMD of the unsuccessful bidders shall be returned after award of work to the successful bidder. The EMD of the successful bidder shall be returned after

submission of requisite Bank Guarantee towards security deposit (Refer clause 2 of section V) for completion period extended up to defect liability period.

ii. **EMD shall be forfeited if the Bidder**:

a. makes misleading or false representations in the forms, statements and attachments submitted, has suppressed any material information, details of any legal proceedings pending in the court which might otherwise have created any impact on the eligibility criteria; or

b. withdraws his Bid during the period of Bid validity; or does not sign the contract after award of Contract.

c. has been blacklisted by any Government agency and the blacklisting is in force as on date of notice inviting the tender.

d. withdraws bid after opening of the price bid.

e. fails to commence the work awarded within the prescribed time limit.

f. fails to sign article of agreement within 14 days after issue of work order.

7. **Pre-bid Meeting:** A pre-tender briefing meeting of the bidders will be held on date and place as per NIT, to clarify any point / doubt raised by them in respect of the tender. No separate communication will be sent for this meeting. Non-attendance at the pre-Bid meeting will not be a cause for disqualification of a bidder.

i. All communications regarding points requiring clarifications shall be given in writing/email to the address mentioned in NIT by the eligible bidders one day before said meeting.

ii. Bidders are encouraged to attend the pre-bid meeting to seek clarification on any issue related to the tender from the Bank. No request for change in date of pre-bid meeting will be entertained thereafter. If a firm don't attend pre bid meeting, no clarification in future will be entertained and Minutes of Pre-Bid meeting will be binding on them.

iii. Inclusion/submission of any deviations in the tender conditions in Part I of the tender after pre-bid meeting may be liable for rejection.

iv. The minutes of pre-bid meeting and corrigendum/modification/addendums issued regarding bidding process if any, will be hosted in the Bank's website and CPPP only and shall not be published in any Newspaper

8. **Deviations**: The Bank discourages the stipulation of any additional conditions by the bidder. However, if the intending bidders feels that any of the terms and conditions of the tender documents (Techno- commercial) are not acceptable to them or they feel that additional terms and conditions are required to be incorporated, they may indicate these conditions or additional or amended conditions uploaded in the format as per **Section XI** The submitted deviations will be examined and after discussions with all the bidders, the conditions that are accepted to the Bank will be intimated to the bidders. If accepted condition affects the price then all the bidders will be advised to quote a percentage above or below their tendered amount already submitted in part II. The quoting of such as a percentage above or below their tendered amount shall have a definite bearing on the condition/s the bidders have to withdraw or additional benefit liable to be received as per the condition accepted by the Bank. The letter containing the bidder's quoting percentage above or below their quoted tendered amount should be submitted in sealed cover on or before date fixed to department subsequently and advised to the bidders. This letter together with already submitted tendered rate shall be called Part II, will be opened in presence of the representatives of firms on the due date advised. All other terms and conditions on which there are no observations by the intending bidders shall be constructed as acceptable to the bidder.

9. **Validity**: Tenders shall remain open to acceptance by the Bank for a period of 90 days from the date of opening Part I of the Tender. This period may be extended by mutual agreement in writing and the bidder shall not cancel or withdraw the tender during this period.

10. **Language**: The Tender form shall be filled in English or in Hindi. In the event of any discrepancy or ambiguity between the English and Hindi version of the documents, the English version shall prevail in matters of interpretation.

11. **Rates in price-bid (Part II)**: All the payment will be made in INR

    i. The rates shall be quoted for complete work, i.e. shall include charges for all taxes, scaffoldings, consumable, labor, transport, insurance, storage, workmen compensation & third party liability policies, etc., at the specified site till the work is finally handed over to the Bank. No concessional form for any taxes, duties and levies will be issued by the Bank. Equipment, if required to

be imported shall be arranged to be imported against the bidders own import license.

ii. The rates inclusive of insurance cover as mentioned in the special conditions of the contract.

12. **Successful bidder**: as per evaluation criteria mentioned at section III(A).

13. **Article of Agreement:** On receipt of formal intimation/ letter of Award/ work order of the acceptance of his/ their tender from the Bank, the successful bidder shall be contractually bound to sign/execute an **Article of Agreement** (**as per format Annexure IX**) within 14 days from the date of issue of work order. The agreement should be executed on a non-judicial stamp paper of required value as per applicable stamp act and the cost for the same shall be borne entirely by the bidder.

If the successful bidder fails to sign and execute the formal Article of Agreement within **14 days** from the date of issuance of the work order/Letter of Award, such failure shall constitute a breach of the tender conditions. In such an event, the Bank reserves the absolute right to:

i. **Cancel the award** of the contract.

ii. **Forfeit the Earnest Money Deposit (EMD)** absolutely, without any notice or financial liability to the bidder.

iii. **Blacklist or debar** the bidder from participating in future tenders of the Bank for a specified period.

14. **Site condition**: The work has to be carried out in an occupied office Building which may restrict the availability of work fronts during working hours. The bidders are therefore advised to plan for execution of work beyond Bank's normal working hours and full day working on hours during the Saturdays/ Sundays/ Bank's holidays subject to availability of site. The above aspect may be kept in mind while submitting the tenders.

i. It is essential that the Bidder gives special attention and priority to all matters concerning safety, protection from dust and loose materials, reduction of noise levels, protection from water and air infiltration into Building, and maintenance of neat and orderly conditions in and around work areas inside and outside of Building. Packaging, scrap materials and demolition debris shall be promptly removed from the building and site on a daily basis.

ii. If the contract includes works, which will be disruptive during normal business operations, or would be dangerous to Building occupants, said works shall be performed during hours as the Bank dictates. The Bidder shall perform such work during The Bank dictated hours and shall include all costs in its tender.

15. **Debarment/ Court case**:

i. If the bidder has been convicted of an offence— (a) under the Prevention of Corruption Act, 1988; or (b) the Indian Penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract. In this regard, Bidder shall submit a copy of Undertaking / Declaration / Certificate on their letter head duly sealed and signed by the authorized signatory in the format given in **Annexure XIII**.

ii. The bidder shall submit declaration of debarment by any public institution in the format as given in **Annexure XIV**.

16. **Conformity to the rules on Contractor from Countries sharing Land Border with India:** The instruction/ rules issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Government of India, vide Office Memorandum (OM) F. No. 6/18/2019-PPD dated July 23, 2020, in respect of s from bidder countries sharing land border with India and subsequent revisions and Public Procurement Orders issued in furtherance thereto shall be mandatory. In this regard, bidder shall submit a copy of Undertaking / Declaration / Certificate on their letter head duly sealed and signed by the authorized signatory in the format given in **Annexure XI**.

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Section III (A) Evaluation Criteria

Evaluation of tenders

1. Tenders will be evaluated based on the eligibility criteria mentioned in Section III (A) after opening the first e-cover i.e., Part I (Techno-Commercial Bid), of only those bidders who have submitted the EMD on or before the due date.

2. The bidders must submit all the requisite documents prescribed in the tender document, Part I (Techno-Commercial Bid). Only those tenders, which meet the eligibility requirements, shall be processed further. The correctness /legality and adequacy of information and supporting documents furnished will be verified /examined by the Bank. If any documents are missing or found fabricated in the uploaded tender, the Bank shall have the right to request the missing documents/certificates and independently verify these certificates. Bidders must also ensure that all uploaded files are readable and uncorrupted. If any uploaded document is unreadable, corrupted, or otherwise inaccessible to the Bank, the Bank shall bear no liability or responsibility, and reserves the right to reject the bidder's candidature without further consideration.

3. Price bids submitted by bidders who do not meet the technical eligibility criteria will not be opened. Notification of their disqualification will be communicated to them.

4. Part II (price bid) of all the bidders who qualified in Part I (Techno-Commercial bid) will be opened for financial evaluation.

5. The tenders will be evaluated not only on the basis of capital cost quoted for the chillers less buyback value of the old material but also taking into account the effect of rates quoted for comprehensive all-inclusive Annual Maintenance Contract (CAMC) for a period of 14 years after expiry of one years of Defect Liability Period, by using Net Present Value (NPV) method. For arriving at the NPV of CAMC amount, the following will be considered:

i.	Discount factor	8 % per annum
ii.	Annual Escalation	5 % per annum

iii.	Period of CAMC	14 years
iv.	Payment terms of CAMC	Quarterly payment after satisfactory completion of the service

Total Cost of Ownership (TCO) = A - B + (C X F1)

The bidder with the lowest Total Cost of Ownership (TCO) will be identified as the L1 bidder.

Where,

A= Capital Cost of the new equipment, as applicable

B= Buy Back Value of the Old equipment, as applicable

C= Comprehensive AMC Value of all the new equipment, as applicable

F1= NPV of comprehensive annual maintenance Service contract charges for the period of 14 years after 1 years of defect liability period ***shall be 10.06***

6 Minimum Base Rate for Comprehensive AMC

Minimum Base Rate for Comprehensive AMC is 5% (Five percent) of total capital cost. In case, the tenderer quotes the rates for comprehensive AMC lower than 5% (Five) of the quoted capital cost, then the 5% (Five) of the quoted capital cost will be considered as AMC for calculation of Total Cost of Ownership.

Note: Notwithstanding the above, the Bank shall pay only the quoted rate of the AMC during the currency of the committed contract period subject to renewal formulae indicated in the tender.

7. The bidder with the lowest price (L1) shall be considered for the Award of Contract and called successful bidder. In case the lowest tendered amount of two or more bidders is the same, then such lowest bidders may be asked to submit a revised offer quoting discount on their already quoted tendered amount in a sealed envelope. Further, if any such lowest bidder does not revise his/her bid on lower side, his/her original bid shall remain valid for further processing. The lowest tender shall be decided on the basis of revised offer. If the revised tendered amount of two or more bidders received in the revised offers is again found to be equal, then the firm with the firm with the highest average turnover for last three financial years shall be considered for the award of contract.

Section IV
General Conditions of Contract

Interpretation Clause

In construing these Conditions, the Scope of work, Specifications, Bill of Quantities and Contract Agreement, the following words shall have the meanings herein assigned to them except where the subject or context otherwise required.

i.	"RBI"	Shall mean Reserve Bank of India, Kanpur having its Central Office at Shahid Bhagat Singh Road, Mumbai– 400001 and having its Regional Offices at various places.
ii.	"Bank"	Shall mean The Reserve Bank of India and shall include its assigns and successors.
iii.	"Tender document"	Shall mean document named as such issued by the Bank to the Contractors inviting Bids for the Project.
iv.	"Bidder"	who submits the bids/tenders. It may be partnership firm, individual firm and a company. Legal representatives of a deceased partner.
v.	"Contractor "	Contractor is the successful contractor who has been officially awarded to execute the work. It may be partnership firm, individual firm and a company. Legal representatives of a deceased partner.
vi.	"Site"	Shall mean the site of the contract works including any Building and erections thereon and any other land (inclusively) as aforesaid allotted by the Bank for the Contractor's work.
vii.	"Contract"	Shall mean and include all sections of the tender document, corresponding letters, work order, Articles of Agreement, CAMC agreement and minutes of pre-bid etc. attached hereto and duly signed.

viii.	"Notice in writing"	Or written notice shall mean a notice in written, typed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address to have been received when in the ordinary course of post, it would have been delivered. The communication delivered by any accepted electronic means shall also be deemed to be written notice.
ix.	"Act of Insolvency"	Shall mean any Act of Insolvency as defined by the **Insolvency and Bankruptcy Code (IBC), 2016** or any Act amending such original.
x.	"Net Prices"	The price of item mentioned in part II of the tender at CPPP.
xi.	"Market Rate"	shall be the rate as decided by the Bank on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in clause 19(e) to cover all overheads and profits.
xii.	"The works"	Shall mean name of the tender mentioned in the NIT.
xiii.	Day/Month/Year	Shall mean Calendar Day/month/year
xiv.	Working Day	Shall mean the days when Bank's office is working i.e. Days excluding Public holidays, Saturdays and Sundays
xv.	Engineer-in-charge/Bank's Engineer/Bank's representative	Means the Officer employed and paid by the Bank and acting under the orders of the Bank who shall supervise and be in-charge of the work. All works to be executed under the contract shall be executed under the direction and subject to the approval of the Bank's representative in all respects.
xvi.	Manufacturer	refers to a person or firm who is the producer and furnisher of the material or designer and fabricator of equipment

xvii.	Contractor's Works or Manufacturer's Works	Shall mean and include the land and other places which are used by the CONTRACTOR/ FABRICATOR or SUB-CONTRACTOR/ SUB-FABRICATOR for the manufacture of "Equipment" or performing the "Works".
xviii.	Contract Price or Contract	Amount shall mean the total amount as calculated from quoted unit rates by the successful contractor and quantities mentioned in the Bill of Quantities (Price Bid) and as accepted by the Bank and indicated in the letter of award of work.
xix.	Contract Period	Shall mean the period specified in the tender document for execution of the contract/ completion of the work, including any authorized extended period by the Bank
xx.	Contract Agreement	Shall mean the agreement signed between the Contractor and the Bank for the execution of the Project.

2. **Scope of Contract**

The Contractor shall carry out and complete the said work in every respect in accordance with this Contract and with the directions of and to the satisfaction of the Bank. The Bank may in his absolute discretion and from time to time issue further drawings and/or written instructions, details, directions and explanations, which are hereafter collectively referred to as "Bank's Instructions" in regard to :

i. The variation or modification of the design, quality or quantity of works or the addition or omission or substitution of any work.
ii. Any discrepancy in the Drawings or between the Bill of Quantities and/or Drawings and/or Specifications.
iii. The removal from the site of any materials brought thereon by the Contractor and the substitution of any other material therefor.
iv. The removal and/or re-execution of any works executed by the Contractor.
v. The dismissal from the works of any persons employed by the Contractor thereupon.
vi. The opening up for inspection of any work covered up.
vii. The amending and making good of any defects under Clause 21 hereof.

The Contractor shall forthwith comply with and duly execute any work comprised in such Bank's instructions. Verbal instructions, directions and explanations given to the Contractor or his representatives upon the works by the Bank shall, if involving a variation, must be confirmed in writing by the Contractor within seven days, and if not dissented from in writing within a further seven days by the Bank, such shall be deemed to be Bank's instructions within the scope of the Contract. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

Necessary "**Site instruction Book, Hindrance Register, Labour Register**" **strictly maintained by contractor on daily basis and get duly authenticated from the Bank**.

3. **Variations to be approved by Bank**

All the variation in the scope of the work shall be approved by the Bank's Engineer. The Contractor shall submit a statement of variations giving a quantity and rates duly supported by analysis of rates, vouchers etc. The rates on scrutiny and final acceptance by the Bank shall form a supplementary tender. The Bank shall not be liable for payment of such variations until these statements are approved by the Bank's Engineer.

4. **Drawings, Bill of Quantities & Agreement**

The Contract shall be executed in duplicate and the Contractor shall be entitled to one executed copy for his use. The contractor shall pay the applicable stamp duty on the agreement. Before the issue of the final certificate to the Contractor, he shall forthwith return to the Bank all Drawings and Specifications.

5. **Contractor to provide everything necessary at his cost**

The Contractor shall provide at his cost, everything necessary for the proper execution of the works according to the intent and meaning of the Drawings, Bill of Quantities and Specifications taken together whether the same may or may not be particularly shown or described therein provided that the same can reasonably be inferred therefrom, and if the Contractor finds any discrepancy in the Drawings or between the Drawings, Bill of Quantities and Specifications, he shall immediately and

in writing refer same to the Bank who shall decide which is to be followed. The Contractor shall provide all works under this specification in full accordance with Health and Safety Regulations.

6. **Authorities, Notices and Patents**

The Contractor shall conform to the provisions of any Act of the Legislature relating to the works and any other aspect thereto such as compliance to the various labour codes, and to the regulations and bye-laws of any authority, and of electric supply and other companies and/or authorities with whose systems, the installation is proposed to be connected and shall, before making any variations from the Drawings or Specifications that may be necessitated by so conforming, give to the Bank, written notice, specifying the variation proposed to be made and the reason for making it and apply for instructions thereon. In case the Contractor shall not receive such instructions **within ten days**, he shall proceed with the work conforming to the provisions, regulations or byelaws, in question, and any variation so necessitated shall be dealt with under Clause No. 14 thereof.

The Contractor shall bring to the attention of the Bank, all notices required by the said Acts, regulations or bye-laws to be given to any authority and pay to such authority, or to any public office, all fees that may be properly chargeable in respect of the works, and lodge the receipts with the Bank for payment.

The Contractor shall indemnify the Bank against all claims in respect of rights, and shall defend all actions arising from claims, and shall himself pay all royalties, license fees, damages, cost and charges of all and every sort that may be legally incurred in respect thereof.

7. **Setting out of work**

The Contractor shall set out the works and shall be reasonable for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions, and alignment of all parts thereof. If at any time any error in this respect shall appear during the progress of the works within a period of one year from the completion of the works, the Contractor shall, if so required, at his own expense, rectify such error to the satisfaction of the Bank.

8. **Materials and workmanship to conform the descriptions**

All materials and workmanship shall so far as procurable be of the respective kinds described in the Bill of Quantities and/or Specifications and in accordance with the Bank's instructions, and the Contractor shall upon the request of the Bank furnish him with all invoices, accounts receipts and other vouchers to prove that the materials comply therewith. The Contractor shall at his own cost arrange for and/or carry out any test of any materials which the Bank may require.

9. **Contractor's superintendence and representative on the works**

The Contractor shall provide all necessary personal superintendence during the execution of the works, and as long thereafter as the Bank may consider necessary until the expiration of the "**Defects Liability Period**" stated in the Appendix hereto. The Contractor shall also during the whole time the works are in progress, employ a competent representative who shall be constantly in attendance at the works while the men are at work. Any directions, explanations, instructions or notices given by the Bank to such representative shall be held to be given to the Contractor.

10. **Dismissal of Workmen**

The Contractor shall on the request of the the Bank, immediately dismiss any person employed thereon by him from the works who may, in the opinion of the the Bank, is incompetent or committed any misconduct himself and such persons shall not be again employed on the works, without the permission of the the Bank.

11. **Access to Works**

The Bank and their respective representatives shall have free access to the works and/or the workshops, factories or other places at all reasonable times where materials are lying or from which they are being obtained and the Contractor shall give every facility to the Bank and their representatives necessary for inspection and examination and test of the materials and workmanship. No person not authorised by the Bank except the representatives of public authorities shall be allowed on the works at any time.

12. **The Bank's Representative: Assistant Manager(Tech)/ Manager(Tech)/ AGM (Tech)**

The term "Assistant Manager (Tech)/ Manager (Tech)/ AGM(Tech)" shall mean the person appointed and paid by the Bank to inspect the works, the Contractor shall afford the Assistant Manager (Tech)/ Manager(Tech)/ AGM(Tech), every facility and assistance for inspecting the works and materials and for checking and measuring time and materials. The Assistant Manager (Tech) /Manager (Tech) /AGM(Tech) shall have power to set out works or to revoke, alter, enlarge or relax any requirements of the Contract or to sanction any work, additions, alterations, deviations or omissions or any extra work whatever, except in so far as such authority may be specially conferred by a written order with the prior concurrence in writing of the Bank.

The Assistant Manager(Tech)/ Manager(Tech)/ AGM(Tech) or any representative of the Bank shall have power to give notice to the Contractor or to his representative of non-approval of any work or materials and such work shall be suspended or the use of such materials shall be discontinued by the Assistant Manager(Tech)/ Manager (Tech) but such examination shall not in any way exonerate the Contractor from the obligation to remedy any defects which may be found to exist at any stage of the works or after the same is completed.

13. **Assignments and Sub-letting**

The whole of the works included in the Contract shall be executed by the Contractor and the Contractor shall not directly or indirectly transfer, assign or under-let the Contract or any part share thereof or any interest therein without the prior written consent of the Bank, and no undertaking shall relieve the Contractor from the full and entire responsibility of the Contract or from active superintendence of the works during their progress.

14. **Alterations, additions, omissions etc.**

No alteration, omission or variation shall vitiate this Contract but in case the Bank thinks proper at any time during the progress of the works to make any alterations in or additions to or omissions from the works or any alteration in the kind or quality of the materials to be used therein and shall give notice thereof in writing under his hand to the Contractor, the Contractor shall alter, add to or omit from, as the case may be,

in accordance with such notice but the Contractor shall not do any work extra to or make any alterations or additions to or omissions from the works or any deviation from any of the provisions of the Contract, Stipulation, Specifications or Contract Drawings without the previous consent in writing of the Bank and the value of such extras, alterations, additions or omissions shall in all cases be determined with the prior approval in writing of the Bank in accordance with the provisions of Clause 19 hereof, and the same shall be added to or deducted from the Contract Amount, as the case may be, accordingly.

15. **Bill of Quantities**

The Bill of Quantities, unless otherwise stated, shall be deemed to have been prepared in accordance with the Standard Method of Measurement.

Any error in description or in quantity or in omission of items from the Bill of Quantities shall not vitiate this contract but shall be rectified and the value thereof as ascertained under Clause 18 hereof, shall be added to, or deducted from the Contract Amount (as the case may be) provided that no rectification of errors, if any, shall be allowed in the Contractor's Schedule of Rates.

16. **Sufficiency of Bill of Quantities**

The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the prices stated in the Bill of Quantities and/or the Schedule of Rates and Prices which rates and prices shall cover all his obligations under the Contract, and all matters and things necessary for the proper completion of the works.

17. **Measurement of Works**

The Assistant Manager (Tech)/Manager (Tech) may from time to time intimate to the Contractor and the Bank that he requires the works to be measured, and the Contractor shall forthwith attend or send a qualified Agent to assist the Assistant Manager (Tech)/Manager (Tech) in taking such measurements and calculations and to furnish all particulars or to give all assistance required by any of them.

Should the Contractor not attend or neglect or omit to send such Agent, then the measurement taken by the Assistant Manager(Tech)/ Manager (Tech) shall be taken

to be correct measurements of the works. Such measurements shall be taken in accordance with the Mode of Measurement detailed in the Specifications.

The Contractor or his Agent may at the time of measurement take such notes and measurements as he may require.

All authorised extra works, omissions and all variations made with the prior approval in writing of the Bank shall be included in such measurements.

18. **Measurements Book**

a. The Bank shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done. The Interior Contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

b. Measurement of all items having financial value shall be entered in Computerized Measurement Book (CMB) so that a complete record is obtained of all works performed under the contract after joint measurement of Bank and authorized representative of the contractor. All bills (Running Account (RA) & Final bill) should be in bound volume of Computerised Measurements (A4 size) to be furnished by the contractor, duly machine numbered for pages, and with MB number to be given by the Bank. – Format of Measurement and Abstract Book as provided by the Bank.

c. The Bank Engineer shall incorporate necessary corrections in the sheets of MB. After incorporating the corrections, the Contractor shall submit revised copies. All pages of the finalized, computerized MB sheets, after due check / test check measurements shall have full signature with date of the authorized official of the Contractor.

19. **Ascertainment of prices for extras**

The Contractor may, when authorised by Bank, add to, omit from, or vary the works shown upon the drawings, or described in the Specification, or included in the Bill of Quantities, but the Contractor shall make no addition, omission or variation without such authorisation or direction. A verbal authority or direction issued by the Bank shall be deemed to have been given in writing, provided it is confirmed by the Bank in writing within seven (7) days of issuance of such instruction/direction.

No claim for any extra work shall be allowed unless it shall have been executed under provisions of Clause 2 hereof with the concurrence of the Bank as herein mentioned. Any such extra work is herein referred to as authorised extra and shall be made in accordance with the following provisions.

i. a. The net rates or prices in the original tender shall determine the valuation of the extra work where such extra work is of similar character and executed under similar conditions as the work priced therein upto 25% increase of quantity.

   b. Rates for all items, wherever possible, should be derived out of the rates given in the Priced Bill of Quantities.

ii. The net prices of the original tender shall determine the value of the items omitted, provided if omissions vary the conditions under which any remaining items of works are carried out, the prices for the same shall be valued under sub-clause (c) hereof.

iii. Where the extra works are not of similar character and/or executed under similar conditions as aforesaid or where the omissions vary the conditions under which any remaining items of works are carried out or if the amount of any omission or additions. relative to the amount of the whole of the Contract works or to any part thereof shall be such that in the opinion of the Bank the net rate or price contained in the Priced Bill of Quantities or tender or for any item of the works involves loss or expense beyond that reasonably contemplated by the Contractor or is by reason of such omission or addition rendered unreasonable or inapplicable, the Bank shall fix such other rate or price as in the circumstances he shall think reasonable and proper.

iv. Where extra work cannot be properly measured or valued, the Contractor shall be allowed day work prices at the net rates in accordance with the local day work rates and wages for the district, provided that in either case vouchers specifying the daily time and materials employed, be delivered for verification to the Bank at or before the end of the week following that in which the work has been executed.

v. It is further clarified that for all such authorised extra items where rates cannot be derived from tender or the quantity of any of the tender items increases 25% beyond the Bill of Quantities, the contractors shall summit rates supported by the rate analysis worked on the "actual cost basis" plus 15% towards establishment charges, contractor's overhead and profits. Such item will not be eligible for the escalation.

The measurement and valuation in respect of the Contract shall be completed within the "period of final measurement" stated in the Appendix, or if not stated then within six months of the completion of the contract works as defined in Clause 23 hereof.

20. **Unfixed materials when taken into account to be the property of the Bank**

Upon full payment of a certificate that includes the cost of unfixed materials placed on or adjacent to the worksite, ownership of those materials vests completely with the Bank. The Contractor shall not remove these materials from the site except for direct application in the works, unless permitted in writing by the Bank. The Contractor shall be legally and financially liable for any loss of or damage to such materials from any cause whatsoever.

21. **Removal of improper work**

The Bank shall, during the progress of the works, have power to order in writing from time to time the removal from the works within such reasonable time or times, as may be specified in the order, of any materials which in the opinion of the Bank are not in accordance with the Specifications or the instructions of the Bank, the substitution of proper materials, and the removal and proper re-execution of any work executed with materials or workmanship not in accordance with the Drawings and Specifications or instruction, and the Contractor shall forthwith carry out such order at his own cost. In case of default on the part of the Contractor to carry out such order, the Bank shall have the power to employ and pay the other persons to carry out the same, and all expenses consequent thereon, or incidental thereto shall be borne by the Contractor, or may be deducted by the Bank from any moneys due, or that may become due, to the Contractor.

22. **Defects after virtual completion**

Any defect, shrinkage, settlement or other faults which may appear within the "Defects Liability Period" stated in the Appendix hereto, if none stated, then within 12 months after the virtual completion of the works, arising in the opinion of the Bank from materials or workmanship not in accordance with the contract, shall upon the directions in writing of the Bank, and within such reasonable time as shall be specified therein, be amended and made good by the Contractor, at his own cost.

In case of default, the Bank may employ and pay other persons to amend and make good such defects, other faults, and all damages, loss and expenses consequent thereon or incidental thereto shall be made good and borne by the Contractor and such damage, loss and expenses shall be recoverable from him by the Bank or may be deducted by the Bank from any moneys due or that may become due to the Contractor, or the Bank may in lieu of such amending and making good by the Contractor deduct from any money due to the Contractor a sum to be determined by the Bank equivalent to the cost of amending such work and in the event of the amount retained as Security Deposit being insufficient, recover the balance from the Contractor, together with any expenses the Bank may have incurred in connection therewith. Should any defective work have been done or material supplied by any Sub-Contractor employed on the works who has been nominated or approved by the Bank as provided in clause 13 & 24 hereof, the Contractor shall be liable to make good in the same manner as if such work or material had been done or supplied by the Contractor and been subject to the provisions of this Clause and Clause 2 hereof. The Contractor shall remain liable under the provision of this Clause, notwithstanding the signing of any certificate or the passing of any accounts, by the Bank.

23. **Certificate of virtual completion and Defects Liability Period**

The works shall not be considered as completed until the Bank has certified in writing that they have been virtually completed. The Defects Liability Period shall commence from the date of such Certificate/date of completion of the work.

24. **Nominated Sub-Contractor**

All Specialists, Merchants, Tradesman and others executing any work of supplying and fixing any goods, for which prime cost prices or provisional sums are included in the Bill of Quantities and/or Specifications, who may be nominated or selected by the

Bank are hereby declared to be Sub-Contractors employed by the Contractor and are herein referred to as nominated Sub-Contractors.

No nominated Sub-Contractors shall be employed on or in connection with the works against whom the Contractor shall make reasonable objection or (save where the Bank and Contractor shall otherwise agree) who will not enter into Contract provided

i. That the nominated Sub-Contractors shall indemnify the Contractor against the obligation in respect of the Sub-Contractor as the Contractor is under in respect of this Contract.
ii. That the nominated Sub-Contractor shall indemnify the Contractor against claims in respect of any negligence by the Sub-Contractor, his servants or agents or any misuse by him or them of any scaffolding or other plant, the property of the Contractor or under any Workmen's Compensation Act in force.
iii. Payment shall be made to the nominated Sub-Contractor within fourteen days provided that all nominated Sub-Contractor's accounts included in previous Certificates have been duly discharged, in default whereof, the Bank may pay the same and deduct the amount thereof from any sums due to the Contractor. The exercise of this power shall not create privity of contract as between Bank and Sub-Contractor.

25. **Other persons employed by Bank**

The Bank reserves the right to use the Estate and any portions of the site for the execution of any work not included in this Contract, which it may desire to have carried out by other persons, and the Contractor shall allow all reasonable facilities for the execution of such work but shall not be required to provide any plant or materials for the execution of such work. Such work shall be carried out in such manner as not to impede the progress of the works included in the Contract and the Contractor shall not be responsible for any damage or delay which may happen to or occasioned by such work.

26. **Insurance in respect of damage to person and property**

The contractor shall, at his own expense, effect and maintain with effect from the date of commencement till issue of the completion certificate under this contract, with an approved insurance company, an All Risks Policy for insurance for an amount equal

to the amount of the contract including earthquake risk in the joint names of the Bank and the contractor (the name of the former being placed first in the policy) against all risks as per the standard all risk policy for contractors and deposit such policy or policies with the Bank before commencing the works.

The Contractor shall be held to be reasonably liable for all injury to persons, animals or things, and for all structural and decorative damage to property which may arise from the operation or neglect of the Contractor or its workers or of any nominated Sub-Contractor or any employee or either, whether such injury or damage arises from carelessness, accident or any other cause whatever, in any way connected with the carrying out of this Contract. The liability under this clause shall be held to include inter alia any damage to Building, whether immediately adjacent or otherwise, and any damage to roads, streets, footpaths, bridges or ways as well as all damage caused to the building and other structures and works forming the subject matter of this Contract. The contractor shall also be responsible for any damage caused to the building and other structures and works forming the subject matter of this Contract by frost, rain, wind or other inclemency of weather. The Contractor shall indemnify and keep indemnified the Bank and hold him harmless in respect of all and any loss and expenses arising from any such injury or damage to persons or property as aforesaid and also against any claim made in respect of injury or damage, whether under any Statute or otherwise and also in respect of any award of compensation or damages consequent upon such claim.

The Contractor shall reinstate all damage of every sort mentioned in this Clause, so as to do delivery of the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties. The Contractor shall also indemnify and keep indemnified the Bank against all claims which may be made against the Bank by any person/ member of the public or other **third party** in respect of anything which may arise in respect of the works or in consequence thereof and **shall at his own expense arrange to effect and maintain, with effect from the date of commencement until the completion of the Contract, with an approved Insurance company a policy of Insurance in the joint names of the Bank and the Contractor(the name of the former being placed first in the policy) against such risks and deposit such Policy or Policies with the Bank before commencement of the work**. The minimum limit of coverage under the policy shall be as defined elsewhere under General Condition of Contract. The Contractor shall also similarly indemnify the Bank against all claims which may

be made upon the Bank whether under the **Workmen Compensation Act** or any other statute in force during the currency of this contract or at Common Law in respect of any employee of the Contractor or any Sub-Contractor and **shall at his own expenses effect and maintain, with effect from the date of commencement until the completion of the Contract, with an approved Insurance company a policy of Insurance in the joint names of the Bank and the Contractor(the name of the former being placed first in the policy) against such risks and deposit such Policy or Policies with the Bank from time to time during the currency of the Contract**. In default of the contractor ensuring as provided above, the Bank may so ensure and may deduct the premiums paid from any money due or which may become due to the contractor.

The Contractor shall be responsible for any liability which may be excluded from the Insurance Policies above referred to and also for all other damages to any person, animal or property arising out of and incidental to the negligent or defective carrying out of this Contract, whatever may be the reasons due to which the damage shall have been caused. He shall also indemnify and keep indemnified the Bank in respect of all and any costs, charges or expenses arising out of any claim or proceedings relating to the works and also in respect of any award of compensation or damages, arising therefrom. Without prejudice to the other rights of the Bank against contractor in respect of such default, the Bank shall be entitled to deduct from any sums payable to the Contractor the amount of any damage, compensation, costs, charges and other expenses paid by the Bank and which are payable by the contractor under this clause. The contractor shall upon settlement by the insurer of any claim made against the insurer pursuant to a policy taken under this clause proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the money received from the insurer in respect of such damage shall be paid to the contractor and the contractor shall not be entitled to any further payments in respect of the expenditure incurred for Building or repairing of the materials or goods destroyed or damaged.
The contractor, in case of re-Building or reinstatement after damage shall be entitled to such extension of time for completion as the Bank may deem fit, but shall, however, not be entitled to reimbursement by the Bank of any shortfall or deficiency in the amount finally paid by the insurer in settlement of any claim arising as set out herein.

Without prejudice to his liability under this clause, the contractor shall also cause all nominated sub-contractors to effect, for their respective portions of works similar policies of insurance in accordance with the provisions of this clause and shall produce or cause to produce to the Bank such policies. The contractor shall not permit a nominated sub-contractor to commence work at site unless said insurance policies are submitted. In the event of failure of the sub-contractor to take out such policy or policies of insurance before commencing the works at site, the contractor shall be responsible for any claim or damage attributable to the said sub-contractor.

In order to fulfil all the insurance-related conditions mentioned above, the contractor shall, within 14 days from the date of issue of the work order, insure the works at his cost and keep them insure until the virtual completion of works, against loss or damage by fire with an office in the joint names of the Bank and the contractor (the name of the Bank i.e. "RESERVE BANK OF INDIA" being placed first in the policy). It shall cover the following risks.

i. **Contractors all risk (CAR) policy** insurance inclusive of Storage, erection, testing and commissioning policy for the full contract value including fire risk and Transit insurance for transportation from manufacturer's works to site (by Air/Sea/Road etc. as applicable.
ii. **Workmen compensation policy** for the employees of the contractor at site.
iii. **Third party liability policy** with a limit of Rs 2 lakh per accident maximum upto 3 accidents.

Note: If the contractor does not provide these policies, the Bank reserves the right to take the above insurance policies themselves and recover **double the cost as penalty** thereof from the bill of the contractor or any other action as it deems fit.

27. **Date of Commencement and Completion**

The Contractor shall be allowed admittance to the site on the "Date of Commencement" stated in the Appendix hereto or such later date as may be specified by the Bank and he shall thereupon and forthwith begin the works and shall regularly proceed with and complete the same on or before the "Date of Completion" stated in the Appendix subject nevertheless to the provisions for extension of time hereinafter contained.

28. **Damages for Non-completion**

If the Contractor fails to maintain the required progress of the works and fails to complete the works by the stipulated completion time in the Contract or within any extended time under time extension Clause 29 hereof and the Bank certifies in writing that in his opinion the same ought reasonably to have been completed, the Contractor shall pay the Bank a sum towards "**Liquidated Damages**" **@ 0.25% of the contract value** per week of delay subject to a maximum of 10% of the contract value (contract value means the total value of capital cost of work) for the period during which the said works shall so remain incomplete and the Bank may deduct such damages from any moneys due to the Contractor. The contractor hereby specifically agrees and authorizes the Bank to deduct such liquidated damages, if any, from any instalment of payment becoming due and payable to the contractor in terms of this contract or from the retention money."

If the Contractor fails to maintain the required progress of the works by the completion time stipulated in the Contract or within any extended time under time extension Clause and the employer certifies in writing that in her/ his opinion the same ought reasonably to have been completed, the Contractor shall pay the Employer the sum named as "Liquidated Damages" for the period during which the said works shall so remain incomplete and the Employer may deduct such damages from any moneys due to the Contractor. The projects are broken down in the following three milestones indicating time and amount for achieving each milestone. In case, the contractor does not achieve a particular milestone(s), if any, mentioned in the Contract or rescheduled milestone(s) in terms of time extension clause, the amount to be calculated based on the targeted financial progress for the milestone and the delay up to the Running Account bill under processing shall be withheld (as per the method given below) to be adjusted against the liquidated damages levied at the time of completion of contract. Withholding of payments on failure to achieve a milestone shall be automatic and without any notice to the Contractor. However, if the Contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make-up for the delay before the subsequent milestone(s), the amount mentioned against each missed milestone shall be withheld. No interest whatsoever shall be paid by the Bank on such withheld amount/s. The delay period shall be calculated from the stipulated date of occurrence of a milestone until the date when the milestone is actually achieved, however, the amount to be withhold from a R.A. bill before reaching to a particular milestone(s)

shall be calculated for the delay until the date of R.A. bill. The application of liquidated damages shall not effect a change in the milestone or release the Contractor of her/ his obligation to improve the progress of work. The contractor hereby specifically agrees and authorizes the Employer to deduct such liquidated damages, if any, from any instalment of payment becoming due and payable to the contractor in terms of this contract or from the retention money.

Specimen Milestone Chart

Milestone	Due date	Milestone Target amount
Project Start	D0	0
1st	D1	T1
2nd	D2	T(N-X)
(N-X)th	D(N-X)	T(N-X)
(N-X+1)th	D(N-X+1)	T(N-X+1)
(N-X+2)th	D(N-X+2)	T(N-X+2)
(N-1)th	D(N-1)	T(N-1)
Nth	D(N)	T(N)

Say an RA bill received on D(R) is certified for gross amount of R where:

a) T(N-X) ≤ R < T(N-X+1) i.e., Progress reached up to (N-X)th milestone

b) RA Bill date D(R) is after D(N) i.e. Nth milestone has become due as on RA bill date

c) Withhold amount for not achieving Nth milestone

A(N) = (0.0025/7)*(DR-DN)*(TN-T(N-1));

where T(N-1) will be zero if Nth milestone is the first in the series of delayed milestones.

Gross Withhold amount for current RA bill: The withhold amount shall be calculated as follows:

a) Withhold amount for milestones achieved with delay till previous RA Bill = P

b) withhold amount for milestones achieved with delay during current RA bill = Q

c) withhold amount for milestone due but not achieved till current RA bill. = R

P = A(1)+A(2)+…..+A(N-X-1)

Q = A(N-X)

R=(0.0025/7)*((D(R)-D(N-X+1))*(T(N-X+1)-T(N-X))+(DR-D(N-X+2))*(T(N-X+2)-T(N-X+1) +……..…+(DR-DN))*(T(N)- T(N-1))

For project (Design, Supply, Installation, Testing and Commissioning (DSITC) of 3 no's of 250 TR Water Cooled Chiller at RBI, Kanpur N=3 i.e., three milestones as follow:

Milestone	Due date	Milestone Target amount
Project Start	D0	0
1st	D1= 12 weeks from the scheduled commencement of work	T1= 60% of contract value
2nd	D2= 3 weeks from D1	T2= 90% of contract value
3rd	D3= 1 weeks from D2	T3=100% of contract value

29. **Delay and Extension of Time**

If in the opinion of the Bank, the assigned works get delayed (a) by force majeure or (b) by reason of any exceptionally inclement weather or (c) by reason of proceedings taken or threatened by or dispute with adjoining or neighbouring owners or public authorities arising otherwise than through the Contractor's own default or (d) by the works or delays of other Contractors or Tradesmen engaged or nominated by the Bank and not referred to in the Bill of Quantities, and/or Specification or (e) by reason of Bank's instructions as per Clause 2 hereof or (f) by reason of civil commotion, legal combination of workmen or strike or lock-out affecting any of the Building trades or (g) in consequence of the Contractor not having received in due time, necessary instructions from the Bank for which he shall have specifically applied in writing or (h) from other causes which the Bank may certify as beyond the control of Contractor or (i) in the event the value of the work exceeds the value of the Priced Bill of Quantities owing to variation, the Bank may make a fair and reasonable extension of time for completion of the Contract works. In case of such strike or lock-out the Contractor shall nevertheless constantly use his endeavours to prevent delay and shall do all that may reasonably be required to the satisfaction of the Bank to proceed with work.

If the contractor needs an extension of time for completion of the work or if the completion of work gets delayed for any reason beyond the due date of completion stipulated in the contract, the contractor shall apply to the Bank for extension of time in writing at least 7 days before the expiry of the scheduled time and while applying for extension of time, contractor shall furnish the reasons in detail and his justification along with documentary evidence (copy of relevant pages of hindrance register), if any, for delays. Only that period of extension of time as granted by the Bank (on receipt of the application from the contractor or even in absence of any such

application certification as to the reasonableness of the grounds for delay) will qualify for exemption of imposition of liquidated damages. For the balance period in excess of original stipulated period and an authorised extension of time granted by the Bank, the provision of liquidated damages as stated under clause 28 will become applicable.

Further, the contract shall remain in force even for the period beyond the due date of completion irrespective of whether the contractor has applied or not, for the grant of extension of time for completion unless the Bank decides to terminate the contract. The delay for completion of work for any reason will not entail any right to the contractor to claim any revision of rates or any extra compensation for any reason.
The conditions for force majeure, as mentioned above are as follows:

i. Notwithstanding anything else contained in this document, neither party shall be liable for any delay in performing its obligations hereunder if such delay is caused by circumstances beyond its reasonable control including without limitation any delay caused by the acts of governments, acts of God, natural calamities, strikes, riots in any region, terrorist attack, war (declared and undeclared). However, upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Bank. The Contractor is under obligation to take necessary steps to mitigate the effects of the force majeure event.

ii. Neither party shall, by reason of such event, be entitled to terminate the Contract in respect of such performance of their obligations.

iii. The obligations under the Contract shall be resumed as soon as practicable after the event has come to an end or ceased to exist. If the performance of any obligation under the Contract is prevented or delayed by reason of the event beyond a period mutually agreed, either party may at its option, terminate the Contract.

30. **Failure by Contractor to comply with Bank's instructions**

If the Contractor after receipt of written notice from the Bank requiring compliance within ten days fails to comply with such further drawings and the Bank may employ and pay other persons to execute any such work whatsoever that may be necessary to give effect thereto, and all costs incurred in connection therewith shall be recoverable from the Contractor by the Bank as a debt or may be deducted by him from any moneys due to the Contractor.

31. **Termination of Contract by the Bank**

If the Contractor being an 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 the supervision of the Court and the Official Assignee or the Liquidator, in such acts of insolvency or winding up, as the case may be, shall be unable, within seven days after notice to him requiring him to do so, to show the reasonable satisfaction of the Bank that he is able to carry out and fulfil the Contract and to give security therefor, if so required by the Bank.

Or if the Contractor (whether an individual, firm or Incorporated Company) shall suffer execution or other process of Court attaching property to be issued against the Contractor,

Or shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the Contractor,

Or shall assign or sublet this Contract without the consent in writing of the Bank first had and obtained,

Or shall charge or encumber this Contract or any payments due or which may become due to the Contractor hereunder,

Or if the Bank determine that the Contractor

i. has abandoned the Contract, or
ii. has failed to commence the works, or has without any lawful excuse under those Conditions suspended the progress of the works for 14 days after receiving from the Bank notice to proceed, or
iii. has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or
iv. has failed to remove materials from the site or to pull down, and replace work for seven days after receiving written notice that the said materials or work were condemned and rejected by the Bank under these Conditions or
v. has neglected or failed persistently to observe and perform all or any of the acts, matters or things by the Contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same.

Then and in any of the said cases, the Bank may, notwithstanding any previous waiver, after giving seven days' notice in writing to the Contractor, determine the Contract and liabilities of the Contractor, the whole of which shall continue in force fully as if the Contract had not been so determined, and as if the works subsequently executed had been executed by or on behalf of the Contractor and further, the Bank by his agents or servants may enter upon and take possession of the works and all plant, tools, scaffoldings, machinery and materials lying upon the Estate or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other Contractor or other person or persons to complete the works, and the Contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient, the Bank shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of fourteen days after receipt thereof by him, the Bank may sell the same by public auction, and give credit to the Contractor for the net amount realised. The Bank shall thereafter ascertain and certify in writing under his hand what (if anything) shall be due or payable to, or by the Bank, for the value of the said plant and materials so taken possession of by the Bank and the expense or loss which the Bank shall have been put to in procuring the works to be completed, and the amount, if any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Bank to the Contractor or by the Contractor to the Bank, as the case may be, and the decision of the Bank shall be final and conclusive between the parties.

32. **Termination of Contract by Contractor**

If payment of the amount payable by the Bank under certificate of the Bank's Engineer shall be in arrears and unpaid for thirty days after notice in writing requiring payment of the amount as aforesaid shall have been given by the Contractor to the Bank or if the Bank shall repudiate the Contract, or if the works be stopped for three months under the order of the Bank or by any injunction or other order of any Court of Law, then and in any of the said cases, the Contractor shall be at liberty to determine the Contract by notice in writing to the Bank and he shall be entitled to recover from the

Bank, payment for all works executed and for any loss he may sustain upon any plant or materials supplied or purchased or prepared for the purpose of the Contract.

In arriving at the amount of such payment, the net rates contained in the Contractor's original Tender shall be followed, or where the same may not apply, valuation shall be made in accordance with Clause 19 hereof.

33. **Certificates and Payments**

(a) The Contractor shall be paid by the Bank from time to time by instalments under Interim Certificate to be issued by the Bank on account of the works executed, work to the approximate value named in the Appendix as "**Value of work for Interim Certificates**" (or less at the reasonable discretion of the Bank) has been executed in accordance with this Contract. The Bank may, at his discretion, include in the Interim Certificate such amount as he may consider proper on account of materials delivered upon the site by the Contractor for use in the works. And when the works have been virtually completed and the Bank shall have certified in writing that they have been completed, the contractor shall be paid the balance amount by the Bank in accordance with the certificate to be issued by the Bank. **The Contractor shall be entitled to the release of the Bank guarantee towards Security Deposit in accordance with the Final certificate to be issued in writing by the Bank at the expiration of the period referred to as "the Defects Liability Period**" in the Appendix hereto from the date of Virtual Completion or as soon after the expiration of such period as the works shall have been finally completed and defects made good according to the true intent and meaning hereof, whichever shall last happen, provided always that the issue by the Bank of any certificate during the progress of the works at or after their completion shall not relieve the Contractor from his liability under Clause 2 and 22 nor relieve the Contractor of his inability in cases of fraud, dishonesty or fraudulent concealment relating to the works or materials or to any matter dealt within the Certificate, and in case of all defects and insufficiencies in the works or materials, which a reasonable examination would not have disclosed. No Certificate shall of itself be conclusive evidence that any works or materials, to which it relates, are in accordance with the Contract neither will the Contractor have a claim for any amounts which the Bank might have certified in any interim bill and paid by the Bank and which might subsequently be discovered as not payable and in this respect the Bank's decision shall be final and binding.

The Bank shall have power to withhold any Certificate if the works or any parts thereof are not being carried out to his satisfaction.

The Bank may by any Certificate make any correction in any previous certificate which shall have been issued by him.

Payments shall be made within the period named in the Appendix as "Period for honouring Certificates" after such Certificates have been delivered to the Bank.

The payment for the system will be made in INR and any dispute arising out of this contract will also be sorted out within the jurisdiction by Office from which contract is signed.

34. **Delayed Payment**

Any amounts payable by the Bank to the Contractor if not paid within the "Period for honouring Certificates" named in the Appendix, carry interest at the rate named in the Appendix as the "Rate of interest for delayed payment" from the date upon which such sum ought to have been paid by the Bank until the payment.

35. **Settlement of dispute by Arbitration**

All disputes and differences of any kind whatever arising out of or in connection with the contract or the carrying out of the works (whether during the progress of the works or after the completion and whether before or after the determination, abandonment or breach of the contract) shall be referred to and settled by the Bank who shall state its decision in writing. Such decision may be in the form of a final certificate or otherwise. The decision of the Bank with respect to any of the excepted matters shall be final and without appeal. But if either party is dissatisfied on any matter, the party may within 28 days after receiving notice of such decision give a written notice to the other party requiring that the matters in dispute be referred for Arbitration as per the procedure agreed upon herein. Such written notice shall specify the matters, which are in dispute or difference of which such written notice has been given. If both the parties agree a single arbitrator would be appointed for the purpose. In case no agreement could be reached on the appointment of single arbitrator, both the parties will nominate one person each as an arbitrator on their behalf. The two arbitrators nominated by the parties shall nominate one more person to act as third arbitrator.

The arbitrator or arbitrators, as the case may be, shall have power to open up, review and revise any certificate, opinion, decision, requisition or notice, save in regard to

the excepted matters, referred to in the preceding clause, and to determine all matters to dispute which shall be submitted to arbitration and of which notice shall have been given as aforesaid.

The arbitrator or arbitrators, as the case may be, shall make his or their award within one year (or such further extended time as may be decided by him or them as the case may be with the consent of the parties) from the date of entering on the reference. In case during the arbitration proceedings, the parties mutually settle or compromise their dispute or difference, on the parties filing their joint memorandum of the settlement or compromise, the arbitrator or the arbitrators, as the case may be, shall make an award in terms of such settlement or compromise.

Upon any such reference, the decision on the cost incidental to the reference and award respectively shall be in the discretion of the arbitrator or arbitrators, as the case may be, who may determine the amount thereof or direct the same to be taxed as between the party and party, and shall direct by whom and to whom and in what manner the same shall be borne and paid.

This submission shall be deemed to be a submission to arbitration within the meaning of the Indian Arbitration and Conciliation Act, 1996 or any statutory modification thereof.

The award of the arbitrator or arbitrators, as the case may be, shall be final and binding on the parties. It is agreed that the Contractor shall not delay the carrying out of the works by reason of any such matter, question or dispute being referred to arbitration, but shall proceed with the works with all due diligence and shall until the decision of the arbitrator or arbitrators is given, abide by the decision of the Bank. No award of the arbitrator or arbitrators, as the case may be, shall relieve the Contractor of his obligations to adhere strictly to the Bank's instructions with regard to the actual carrying out of the works. The Bank and the Contractor hereby also agree that arbitration under this clause shall be a condition precedent to any right of action under the contract.

The venue of arbitration shall be the centre/city in which the work is being executed.

36. **Right of technical scrutiny of final bill**

The Bank shall have a right to cause a technical examination of the works and the final bill of the Contractor including all supporting vouchers, abstracts etc. to be made at the time of payment of the final bill. If as a result of this examination or otherwise, any sum is found to have been overpaid or over-certified, it shall be lawful for the Bank to recover the sum.

37. **Bank entitled to recover compensation paid to workmen**

If, for any reason, the Bank is obliged, by virtue of the provision of the Employees' Compensation Act,1923, or any statutory modifications or re-enactment thereof to pay compensation to a workman employed by the Contractor in execution of the works, the Bank shall be entitled to recover from the Contractor the amount of compensation so paid, and without prejudice to rights of the Bank under the said Act. The Bank shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by the Bank to the Contractor under this Contract or otherwise. The Bank shall not be bound to contest any claim made against it under the said Act, except on the written request of the Contractor and upon his giving to the Bank full security to the satisfaction of the Bank for all costs for which the Bank might become liable in consequence of contesting such claim.

38. **Abandonment of Works**

If at any time after acceptance of the tender, the Bank shall, for any reasons whatsoever, not require the whole or any part of the works to be carried out, the Bank shall give notice in writing to the Contractor who shall have no claim to any payment of compensation or otherwise whatsoever on account of any profit or advantage which he might have derived from the execution of the whole works.

39. **Return of surplus materials**

Notwithstanding anything contained to the contrary in any or all the Clauses of this Contract, where any material for the execution of the Contract is procured with the assistance of the Bank by purchases made under orders or permits or licenses issued by Government, the Contractor shall hold the said materials economically and solely for the purpose of the Contract and not dispose of them without the prior written permission of the Bank and return it to the Bank, if required by the Bank, at the price to be determined by the Bank having due regard to the condition of the materials, the price to be determined not to exceed the purchase price thereof inclusive of sales

tax, Goods and Services Tax (GST), octroi and other such levies paid by the Contractor in respect thereof. In the event of breach of the aforesaid condition, the Contractor shall, in addition to being liable to action for contravention of the terms of licenses or permits and/or criminal breach of trust, be liable to the Bank for all moneys, advantages or profits resulting, or which in the usual courses would have resulted to him, by reason of such breach.

40. **Right of Bank to terminate Contract in the event of death of Contractor, if individual**

Without prejudice to any of the rights or remedies under this Contract, if the Contractor, being an individual, dies, the Bank shall have the option of terminating the Contract without incurring any liability for such termination.

41. **Accident Reports**

In the event of accidents of any kind, all required reports (accidental or otherwise) must be submitted without delay. The Contractor shall ensure that these reports are shared with the Bank simultaneously with their transmission to any other external parties or stakeholders.

42. **Prevention of Sexual Harassment at workplace:**

i. The contractor shall be solely responsible for full compliance with the provisions of "the Sexual Harassment of women at workplace (Prevention, Prohibition and Redressal) Act, 2013". 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 contractor/Agency or Local Complaints Committee as the case may be and the contractor Agency shall ensure appropriate action under the said Act in respect of the Complaint.
ii. Any complaint of sexual harassment from any aggrieved employee of the Service Provider against any employee of the Bank or any employee of any other firm working in the Bank shall be taken cognizance of by the Regional Complaints Committee constituted by the Bank.
iii. The contractor shall be responsible for any monetary compensation that may need to be paid in case the incident involves the employees of the contractor, for instance any monetary relief to Bank's employee or other firm's employee, if sexual violence by the employee of the contractor is proved.
iv. The contractor shall be responsible for educating its employees about prevention of sexual harassment at workplace and related issues.

v. The contractor shall provide a complete and updated list of its employees who are deployed within the Bank's premises.

43. Non – Disclosure clause:

i. The contractor shall not disclose directly or indirectly any information, materials and details of the Bank's infrastructure/systems/equipment etc., which may come to the possession or knowledge of the Service Provider and /or the DB Developer during the course of discharging their contractual obligations in connection with this agreement, to any third party and shall at all times hold the same in strictest confidence. The contractor shall treat the details of the contract as private and confidential, except to the extent necessary to carry out the obligations under it or comply with applicable laws. The contractor shall not publish, permit to be published, or disclose any particulars of the works in any trade or technical paper or elsewhere without the previous written consent of the Second Party. Failure to observe the above shall be treated as breach of contract on the part of the contractor, as the case may be, and the Second Party shall be entitled to claim damages and pursue legal remedies.

ii. The contractor shall take all appropriate action with respect to its employees to ensure that the obligations of non-disclosure of confidential information under this agreement are fully satisfied.

Without prejudice to the formal Contract Agreement, all confidentiality and non-disclosure obligations binding the Contractor under this tender shall survive the expiration, completion, or termination of this Agreement for any reason whatsoever.

44. **Program chart/ Progress report:**

The contractor shall submit a suitable progress report/chart for completion of different stages of work, to ensure completion of work within allotted period. Such program should be submitted within 14 days of the award of work. All suitable modification made by the Bank must be incorporated in the progress chart. If asked the contractor shall submit reports showing current equipment delivery dates and anticipated completion dates for individual units and groups of units.

45. **Statutory Approvals:**

The work shall be executed by the Contractor as per pre-NOC & local body approval received from respective statutory authorities such as Pollution Control Board(PCB) / Chief Electrical Inspector (CEI) / Local fire Authority / Local Municipal Authority etc/

Local statutory Authority. The contractor shall be responsible to understand all the provisions made in all such approvals accorded. In case of any requirements of any additional work/ modification thereof, the same shall be brought to the notice of Engineer in charge well in advance. The work has to be executed adhering to the norms of local body authorities. The contractor shall assist in preparation of documents, reports etc. as required during & after completion of work for obtaining further approvals & final completion & occupancy certificate from the respective authorities. The contractor shall also be responsible to attend meetings & do all liasoning works with respective authorities. No extra/additional payment will be made on this account. However, the fee paid to the local bodies / authorities, if any, shall be borne by the Bank.

46. **Debarment/Disqualification:**

A **contractor is liable for debarment / disqualification** from bidding on the following grounds:

i. If it is determined that the contractor has committed the following acts or omissions in contravention of the code of integrity:

a.

I. making offer, solicitation or acceptance of bribe, reward or gift or any material benefit, either directly or indirectly, in exchange for an unfair advantage in the procurement process or to otherwise influence the procurement process.

II. any omission or misrepresentation that may mislead or attempt to mislead so that financial or other benefit may be obtained, or an obligation avoided.

III. any collusion, bid rigging or anticompetitive behavior that may impair the transparency, fairness, and the progress of the procurement process.

IV. improper use of information provided by the procuring entity to the contractor with an intent to gain unfair advantage in the procurement process or for personal gain.

V. any financial or business transactions between the contractor and any official of the procuring entity related to tender or execution process of contract: which can affect the decision of the procuring entity directly or indirectly.

VI. any coercion or any threat to impair or harm, directly or indirectly, any party or its property to influence the procurement process.

VII. obstruction of any investigation or auditing of a procurement process.

VIII. making false declaration or providing false information for participation in a tender process or to secure a contract.

b. failed to disclose conflict of interest.

c. failed to disclose any previous transgressions made in respect of the provisions of sub-clause (i) with any public institution / entity in India or any other country during the last three years or of being debarred by any public procuring institution / entity.

ii. For any actions or omissions by the contractor other than violation of code of integrity, which in the opinion of the Bank warrants debarment, for the reasons like supply of sub-standard material, non-supply of material, abandonment of works, sub-standard quality of works, failure to abide terms of the tender etc.

iii. If the contractor has been convicted of an offence— (a) under the Prevention of Corruption Act, 1988; or (b) the Indian Penal Code or any other law for the time being in force, for causing any loss of life or property or causing a threat to public health as part of execution of a public procurement contract.

47. **Packing and dispatch:** The equipment shall be properly and securely packed in boxes suitable for multiple handling and transportation under Indian conditions. All equipment/ components shall be delivered on Duty Delivery Paid (DDP) basis in the Bank's Office Building.

Section V
Special Conditions of Contract

1. **Time for Completion:**

i. Time allowed for carrying out the work as mentioned in the Memorandum shall be strictly observed by the contractor and it shall be reckoned from the 14th day after written order to commence the work is issued. The work shall throughout the stipulated period of the Contract be proceeded with all due diligence and if the contractor fails to complete the work within the specified period, he shall be liable to pay compensation as defined in clause 28 of the Conditions of Contract. The contractor shall before commence the work prepare a detailed work programme which shall be approved by the Bank.

ii. The contractor shall not be entitled to any compensation for any loss suffered by him on account of delays in commencing or executing of the work, whatever the cause of delays may be, including delays arising out of modifications to the work entrusted to him or in any sub-contract connected therewith or delays in awarding contracts for other trades of the project or in commencement or completion of such works or in procuring Government controlled or other building materials or in obtaining water and power connections for construction purposes or for any other reason whatsoever and the Bank shall not be liable for any claim in respect thereof. The Bank does not accept liability for any sum besides the tender amount, subject to such variations as are provided for herein.

iii. The tentative schedule for work shall be –

(a)	Submission of layout drawing, programme chart etc	1	Week
(b)	Approval of layout drawings by Bank	1	Week
(c)	Factory testing and Delivery of materials at site	10	Weeks
(d)	Dismantling of existing first chiller and Installation, commissioning of 1st new Chiller	1	Weeks
(e)	Dismantling of existing 2nd Chiller and Installation, commissioning of 2nd new Chiller	1	Weeks
(f)	Installation and commissioning of 3rd new Chiller	1	Weeks

(g)	final testing and handing over of Installed Chillers with complete training	1	Weeks
	Total Completion Period in weeks	16	(Total from (a) to (g))

2. **Security Deposit:**

i. **Retention Money:** The Retention Money @ 5% will be recovered from each on-account bill till the total recovery amounts to 5% of the contract value as stipulated in the tender document. Such amount shall be released to the contractor after completion of the Defect Liability Period (DLP), without any interest. Successful bidder may also submit the Bank Guarantee (BG) in lieu of retention money, valid till end of DLP. The format of BG mentioned at Annexure X.

ii. **Performance Bank Guarantee (PBG):** In addition to the Retention Money as specified above, on award of the work, the successful contractor shall furnish an amount equal to **5% (Five percent) of the contract value in the form of a Bank Guarantee (BG) f**rom any scheduled Bank as per Annexure X towards entire period of currency of Contract (work completion+DLP+60 days) for due fulfilment of the Contractual obligations by the contractor. This Performance Bank Guarantee (PBG) shall be initially valid for a period of contract duration plus 60 days and shall be suitably extended till DLP of the work plus 60 days in case of extension of contract period. Such Performance Bank Guarantee (PBG) should be submitted to the Bank within 14 days of the issue of work order. **The Performance Bank Guarantee (PBG) may be submitted as an ePBG, a physical copy, or via NEFT for the equivalent amount.**

iii. Submission of Performance Bank Guarantee shall be ensured as stipulated in the tender. In case of delay in unavoidable circumstances, charge for delay in submission of Performance Bank Guarantee shall be recovered from the bills of the contractor at Bank rate.

iv. The Bank reserves the right to enforce the Bank Guarantee in case of unsatisfactory performance of the terms, conditions of DLP set out in the tender at any time during the DLP period.

3. **Payment Terms: The following terms of payment, subject to statutory deductions, shall be applicable to this contract:**

i. 60% of the quoted rate on pro-rata basis against delivery of materials (as per BOQ), checking the same and on submission of the following documents:

(a) Bank guarantee towards security deposit

(b) Manufacturer's Inspection and Test Certificates

(c) Contractor's Certificate that all components, parts, sub systems, consumables etc. for successful installation, commissioning and testing of the systems including maintenance have been received at site in good condition and if any shortfall is noticed during installation, commissioning and testing they will be supplied free to the Bank.

(d) Policies of insurance covering all the risk as mentioned in tender.

ii. 30% of the quoted rates against erection, testing, commissioning, and handing over of the system to the Bank. (Note-10% of quoted rate may be released as RA bill on successful commissioning and handing over of each chiller unit with associated pump in phased manner)

iii. 10% of the quoted rates after successful commissioning and testing of the entire system as well as on receiving confirmation/declaration from the OEMs about the installation, testing and commissioning and system configuration have been executed as per OEM standard practice/ Guidelines.

iv. In addition, I.T. surcharge, TDS and any other statutory tax as per the Government rules and RMD @5% shall be deducted from all the Running Account bills.

4. Performance Bank Guarantee for Comprehensive Annual Maintenance Contract (CAMC- PBG): To ensure due fulfilment of the terms and obligations of the AMC period of total **14 years** (after completion of defect liability period) by the contractor, the contractor, **one month prior** to the end of defect liability period, shall submit a Bank guarantee as security deposit for an amount equal **to 5% of the value of work (capital work) executed as per contract**, which shall remain valid till **fourteen years of AMC** period from the day of completion of defect liability period for due fulfillment of contractual obligations against CAMC. **The PBG (as mentioned in Section V clause 2.ii. above) shall be released only after submission of this Bank Guarantee.**

In case of non-receipt of this renewed BG prior to the expiry of earlier PBG, the Bank shall have the right to invoke the PBG held with the Bank.

Note: The AMCs in the Bank are co-terminus with the financial year i.e., April to March, therefore, first and last AMCs may be for a period of less or more than a year.

5. Defect Liability Period- The entire system shall be guaranteed against all type of defects during the currency of defect liability period which shall extend till start from the day of virtual completion and ends **till 1 years from the date of virtual completion of work**. During this period the firms needs to attend the manufacturing/installation etc related defect and rectify it without any additional cost to Bank.

6A. Factory inspection /Cost of Inspection: The Chillers may be inspected at factory premises by the Bank Engineers at the discretion of the Bank. The contractor shall provide, without any extra charge, all materials, tools, labour and assistance of every kind which the Banks may demand of him for any test/inspection and examination which he shall require to be so made on the contractor 's premises and shall bear and pay all costs attendant thereon. However, cost of traveling, boarding and lodging of The Bank (s) to the site of inspection shall be borne by the Bank.

6B. Method of Testing:

i. The system shall be tested in the manufacturer's factory/ contractor's works to ascertain the compliance of offered specifications.
ii. Before offering the system to the Bank for testing, the firm shall carryout the various tests mentioned in the tender in their factory and forward the copy of those test reports to the Bank along with invitation for Bank's testing. All the testing facilities should be available at the time of testing of equipment by the Banks. Satisfactory performance at this stage meeting the prescribed limits will only be construed as acceptance of the system. System, which falls short of the prescribed specifications, is liable to be rejected.
iii. Further, the system shall be tested at the site for proper functioning and performance.
iv. The above will, however, not in any way absolve the contractor of his responsibility about proper performance of the system / components after installation and commissioning at the designated place.

6C. Inspector Authority to certify performance: The Bank shall have the power:

i. To certify that the system or any portion thereof are not in accordance with the contract owing to adoption of any unsatisfactory method of manufacture.

ii. To reject any equipment or parts submitted as not being in accordance with the specification;
iii. To reject the whole of the equipment tendered for inspection, if after inspection of such portion thereof as he may in his discretion think fit, he is satisfied that the same is unsatisfactory; and
iv. To mark the rejected equipment or parts with a rejection mark so that it may easily be identified if re-submitted.

The Bank decision as regards the rejection shall be final and binding on the contractor subject to contractor's appeal.

6D. Consequence of rejection: If on the equipment/material or its part thereof, being rejected by the Bank, the contractor has to rectify/replace the same at his own risk and cost for which no additional time shall be granted.

7. As the work is to be carried out in operational building, contractor is advised to keep at least one number of chiller (old/ new) always operational. Any necessary modification or material required for this arrangement shall be provided by the contractor at no additional cost. Time is the essence of the contract considering the requirement of AC plant on the onset of summer season from mid of March. Hence contractor is advised to complete it within in the permissible time only.
8. Necessary training and operational manual is to be provided by the contractor to the plant operators (at least for one week) for the subsequent operation of chillers.

Section (VI) - Appendix Hereinbefore Referred To

Ref to Clauses in General condition of contract hereinbefore referred to

1	Defects Liability Period	As per clause 5 of section V
2	Period of Final Measurement	3 months
3	Date of Commencement	14th day from the date of issue work order
4	Liquidated damages at the rate of	0.25% of contract value per week
5	Minimum value of works for interim certificates/running account bill	25 Lakhs*
6	Period for honouring certificates of payment	One month for interim bills and 3 months for final bill.
7	Interest for delayed payment	As per Bank rate

*Payment shall be made as per clause 3 of Section V Part I of tender

Ref to clauses in special condition of contract

1	Contract Period/Time of Completion	As per clause 1 of section V
2	Retention Money	As per clause 2(i) of section V
2	Security Deposit / PBG during execution of the work	As per clause 2(ii) of section V
4	CAMC period PBG	As per clause 4 of section V

Section-VII
Safety Code (A & B)

A. GENERAL SAFETY

i. First aid appliances including adequate supply of sterilized dressings and cotton wool shall be provided in a readily accessible place.

ii. An injured person shall be taken to a public hospital without loss of time, in cases where the injury necessitates hospitalization.

iii. Suitable and strong scaffolds should be provided for workmen for all work that cannot safely be done from ground.

iv. No portable single ladder shall be over 8 meters in length. The width between the side rails shall not be less than 30 cm (clear) and the distance between two adjacent rungs shall not be more than 30 cm. When a ladder is used an extra mazdoor shall be engaged for holding the ladder.

v. The excavated material shall not be placed within 1.5 meters of the edge of the trench or half of the depth of trench, whichever is more. All trenches and excavations shall be provided with necessary fencing and lighting.

vi. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of persons or materials by providing suitable fencing or railing; minimum height shall be one metre.

vii. No floor, roof or other part of the structure shall be so overloaded with debris of materials as to render it unsafe.

viii. Workers employed on mixing and handling material such as asphalt, cement mortar or concrete and lime mortar shall be provided with protective footwear and rubber hand-gloves.

ix. Those engaged in welding works shall be provided with welder's protective eye-shields and gloves.

x. i) No paint containing lead or lead products shall be used except in the forms of paste or readymade paint.

ii) Suitable face masks shall be supplied for use by the workers when the paint is applied in the form of spray or surface having lead paint dry rubbed and scrapped.

xi. Overalls shall be supplied by the Bidder to the painters and adequate facilities shall be provided to enable the working painters to wash during the period of cessation of work.

xii. Hoisting machines and tackle used in the works, including their attachments, anchorage and support shall be in perfect condition.

xiii. The ropes sued in hoisting or lowering material or a means of suspension shall be of durable quality and adequate strength and free from defects.

xiv. The bidder shall provide all the safety gadgets to the workers for carrying out the work as per statutory norms.

xv. During the work execution necessary fire safety measures shall also be taken.

B. FIRE AND ELECTRICAL SAFETY

1. All the temporary electrical power for carrying out various services at site such as cutting / drilling machine shall be provided through properly rated earth leakage protection devices (ELCB).
2. Only ISI marked 3 pin plug and other appliances and equipment's shall be used. Electrical power cables/wires used shall be properly rated and joints should be avoided. If there, the joint should be proper and insulated.
3. All electrical appliances i.e. welding, drilling, cutting machine, etc. shall be safely and securely earthed to prevent leakage current while in operation. Before commencing the welding work for the first time on any day, fire section shall be informed and only after the site inspection by the Fire officers/Personnel, work shall be started.
4. Fire buckets filled with clean dry sand and ready for immediate use for extinguishing fires, in addition to fire extinguishers suitable for dealing with fires, shall be conspicuously marked and kept at site at convenient location.
5. Used paint drums shall be stored in specified store only after closing them properly.
6. None of the fire extinguishers shall be removed/shifted from its designated location.
7. Personal protective equipment such as safety shoes, hand gloves, welder's mask, ear plugs, etc. as applicable depending upon the requirement of the work, shall be used by the workmen to prevent occupational health hazards.
8. None of the passages near lift lobby and staircases shall be used for stacking/ dumping any kind of materials/waste
9. Power supply shall be switched off from the Mains when equipment is not in use.
10. Wood-shavings, saw-dust or any debris generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner.
11. The work site shall be properly illuminated during the work.
12. All the electrical works should be carried out by licensed/ authorized electricians/ wiremen
13. Portable battery-operated lights may be used at work site to avoid laying of temporary wire for lights.
14. Necessary barricading and signage boards of good quality shall be fixed at conspicuous locations at the work site.
15. Aluminium / steel ladders should have proper rubber insulation at the base and wherever required, these ladders shall be kept on electrical insulating safe rubber mats.
16. Any debris generated from the work shall be collected on daily basis, removed from site and stored at the designated place in proper manner

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Section VIII
Scope of Work

1. Background: The Bank's Office Building at Kanpur comprises of two buildings viz. Main office building (Basement +2nd Floor) and Additional office building(G+2) comprises in same office premises. The said two buildings are required to be centrally air-conditioned through a plant room located adjacent to Main building in office premises. The main chiller pipeline is divided into two branches after the secondary pumps.

Currently the system consists of 2x250 (multi-compressor) tonnage chillers; 2x400 tonnage cooling towers; three (2 Working + 1 Standby) chillers pumps(30 HP) and three (2W+1S) condenser pumps(40 HP). Considering the similar heat load of **500 TR approximately**, it is planned to install 3x250 TR chillers (2W+1S) for the system with one additional chiller as a backup chiller unit.

2. Requirement: Scheme for air conditioning

It is proposed to install 3 nos. new 250TR (min) water cooled multi /single screw chiller with microprocessor-based control panel to cater to the above refrigeration load. **Two chiller machine shall be working with one unit kept in standby mode**. The chiller machines shall work in conjunction with 3 Nos. condenser water pump sets 3 Nos. chilled water pump set 2 Nos. induced draft cooling towers, MS C class condenser water and chilled water piping duly insulated and aluminium cladded with fittings and valves, nitrile rubber insulation etc. Power shall be supplied to the chiller at 415 volts — 3 phase - 50 Hz.

The work covers replacement of following equipment- as detailed in the technical specifications to achieve proper air conditioning of the office building –

a) Replacement of 2x250 TR chillers with 3x250TR(min) chillers(2W+1S) water cooled (single/multi) screw compressors

b) Replacement of existing 3 number of chilled water pumps (30 HP)

c) Replacement of existing 3 number of condenser water pumps (40 HP).

d) Modification in pipeline for installation of above equipment. It includes proving of required flanges and dummy plates etc.

e) Providing and installation work stations (with hardware/software, antivirus and other drivers etc. updated time to time) and associated control/communication related cabling in control room for viewing of faults parameters of each of the chiller.

f) The work has to be carried out in sequential manner so that at least one chiller (new/old) remains always operational for running the plant for the building. Any associated additional equipment /material/labor etc., if required, for this activity shall be arranged by the contractor without any additional cost.

g) Any necessary civil work like foundation repairs/making holes in walls etc. shall be carried out by the bank on receiving layout /plan/drawings/site markings from the vendor.

h) Electrical power cabling work or switches related work on existing LT panel shall be carried out by the Bank wherever required.

Note: **Existing cooling towers are to be retained.**

- The equipment and systems proposed to be supplied shall be latest technical specifications, energy efficiency eco-friendly air conditioning system focussed on sustainability, scalability and minimizing environmental impact using eco-friendly refrigerant. Any part not mentioned in this document but essential for operation of the system as a whole shall be included in the scope of work and offered as a part of the complete package. The tenderer shall clearly indicate during **Pre-bid meeting** such additional equipment/components if any with all technical details.

- The total responsibility for the maintenance of individual equipment and the system as a whole rests with the contractor as regards the ratings, performance, reliable and trouble-free working. The tenderer shall visit the premises and ascertain site conditions, existing structures and other obstructions if any. The work has to be carried out in office building without causing inconvenience to the normal working of the Bank. The tenderer will consider suitably for these exigencies in his offer and no extra claims will be entertained later on these grounds.

- The make of individual equipment covered under these specifications shall only be from among those indicated in the **approved lists or equivalent makes and models** in the tender. The tenderer shall clearly indicate the make of various equipment or components offered by him. In case of non-availability of the brand indicated by the

contractor, he shall be allowed to use one of the alternative brands indicated in the tender subject to submission of documentary evidence of non-availability of such equipment's.

- The Air conditioning System and the workstation (PC) shall be provided with required operating system, software, hardware and latest anti-virus software of reputed brand (to be decided with the approval of the Bank) and any other required software. All the original licensed copies of the software(s) shall be kept in the custody of the Bank.

3. Technical Specifications:

3.1 General These specifications are intended to cover the complete Design, Installation, Testing, commissioning of the 3 no's of water cooled Chillers of minimum capacity 250 TR each with all materials in accordance with the drawings and specifications.

3.1.1 **Applicable codes**

Chiller Performance	AHRI 550 / 590 -2023
Heat Exchanger Design	Standard compliance with ASME Section VIII Div. I and TEMA C.
Insulation	IS-14164 or ASTMC-680
Vibration	IS 12075 - 1987
Painting	Paint as per RAL 7035
Piping	SA 106 Gr. B
Gasket	Refrigerant side – NAM AF 159
	Water side – NAM AF 120
ASHRAE Compliance	ASHRAE 15 for safety code for mechanical refrigeration
	ASHRAE 147 for refrigerant leaks, recovery, and handling and storage Requirements.
Noise	AHRI 575-2017

*The manufactures should consider the codes as updated till date.

3.1.2 Staging area

The Bank shall designate an equipment storage area for use by the Contractor. The Contractor shall restrict usage to area designated and shall notify Client prior to storing of any large equipment which will impose heavy concentrated loading on floor area. Contractor shall not store such equipment until approval is received.

Design Requirements

3.2 Specification for chiller package

Water cooled packaged multi screw chillers of specified design conditions as-

IKW/TR (max) – 0.66 with VFD
NPLV/TR (maximum) <= 0.39 KW/TR
COP at AHRI conditions (minimum) >= 6.2
IPLV shall be <= 0.37 KW/TR

Note: Manufacturer's AHRI Certified Selection Performance Sheet to be submitted to evaluate and verify the specified performance parameters.

And comprising of the following, with a hermetic/ semi-hermetic screw compressors suitable for **R134A or ozone eco-friendly green gas.**

- Semi-hermetic single / multi screw compressors with **Variable frequency drive**.
- **ECBC compliant, min 4-star BEE rated, ASME stamped, AHRI 550/590 certified**
- Noise level-AHRI 575-2017. The sound pressure levels for the complete unit will not exceed 80 dB for single compressor circuit and 85 dB for dual compressor circuit at 1 Meter distance in free field.
- provision of rapid cooling with feasibility of Two-minute stop-to-start and five-minute start-to-start anti-recycle time ensures tight chilled water temperature control in constant load applications.
- Water cooled shell and tube type condenser
- Water cooled chiller with all accessories
- Auto capacity control system
- Unit mounted Incomer MCCB of suitable capacity
- Unit mounted VFD starter with auxiliary contacts
- Microprocessor based unit mounted control panel
- Interconnecting refrigerant piping and valves
- Controls comprising expansion valve, HP/LP cutouts, cooling and anti-freeze thermostats etc.
- Unit complete with refrigerant gas and compressor oil etc.
- Accessories like refrigerant drier with isolating valves, strainer, safety relief valves etc.
- Interconnecting copper piping, power wiring from starter to motor of required size, control wiring and earthing
- Base frame with anti-vibration mounts with numbers as per OEM standards
- Insulation for the chiller and suction line
- Initial charge of oil and refrigerant
- Any software required for proper functioning
- Supply, installation, testing and commissioning of chiller system Manager for three chillers with all sensors, software, PC with 32" LED screen 64-bit, unlimited user without additional license, associated cabling on cable trays, network cabling for viewing and monitoring purpose.

- The chillers, condenser pumps/chiller pumps shall be connected to the plant manager for monitoring and viewing purpose.
- Any other item required for completion of the work and not mentioned herein shall be under the scope of contract and needs to be carried out by the contractor without any additional cost to the Bank.

Design Parameters-

Chilling Unit

(a)	Screw Chilling Unit	CFC and HCFC free refringent
(b)	Suction temperature	As per Manufacturer standard
(c)	Condensing temperature	Design to suit duty of Chilling Unit

Chiller

(a)	Temperature of chilled water entering the chiller (^{0}C)	12.2
(b)	Temperature of chilled water leaving the chiller (^{0}C)	6.67
(c)	Fouling factor of chiller (British unit)	0.0001
(d)	Chiller water flow (LPM)	2800
(d)	Actual Capacity of chiller	250TR
(e)	Max. power consumption at 100% load	0.66 IKW/TR
(f)	Refrigerant	R-134A or latest eco-friendly refrigerant

Condenser

(a)	Type	Shell and tube
(b)	Water flow LPM	3600
(c)	Entering water temperature ^{0}C	31.1
(d)	Leaving water temperature ^{0}C	36.6
(e)	Fouling Factor of condenser (British unit)	0.0002

Piping

(a)	Maximum flow velocity	2.5 m/s
(b)	Maximum friction	5m/100 m run

3.2.1 **Chiller Components**

The chiller will have the following components:

a) *Compressor*

- Compressor should be screw type. There should be single or multi compressors in each chiller unit.
- Casing design will ensure major wearing parts, main bearings, and thrust bearings are accessible for maintenance and replacement.
- The compressor will be pressure tested using dry nitrogen at a minimum pressure of 18 kg/cm2.
- A temperature sensing element such as thermistors will be provided for each phase of the motor windings. These will provide independent inputs to the controller to stop the compressor if excessive temperature is sensed in any of the windings.
- Compressor will be complete with all standard accessories such as pressure transducers, temperature sensors. Compressor will be provided with provision for fitting eye bolts for lifting of the compressor with the help of crane.
- Butterfly valve will be provided on suction line whereas shut valve to be provided on discharge line for isolation purpose.
- Each compressor shall be provided with protection against high refrigerant pressure and low refrigerant pressure, anti-cycle timer, indication lamps, fault alarm etc. through microprocessor controller.
- It shall be fitted with suction and discharge stop valves, permitting full servicing facilities, built in safety controls, filters, release valves, control valve and other standard accessories.

i) *Compressor Motor*

- Motor for compressor will be semi hermetic or open drive, refrigerant cooled, squirrel cage induction type capable of continuous operation. It will be fully protected against abnormal conditions. The motor shall be suction cooled.
- Copper winding
- Motor will be equipped with PTC type winding temperature sensors

ii) *Motor Starter and protections*

- VFD type
- Each starter is equipped with control transformer with primary voltage of 230V AC to supply power to the control panels, each starter will include the following protections:

1. Single phasing and phase reversal
2. Overload
3. over / under voltage
4. Voltage unbalance
5. Short circuit

6. Winding temperature high

- SFU will be provided in each circuit for isolation and short circuit protection.

iii) *<u>Specifications of VFD if used as a motor starter and capacity controller.</u>*

- The main motor starter will be a Variable Frequency Drive supplied by the chiller manufacturer and will be unit mounted with IP 54 enclosure designed for front access.

- The chiller will be supplied with Variable Frequency Drive housed in an IP 54 enclosure with fuse and disconnect. MCCB of suitable ratings are to be provided inside the cabinet only. The VFD will be air cooled and will not need any external cooling such as water or refrigerant.

- The VFD will ensure smooth starting of the compressor motor such that starting current does not exceed Full Load Current of the motor.

- The VFD will ensure that power factor is maintained > 0, 95 at all times. The VFD will be with built in filters for controlling RFI emission and built-in chokes to suppress harmonics upto THD < 5% and THiD < 30%.

- The VFD should have provision to communicate with BMS over MODBUS protocol.

- The VFD shall be a dedicated HVAC engineered design supporting HVAC applications. The VFD and all its options shall be Factory built and Factory tested as a Single unit and not at site.

- The VFD shall allow the motor to produce full rated power at rated motor voltage, current, and speed without using the motor's service factor. The VFD shall be using Advanced PWM control methodology for high motor performance. The motor current shall closely approximate a sine wave.

- The VFD shall have a dual 5% impedance DC link reactor (Harmonic filters) on the positive and negative rails of the DC bus to minimize power line harmonics and protect the VFD from power line transients. The chokes shall be non-saturating.

- The VFD should allow switching at the output side of Drive happening due to operation of Switches / contactor / isolator without causing tripping and shall be capable of withstanding Output switching safely. The VFD should not require interlocks for Switches on Output side for its safety.

- A real-time clock shall be an integral part of the VFD. All VFD faults shall be time stamped to support troubleshooting.

- The VFD shall be able to store load profile data to assist in analyzing the system demand and energy consumption over time. There shall be a KWH counter available to record the Energy consumption of the equipment.

- The VFD shall have 45°C Ambient temperature rating at full speed, full load operation with continuous drive rated output current without any de-rating. Relative Humidity Rating shall be 0 to 95%, non-condensing.

- The VFD should have a dedicated Fire mode operation, wherein the Fan Speed in case of Fire operation can be programmed. The VFD should be capable of running in Fire Mode, by passing all programmed parameters and set points to keep the Ventilation system running until the Power Supply is shut off.

iv) *Evaporator and Condenser*

- Evaporator and condenser will be of shell-and-tube type, designed, constructed and tested generally in accordance with requirements of the ASME Sec. VIII Div. 1 for Unfired Pressure Vessels or fabricated out of 8 mm/10 mm thick steel plate.

- Intermediate tube supports will be provided at an appropriate distance.

- The end covers will be of appropriate size with the water nozzles being suitable for flanged / Victaulic connections. Victaulic couplings will be supplied by user. In case flanged connections are provided for the water nozzles, then the manufacturer will provide the mating flanges.

v) *Evaporator*

- Each unit will have flooded type evaporator with refrigerant on shell side and water on tube side.

- Tubes will be enhanced externally as well as internally for maximum heat transfer. Tube ends will be expanded into grooves in tubes sheets and sealed with Loctite or equal sealer to prevent leakage of refrigerant gas. Tubes will be individually replaceable.

- Factory mounted and wired pressure differential switches will be provided across water nozzles to act as flow switches and prevent unit operation with no / low flow.

- Reseating type spring loaded pressure relief valves according to ASHRAE-15 safety code will be furnished.

- All joints and seams will be carefully sealed to form a vapor barrier. Insulation will not be painted.

vi) *Condenser*

- Each unit will have 1 No. condenser with refrigerant on shell side and water on tube side.

- Tubes will be enhanced externally as well as internally for maximum heat transfer. Tube ends will be expanded into grooves in tubes sheets and sealed with Loctite

or equal sealer to prevent leakage of refrigerant gas. Tubes will be individually replaceable.

- The water heads will be suitable for min 2 pass operation.
- The design pressure on water side will be 10.3 Bar. The water side will be tested at a hydrostatic pressure of 13.7 kg/cm^2. Vents and drains will be provided on the water boxes and fitted with plugs.
- The design pressure on refrigerant side will be 16 Bar. The refrigerant side will be tested at a pneumatic pressure of 17.9 kg/cm^2.
- Isolation valves and sufficient volume will be provided to hold the full refrigerant charge in the condenser during servicing / long standby.
- Factory mounted and wired pressure differential switch will be provided across water nozzles to act as flow switches and prevent unit operation with no / low flow.
- Reseating type spring loaded pressure relief valves according to ASHRAE-15 safety code will be furnished. The condenser will be provided with dual relief valves equipped with a transfer valve so that one valve can be removed for testing or replacement without loss of refrigerant or removal of refrigerant from the vessel.

vii) *Expansion Valve and Refrigerant Piping*

- Refrigerant flow to the evaporator will be controlled by one or multiple self-metering and adjustable electronic expansion valves Expansion device will allow simple control that quickly reacts to load variations and ensures precise refrigerant flow to the evaporator. Fixed orifice devices or float controls with hot gas bypass are not acceptable.
- The refrigerant circuit will be equipped with all the necessary components in order to ensure proper operation of the unit such as filter drier, liquid sight glass, shut-off valve, etc.
- The piping will include a factory insulated suction line with 19 mm thick nitrile rubber insulation.

viii) *Microprocessor Based Controller*

- Each chiller unit will be with microprocessor control centre in a lockable enclosure, factory mounted, wired and tested. The control panel will include touch screen graphic display, showing all system parameters in English Language with numeric data in English (FPS / SI units).
- Digital programming of essential set points through a touchscreen panel will includes entering and leaving chilled water temperature and condensing water temperature, percent loading, pull down demand limiting, seven-day time clock for

starting and stopping chiller and remote reset temperature range. The chiller package will have proactive micro-computer panel with open protocol (Modbus) suitable for hook up to local BMS.

- All safety and cycling shutdowns will be annunciated through the graphic display and consists of daytime, clause of shutdown, type of restart required. Safety shutdown list is given below. It includes high oil pressure, high compressor discharge temperature, low evaporator pressure, motor controller fault and sensor malfunctions. Cycling shutdowns includes low water temperature, chilled /condenser water flow interruption, power fault, internal time lock and entire cycle.

A. Data available on display:

a. Entering and leaving chilled water temperatures
b. Entering and leaving condenser water temperatures
c. Evaporator saturated refrigerant pressure
d. Condenser saturated refrigerant pressure
e. Net oil pressure
f. Percentage of rated load amperage
g. Suction pressure
h. Discharge pressure
i. Oil feed pressure
j. Suction temperature
k. Discharge temperature
l. Oil feed temperature
m. Suction superheat
n. Discharge superheat
o. Evaporator saturated refrigerant temperature
p. Condenser saturated refrigerant temperature
q. Any other as per OEM recommendation

B. Safeties: Following safeties are directly sensed by the controller and acted upon

a. High and low discharge pressure
b. Low evaporator pressure
c. High discharge temperature
d. No evaporator or condenser water flow
e. High oil feed temperature
f. Low oil feed temperature
g. Low oil differential pressure
h. High current
i. Low current
j. Low suction pressure
k. Any other as per OEM recommendation
l. Any other as per OEM recommendation

C. Other safeties which are sensed by other devices, but action is taken by the controller:

a. Over Voltage / Under Voltage / Single phasing / Reverse phasing / Voltage unbalance.
b. Motor Winding Overheat.
c. No evaporator or condenser water flow

D. Other Features:
a. Graphic touchscreen display.
b. Non-volatile memory with battery backup for memory to maintain all data even during extended shutdown or power failure.
c. Automatic startup on resumption of power after power failure.
d. Compressor lead-lag and sequencing facility for multi compressor units
e. Internal 7-day, 8 holiday clock with programmable Time Scheduling with Interval / RTC
f. Alarm History: Logging of last 99 alarms with 4 Variables (critical parameters) which can be viewed with display
g. Selective lockout facility on alarms to avoid unauthorized operator control
h. RTC based anti-recycle time (Start to Start / Stop to Start).
i. Loading / unloading / starting / stopping on chilled water outlet is automatic.
j. PC-Connectivity is possible (separate software / hardware to be procured for this).
k. Important variables list incorporated for getting connected to BMS system
l. Access to all set points with 3 Levels of Password User, Supervisory and Factory
m. The chiller lead / lag system will allow manual rotation of the lead chiller; include load balancing, and a staggered restart of the chillers after a power failure.
n. Security access will be provided to prevent unauthorized change of set points to allow local / remote control of the chiller.
o. Modbus communication capability will be provided.
p. Chiller will be provided with an RS 485 port to output all system operating data, shutdown / cycling messages and a record of the last four cycling / shutdowns to BAS. The control centre will be programmable to provide data logs to BAS.
q. Controls will be furnished to avoid nuisance chiller system cycling due to transient high and low pressure conditions by not allowing compressor to load for a safe period of time. If the condition persists, unit will shut down automatically.
r. The controller will incorporate a soft loading function to prevent the compressor from operating at full load during the chilled water temperature pull down period.

ix) *Witness Testing*

The complete chiller will be offered for witnessed testing of performance to the Bank for determination of guaranteed capacity and power on AHRI Certified Test Bed. The testing and tolerances will be in accordance with AHRI 550 / 590 and test will be offered on AHRI certified test bed. Performance testing at 100% load will be carried out and witnessing of the same offered to customer as optional. Part load testing at 4 load points (100%, 75%, 50% and 25%) of load with AHRI relief on condenser water entering temperature will be offered. The expenditure in respect of boarding/ lodging of the Banks engineer attending the factory testing shall be borne by the Bank.

x) *Painting*

The chiller will be painted with suitable primer and finished with RAL 7035 paint as per manufacturer's specification. Shade will be as per manufacturer's standard.

3.2. Chilled and condenser water Pumps

3.2.1 The motor shall be totally enclosed fan cooled type. The motor shall have efficiency class IE-4 or better efficiency. Pumps shall be of **End Suction/Horizontal split casing** type and suitable for the given duty points and parallel operation.

3.2.2 *Design parameters*-

Chilled water pumps

i.	Quantity	3 no's (2 working 1 standby)
ii.	Type	End Suction /Horizontal split casing
iii.	Capacity and head	30 HP;2500LPM;>=30meter pump head
iv.	Casing	Cast iron, common base with anti-vibration base
v.	Impeller	Bronze
vi.	Shaft	High tensile/ strength stainless steel with minimum shaft deflection.
vii.	Bearings ring	Ball/Roller to minimise pressure leakage and prevent rotation
viii.	Coupling	Rigid spacer type coupling for vertical pump-sets / Flexible coupling for horizontal pump-sets with coupling Guard
ix.	Seal	Mechanical type (Silicon carbide) lower seal chamber throttle bushing
x.	Motor	Squirrel Cage TEFC with Class-F electrical insulation, high efficiency,
xi.	Starter	VFD based
xii.	Shaft sleeve	Bronze
xiii.	Efficiency	IE4

Condenser water pump sets-

i.	Quantity	3 no's (2 working 1 standby)
ii.	Type	End Suction /Horizontal split casing
iii.	Capacity and head	40 HP;3200LPM;>=30meter pump head
iv.	Casing	Cast iron, common base with anti-vibration base
v.	Impeller	Bronze
vi.	Shaft	High tensile/ strength stainless steel with minimum shaft deflection.
vii.	Bearings ring	Ball/Roller to minimise pressure leakage and prevent rotation
viii.	Coupling	Rigid spacer type coupling for vertical pump-sets / Flexible coupling for horizontal pump-sets with coupling Guard
ix.	Seal	Mechanical type(Silicon carbide) lower seal chamber throttle bushing
x.	Motor	Squirrel Cage TEFC with Class-F electrical insulation, high efficiency,
xi.	Starter	Star delta type
xii.	Shaft sleeve	Bronze
xiii.	Efficiency	IE4

3.2.3 Pumps shall be selected for the rated conditions indicated. Peak efficiency shall be obtained at or near rated conditions. Impellers shall be statically and dynamically balanced. Contractor shall select their drives at least 10% in excess of the maximum BHP of the pumps.

3.2.4 The following accessories shall be provided where required with each pump besides other standard accessories:

- Lubrication fitting and seal packing
- Test and air vent cock
- Drain cock
- Adequately sized of sealed Terminal box for termination of 2 runs, 3 core copper conductor armoured cable.
- Coupling Guard for pumps.
- Pressure gauges at suction and discharge sides,
- Butterfly valves on suction and discharge, and
- Reducers, as may be required to match the sizes of the connected pipe work.
- Non-return valve at the discharge.
- Strainer at suction side

3.2.4 This shall be shrouded type with machined collars. Wear rings, where fitted to the impeller, shall be of the same material as the impeller. The impeller surface shall be smooth finished for minimum frictional loss. Rile impeller shall be secured to the shaft by a key.

3.2.5 The thrust balancing can be of balancing holes or back vanes. The direction of rotation of the impeller is clockwise when viewed from the motor and having sufficient strength to withstand the forces due to water flow at all working conditions.

3.2.6 The shaft seal shall be stuffing box type unless otherwise specified, so as to allow minimum leakage compatible with the operation of the seal. The stuffing box shall be of adequate length and shall be packed with graphite asbestos or any other suitable material for the operating temperature.

3.2.7 Drip well shall be provided beneath the seal. Shaft shall be high strength stainless steel. Pumps shall be fitted with outside balanced mechanical seals (factory fitted). The shaft shall be of with optimum diameter to provide maximum strength with minimum shaft deflection.

3.2.8 In the case of HSC (Horizontal Split Case) pumps, the same shall be directly coupled to the motor shaft through a flexible coupling protected by a coupling guard.

3.2.9 In case of mono block pumps with solid casing, the motor and pumps shall be on a common shaft.

3.2.10 The pump and motor shall be mounted on a common base plate either of cast iron or fabricated from rolled steel section, with vibration isolation pads. The base plate shall have rigid, flat and true surfaces to receive the pump and motor mounting feet.

3.2.11 After complete installation, original paint of the pump shall be retouched and accessories, fittings and floating foundations frame shall be given two coats of synthetic enamel paints of colour specified in specification for painting works.

3.2.12 All external and exposed Cast iron parts shall have an epoxy based coating made in a cathodic electro-deposition (CED) process which is high quality dip painting process and which would prevent rusting and corrosion. The shaft shall not be painted.

3.2.13 Foundation:

The pump shall be installed on RCC Foundation of dimensions as recommended by the pump manufacturer. Foundation shall be prepared by the bank as per the dimensions given by manufacturer. The grade of concrete and design as well as quantity of rebar used in making the pump foundation, shall be as approved by the Bank. SS J-Bolts along with 2 SS nuts per bolt shall be used for anchoring the pump-set to its foundation. Installation shall be done as per the Manufacturer's foundation

/ GA drawing. Pump RCC foundation shall be with M.S Angle frame along the edges of the foundation, made of 50x50x5 mm M.S Angles. The pump shall be capable of getting installed with pipe support and without flexible connectors on the suction and delivery side.

3.3 Water Piping

This section deals with supply and laying of heavy class pipes with bevelled ends. All pipe accessories such as bends, elbows, flanges, G.I nuts, G.I bolts, thermo-wells for temperature gauges, descaling tee, G.I. channel angle rod supporting work and PCC supports with full round high density PUF supports, vibration isolators and valves, testing and balancing of the piping system, required for the complete installation in accordance with the site requirement. All piping inclusive of fittings and valves shall follow the Indian Standards (IS).

a) Water pipes shall be bevelled ended, ERW Mild Steel (MS) Class `C' (Heavy Class) conforming to relevant BIS-1239 Code and all the fittings also shall be of Mild Steel. All jointing in the pipe system shall generally be by welding, unless otherwise mentioned, or directed at site. All welding shall be done by qualified welders and shall strictly conform to BIS Code of practice for manual metal arc welding of Mild Steel.

b) All welded joints (except pipe welded end-to-end) shall be made by use of forged one-piece welding flanges, caps, nozzles, elbows, branch outlets and tees of approved make. For pipes up to 200mm diameter, readymade pipe fittings shall be used.

c) The wall thickness of "C" Class M.S.E.R.W. Black pipes shall be as follows:-

	Nominal pipe dia. in mm	Wall thickness of pipe in mm
(a)	25	4.00
(b)	32	4.00
(c)	40	4.00
(d)	50	4.50
(e)	65	4.50
(f)	80	4.80
(g)	100	5.40
(h)	125	5.40
(i)	150	5.40
(j)	200	6.35
(k)	250	6.35

d) All pipes and their MS supports shall be thoroughly cleaned and given two coats of primer and epoxy paint before installation.

e) For vibration isolators pre moulded polyurethane pipe sections of 160 Kg/m3 density with adhesive shall be fixed between pipe and MS support. 10 mm thick MS 'U' clamp shall be fixed on the pipe so that the pipe is kept in position. All welded piping shall be subject to the approval at site.

3.4 **a) Pipe Fittings**

1) The pipe fittings for screwed piping shall be malleable iron and for piping with welded joints shall be of weld-able quality. Also, the fittings shall be suitable for same pressure ratings as for the piping system. All bends up to sizes 150 mm dia. shall be of heavy duty readymade.
2) All bends in sizes 200 mm and above shall be fabricated from the same dia. and thickness of pipe in at least four sections and having a centre in radius of at least 1.5 times diameter of pipes. Fittings such as tees, reducers etc. shall be from the same pipe and at least of length twice the diameter of the pipe.
3) The dead ends are to be formed with flanged joints and 6 mm thick blank between flange pair for 150 mm and over in case future extension is to be made. Otherwise, blank end disc 6 mm thicknesses are to be welded with additional stiffness from 50mm x 50 mm M.S. heavy angles.
4) **Flanges**

   All flanges shall be of mild steel as per relevant IS code (with latest amendments) & shall be slip on type welded to the pipes. Flanged thickness shall be to suit Class II pressure. 3 mm thick gasket shall be used in between the flanges. Flanged pair shall be used on all such equipment which are required to be isolated or removed for service for example condenser/chilled water pumps, chilling machine, cooling tower etc.

   Mild steel ANSI 125 flanges shall be used for pipes of 65mm dia. and above. The supply of flanges shall form part of piping shall also include supply of bolts, washers, nuts and suitable asbestos fibre/ rubber insertion gaskets (min 3 mm thick).

b) Set up of Piping

1) All pipes to be used for makeup water, drain, and condensate drain and fittings shall be galvanized steel class `C`/ `B' class conforming to relevant BIS Codes.
2) All jointing in the pipe system shall be by screwed joints and/or by screwed flanges using 3 mm 3 ply rubber insertion gaskets. Pipe threads and flanges shall be as per relevant BIS Codes.

3) Fittings shall be galvanized steel `medium class' malleable casting of pressure rating suitable for the piping system. Flanges shall be of approved make. Supply of flanges shall include bolts, nuts, and gaskets as required. Sufficient number of flanges and unions shall be provided for future cleaning and servicing of piping. Tee-off connection shall be through equal or reducing tees. All equipment and valve connections or connections to any other mating pipes shall be through flanges required for the making connections. Fittings & flanges shall form part of piping and are not separately identified in Schedule of Quantities.
4) Valves, strainers shall be similar to those specified for chilled water piping.
5) All pipe supports shall be of steel, coated with two coats of anti-corrosive paint and finally finished with paint.
6) The pipe spacing shall be as follows:

Dia. of Pipe	Spacing between supports
Upto 25mm	1.25 mtr.
30mm to 50mm	2.0 mtr.
65mm to 75mm	2.5 mtr.
100mm to 125mm	2.5 mtr.
150mm	3.0 mtr.
200mm and above	3.0 mtr.
Vertical supports	3 mtr.

3.5 Valves-

a) Butterfly Valves

Butterfly valves shall be ISI marked and of PN 16 / PN 20 rating as per IS 13095 preferably with fixed linear design to suit duty and flanges as per IS 6392**.**

b) **Valve housing**

Housing shall be ductile iron, ASTM A536-65T, class 60-45-18 rated 4000 kPa static pressure/forged brass ASTM B584 rated 2500kPa static pressure and 120°C.

c) **Balancing/Controller Valves**

The valve shall be of Gun Metal Casting up to 40mm with screwed ends. 50mm and above angular flanged type body. The valve should have pressure drop measuring facility on the flanges. The valves up to 125mm shall have digital hand wheel with least count of 0.1 turns and for sizes 150mm and above shall have least count of 0.5 turns. The valves

shall have suitable locking facility at desired setting. The valves shall be suitable for working pressure of 20 kg/cm2.

Double regulating globe valve type manual balancing valves shall be provided at various lines as indicated in schedule of quantities. These valves shall have built-in pressure-drop measuring facility to compute flow rate across the valve. The test cocks shall be long enough to protrude out of pipe insulation. To enable accurate and practical operation, measurement of flow and differential pressure shall be made with a computerised balancing instrument which shall enable the operator to read the flow directly without the use of diagrams or tables. In addition to measuring flow rate, differential pressure and temperature, computerised balancing instrument shall be compatible with the provided BMS/ SCADA system to provide the following functions:

- To balance the AC installation and calculate the necessary valve settings, based on system measurements.
- To store the results of balancing.
- To log measured values from a valve (differential pressure, flow rate or temperature).
- To print out saved data in computerized measurement protocol (CMP) consisting of:
  - Name and size of Balancing Valve (BV)
  - Pre-setting position of BV
  - P at BV
  - Flow at BV
  - Design Flow

The valves shall be insulated with the same insulation as the adjoining pipes and with the same thickness.

d) Non-Return valve

The non-return valve shall be wafer type, dual plate with Cast Iron body and flap shall be of SG Iron as per relevant IS code, seat shall be integrally moulded of nitrile / EPDM, suitable for work pressure of 20 Kg/cm2. To be suitable for vertical pipeline / horizontal pipeline as per site requirement and in line with relevant IS, it shall be suitable for PN 20/16 bar service as specified and shall have safe operating range between 5 Deg. Centigrade and 55 Deg. Centigrade. The valve shall have flanges. If a disc or plate type valve is used then its disc shall be of stainless steel grade SS 304 and it shall have a spring of Stainless Steel and the Seal shall be of EPDM elastomer. The valves shall be insulated with the same insulation as the adjoining pipes and with the same thickness.

Non return (check) valves shall be provided as shown on the Drawings, conforming to relevant BIS Codes and in accordance with the following specification:

Size	Construction	Ends
a. 15 to 25 mm	Gun Metal	Screwed
b. 30 to 40 mm	Gun Metal	Flanged
c. 50 mm and over	Cast Iron body with Nitrile sheet.	Wafer Type

Air release and clean out plugs shall be provided and valves shall be suitable for not less than 20 kg per sq.cm gage working pressure.

3.6 Pressure Gauges / Thermometers

All arrangements for connecting pressure gauges at the points specified below shall form part of piping work and the cost thereof shall be included in the rate/amount quoted for the piping. All pressure gauges shall be complete with globe valves conforming to relevant IS code. Similarly for measuring the temperature of water in pipe at the points specified below thermos-wells shall also be provided and the cost thereof shall be included in the rate/amount quoted for piping.

- Both pressure gauge and Temperature gauges shall be made of stainless-steel body and stem. The gauges shall be weatherproof and waterproof. The valve shall have the accuracy of +/- 1% of the reading.

- Pressure gauges' dial shall be not less than 150 mm dia. They shall be selected for appropriate range and shall be complete with siphon and cock, etc. Pressure gauges as specified shall be provided at chilled water and hot water supply and return at each air handling units. Care shall be taken to protect pressure gages during testing. Pressure gage sockets on insulated pipes and accessories shall be extended up to insulation to avoid damage of insulation for replacement of gages.

- Temperature gauges' dial shall not be less than 150 mm dia. These shall be of thermo-well type and as specified shall be provided at chilled water inlet and outlet. Temperature gauges shall be with long stem. Their socket shall be extended up to insulation thickness so that they can be removed without damaging the insulation.

3.7 MAGNETIC TYPE FLOWMETERS

Magnetic type flow meters for measuring the flow in chilled water pipes and hot water pipes. The capacities of the Magnetic type flow meters shall be as indicated in the Schedule of Quantities and their selection shall be as per relevant Indian Standards.

3.8 Insulations

i) Piping Insulation

a) **All chilled water pipes and condensate drain pipes** shall be insulated with closed cell nitrile rubber insulation (thicknesses are specified in the SOQ) in the manner specified herein. Closed cell elastomeric nitrile rubber of minimum 45 Kg / cu m density, thermal conductivity 0.037 W/MK or better at 20 deg. mean temperature class 'O' insulation. The material shall be thermally stable (at least up to 100ºC). It shall be fire retardant type with Class O fire rating self-extinguishing, CFC free, non-dripping type.

The Thickness of Insulating material of closed cell elastomeric nitrile rubber Fire retardant grade to be used for various sizes of pipes is as under.

Pipe Dia. (mm)	Thickness (mm)
10-25	19
30-65	25
80 to 150	32
200 to 350	38

b) **PIPE SUPPORT**

Insulated pipe support, single piece with self-adhesive closure, PUR/PIR load bearing Insert (Density 140 -180 kg/m³) embedded in elastomeric nitrile rubber insulation with two outer metal shells made of aluminium sheet, which also acts as a vapour barrier for the PUR/PIR inserts.

c) **RECOMMENDED ADHESIVE**

In all cases, the manufacturer's recommended Adhesive should be used for the specified purpose. Wherever, the pipes/ducts have exposed installation, an adhesive "Mastic" shall be applied on the overlapping of glass cloth.

ii) PUMP INSULATION

Pumps shall be insulated with the same material and to the same thickness or more as the pipe to which they are connected to give proper shape of the pump. Care shall be taken to apply insulation in a manner as to allow the dismantling of pumps without damaging the insulation.

iii) PROTECTIVE COATING OVER INSULATION

To provide mechanical strength and protection from damage & UV rays all exposed duct insulation shall be covered with woven glass fabric cloth. The glass fabric shall be applied with one coat of fire proof epoxy or acrylic compound. The coat shall be allowed to cure to non-stick state. Subsequently second coat of compound shall be applied to give a tough and smooth finish to the insulated surface.

iv) CHILLER INSULATION

The insulation shall be provided with necessary clamps, supports, hanger, vibration isolators and fittings such as bends, elbows , tees etc. but excluding valves, strainers, gauges etc. duly insulated with closed cell elastomeric nitrile rubber of minimum 45 Kg / cu m density, thermal conductivity 0.037 W/MK or better at 20 deg. mean temperature class 'O' insulation applied by suitable adhesive, Nitrile Rubber Compatible Sealant and Aluminium/PVC Tape, complete finally applying 0.63 mm aluminium sheet cladding complete with type 3, grade 1 roofing felt strip (As per relevant IS code as amended up to date) at joint repairing of damage to building etc. The insulation shall comply with ASTM C1136 (Type IV, Class 2), BS 4841-100 (1991) and Ozone Depletion Regulations

Note:- The Pipes of sizes 150mm & below shall be M.S. 'C' class as per IS : 1239 and pipes size above 150mm shall be welded black steel pipe heavy class as per IS: 3589, from minimum 8 mm thick M.S. Sheet for pipes upto 350 mm dia. and from minimum 8mm thick MS sheet for pipes of 400 mm dia and above. All ends of straight pipes and fittings shall be sealed with polyolefin end seal, applied to the exposed ends of the insulation for protection against moisture ingress.

v) CONDENSER PIPELINE COATING

a) The condenser pipeline shall be protected with a high-performance coating system, comprising a high build Fiberglass Reinforced Plastics (FRP) layer and a high build anti-corrosive chlorinated rubber coating, achieving a total thickness of 3 mm. The pipeline surface shall undergo thorough preparation, including sandblasting to SA 2.5 standards or equivalent, to ensure a clean and angular surface profile of 20-30 microns roughness,

enhancing coating adhesion. A high build FRP layer, consisting of glass fibres embedded in a suitable epoxy or polyester resin matrix, shall be applied in two stages.

b) Initially, a resin layer shall be followed by a chopped strand mat (CSM), allowed to cure, and then ground to a smooth surface. A second CSM layer, topped with a final resin layer, shall complete this 2 mm thick (adjustable) component. Curing shall occur under controlled conditions, as per the manufacturer's instructions, typically within 24 hours at 20°C. The FRP layer shall be over coated with a high build, fast-drying chlorinated rubber coating, preceded by a high corrosive resistant, suitably plasticized primer.

c) The primer and topcoat layers shall collectively contribute to the remaining 1 mm of the total 3 mm thickness. Curing shall take place in a well-ventilated area, protected from direct sunlight, within 2-4 hours at 20°C, as per the manufacturer's guidelines. Optionally, a wax-mixed resin coating may be applied to achieve the desired thickness or provide additional protection, while maintaining the overall 3 mm thickness.

3.9 **CABLE TRAYS**

a) Cable trays, tray support systems, fittings and accessories shall be fabricated out of mild steel free from flaws. The trays shall be fabricated from slotted steel sheets.

b) Cable trays, tray support systems, fittings, accessories and hardware shall be hot dip galvanised as per relevant clauses of this specification after cutting, drilling welding and other operations.

c) Special fittings / accessories such as horizontal/vertical bends, tee's, cross reducer etc. shall be fabricated and galvanised. All hardware like bolts, nuts, washers, etc. are also to be galvanised as required to complete the system in all respects.

d) Cable trays shall have standard width of 100 mm, 150 mm, 300 mm, 450 mm and 600 mm. Each straight section shall be supplied in standard length of 2.5 or 3 metres.

e) The cable trays, accessories shall be as per the following table.

Sr. No.	Tray Width	Side Flange Height	Perforated MS sheet thickness (min)
	(mm)	(mm)	(mm)
1.	100	25	2
2.	150	25	2
3.	300	50	2
4.	450	50	3

5.	600	50	3
6.	750	50	3

f) Each unit length of cable trays offered shall include all necessary side coupler plates, hardware etc. The cable tray support system shall be designed such that it allows easy assembly at site of pre-fabricated factory galvanised components using mainly the bolting or clamping arrangement including anchor fasteners.

g) Cable trays with support systems such as M.S. angle / channel / flats/ rods etc. shall be provided and fixed by the contractor.

h) Cable shall be fixed in cable trays in single tier formation and cable shall be clamped with G.I. clamps and galvanized bolts / nuts. Earthing flat/ wire can also be laid in cable tray along with cables.

3.10 MEASUREMENTS:

The following mode of measurement shall apply for the piping work included in contract-

a. The length of piping shall be measured along its centre line from flange to flange including bends, elbows, tees etc. All such fittings/accessories shall be treated as part of piping work. While taking the measurements special fittings such as any type of valve, non-return valve and strainers will be excluded.

b. Flanges shall not be measured separately, as they form part of piping work.

c. For thermo wells and pressure gauge sockets no measurement shall be done separately.

d. 3 way mixing valves including any modification in the pipeline shall be measured in numbers. Its pipeline modification shall not be measured separately

3.11 **<u>Product delivery, Storage, and handling</u>**

- Delivery material in Contractor's original, unopened protective packaging.
- Store material in original protective packaging. Prevent soiling, physical damage, or moisture damage.
- Protect equipment and exposed finishes from damage and stains during transportation, erection, and construction.

- Provide suitable temporary weather-tight storage facilities as may be required for materials that will be stored in the open. No material shall be stored on landings.

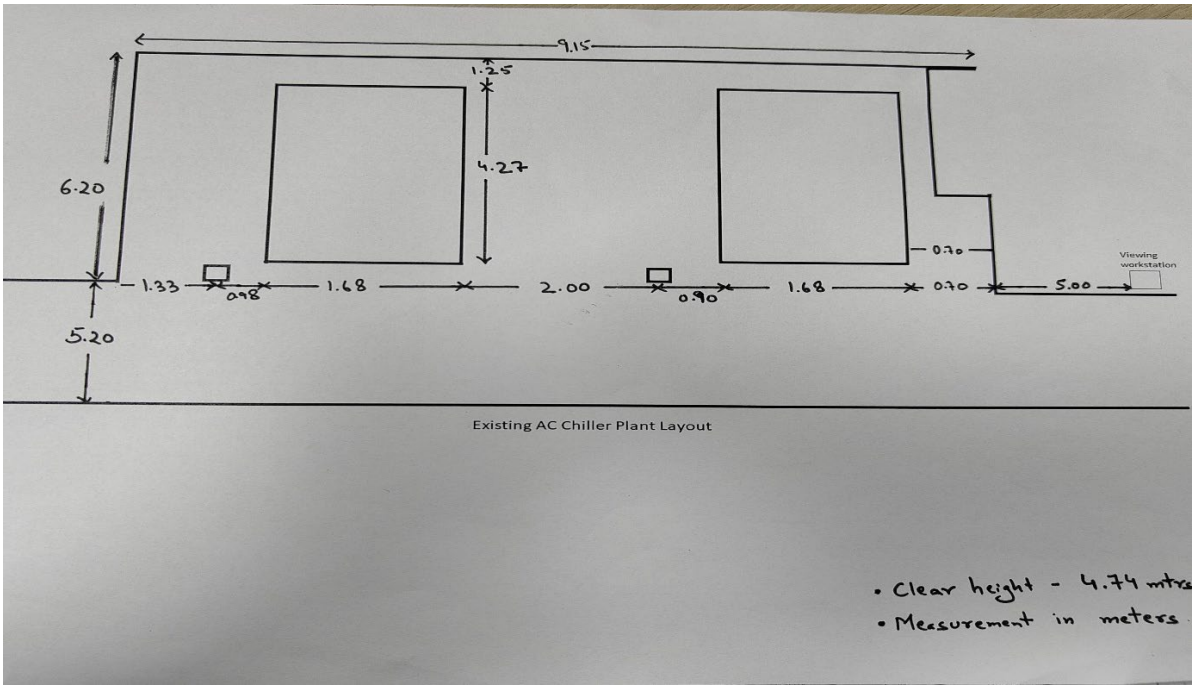
3.12 <u>Installation Requirements</u>

- Install all equipment in accordance with OEM instructions, referenced codes, specifications and approved submittals.
- Space Available for the Installation of Chiller in AC Plant as under:

  Available room dimensions- 28’9”x20’5” (8760 mm x 6240 mm)

  Preferred allocated dimensions for each chiller-1800mm x 3700 mm; min clearance of 950 mm (tentatively) between two chillers and side walls

  Bidders are advised to visit the site to get acquaint itself with site conditions before quoting the rates.



- A tentative plant layout is attached herewith for the reference of the bidders.
- The alteration in unit, if required may only be done at factory, before testing and dispatch. No part of chillers shall be allowed to be divided into parts to install the same at final location.
- To understand the plant room location and survey the path leading to the plant room, visit to the plant room shall be arranged on the day of Pre- Bid meeting.
- Install all equipment so it may be easily removed for maintenance and repair.

- Install all equipment for ease of maintenance. Successful firm must submit a general proposed layout showing all 3 chillers, pumps , panels and mark clearances on all sides.

- Install all equipment to afford maximum accessibility, safety, and continuity of operation.

- Remove oil, grease, scale, and other foreign matter from the following equipment and apply one coat of field-applied machinery enamel.

- All exposed equipment and metal work installed as part of this work, which does not have architectural finish.

- Adjacent work areas that adjoin with new equipment installed as part of this specification.

- The work has been planned in phased manner. The successful bidder will be have to supply, Install, test and commission one chiller at one time after complete handover of one chiller, successful bidder shall Install other two chillers one by one after complete hand over. Dismantling of existing chillers to be done one by one and in such a way that SITC of Chillers can be taken up one by one after handover of one by one Chiller. As work is to be done in working building, at least one 250/250TR old/ New Chiller must always be in working condition.

3.13 Manufacturer's Nameplates

Manufacturer's nameplates and other identifying markings shall not be affixed on surfaces exposed to public view. This requirement does not apply to code required labels.
Each major component of mechanical and electrical equipment shall have identification plate with the manufacturer's name, address, model number rating and any other information required by Governing Codes.

BEE star rating nameplate, ASME stamping identification shall be available on the machines as per tender requirements/specifications.

3.14 Documentation

The vendor will submit the following documentation for information on placement of order

- General Arrangement and Foundation Drawing
- Technical Data Sheet
- Schematic diagram of control system indicating points for field connection.
- Electrical wiring diagrams for interlock and control wiring.

3.15 Delivery, Packing and Handling

- Chillers to be delivered at site completely assembled and charged with refrigerant and oil.

3.16 Commissioning Assistance and After Sales Support

- The supplier will depute his representative for supervision of pre-commissioning checks, startup and commissioning. Training will be provided to customer's representatives on operation and maintenance of the equipment at the time of commissioning.

- In the event of such need arising, the chiller manufacturer will have a facility for complete overhauling of the compressor at a facility in India.

- Chiller will be supplied along with serrated neoprene rubber pads or spring isolators for vibration isolation as specified by the customer.

Installation, operation and maintenance (IOM) manual will be provided at the time of commissioning.

4. **Approved make:**

1.	Chiller unit with Microprocessor based panel water cooled type.	Trane / Dunham Bush/York/ Carrier/ Kirloskar Chillers Pvt. Ltd. / McQuay International/DAIKIN/blue star/ Voltas or approved equivalent
2.	Three phase motors	Siemens / Kirloskar/ ABB / NGEF / Crompton / Grandfoss /Bharat Bijlee or approved equivalent
3.	Water piping	SAIL/GST/Jindal Hissar/HSL/BST/ Tata Steel or approved equivalent
4.	Valves	Audco / Advance / Danfoss/Inter valve /L&T /Honeywell/Belimo /Siemens or approved equivalent
5.	Pressure Gauges	Feibig /Emerald / H Guru or approved equivalent
6.	Industrial type thermometer (alcohol filled V form angle type)	Emerald / H Guru / Japson or approved equivalent
7.	Expanded polystyrene	P.R.Packaging Ltd./ Indian Packaging Services /Kflex or approved equivalent
8.	Glass Wool Blanket	P.R.Packaging Ltd./ U.P.Twiga/ Indian Packaging Services or approved equivalent
9.	Fiber Glass Rigid Board	U.P.Twiga / Owen Corning or approved equivalent
10.	Paints	ICI / Asian / Jenson & Nicholson or approved equivalent
11.	Tar felt / CPRX compound	Shalimar tar product or approved equivalent
12.	Air-Circuit Breaker	L & T /Siemens / ABB / GE / Schneider or approved equivalent
13.	ACB / MCCB	L & T/ GE / Siemens/Schneider or approved equivalent

14.	Power cable	Cable Corporation of India / Gloster / Finolex / Universal/Polycab/Ravin or approved equivalent
15.	Control cable	Cable Corporation of India / Gloster / Finolex/Polycab or approved equivalent
16.	Voltmeter / Ammeter	A.E./IMP/Rishab/Enercon/Krycard/C&S/Kappa or approved equivalent
17.	Switches	L & T /Siemens /C&S/Legrand/Havells or approved equivalent
18.	HRC Fuse and Fittings	L & T /Siemens /C&S/Legrand/Havells or approved equivalent
19.	Current Transformer	A.E. / Kappa / L & T/Pragati/C&S or approved equivalent
20.	Contactors	L & T / Siemens / Schnieder/GE /C&S or approved equivalent
21.	Starter	L & T / Siemens/GE /C&S or approved equivalent
22.	Overload Relays	L & T / Siemens /GE/C&S or approved equivalent
23.	Indicating Lights	Siemens / L & T /GE /C&S or approved equivalent
24.	Selector / Toggle switch	Kaycee / L &T /C&S or approved equivalent
25.	Time Delay Device	Siemens / L &T /GE/C&S or approved equivalent
26.	Gate/Globe valve	Leader/Audco/Advance or approved equivalent
27.	Flow Meter	Rockwin or approved equivalent
28.	Grilles/Diffuser	Carryaire / Dynacraft / Airmaster or approved equivalent
29.	Fire Dampers	Carryair / Conair or approved equivalent
30.	Single Phase Device	L & T/Minilec or approved equivalent
31.	Vibration Isolators	Dunlop / Resistoflex or approved equivalent
32.	GI Sheets	Jindal/SAIL/VSP/Nippon/Deuro or approved equivalent
33.	Plant Manager	L & T/ Enercon/ Siemens/ Johnson / Honeywell or approved equivalent
34.	Cross Linked Closed Cell Polyethylene (FR-XPE) for Ducts	Paramount / Trocellen/Supreme /Kflex or approved equivalent
35.	for pipes	Paramount / Thermaflex/ Supreme or approved equivalent
36.	LT Power& Control Panels	Trinitron / C&S/ or approved equivalent
37.	Mini BMS	Siemens/Sauter Race/ Schneider/ Anergy/Honeywell/Johnson Controls or approved equivalent

38.	VFD	Danfoss, Schneider, Siemens, Johnson controls, Yaskawa /ABB/ L&T OEM make or approved equivalent
39.	Star Delta Starters/Auto Transformer Panel	L&T/Siemens/Trinitron / C&S or approved equivalent

5. **Comprehensive Annual maintenance contract (CAMC):**

5.1 Maintenance schedule

The Tenderers shall quote their charges separately for comprehensive annual maintenance service of complete system as per schedule of quantities which will be applicable after end of defect liability period (DLP). **The scope of comprehensive AMC shall include chillers, chiller parameter monitoring system and pumps, VFD system provided by the contractor.**

The successful Tenderer shall enter into an agreement for comprehensive annual maintenance contract of the system with the Bank conditions and scope of work for which are as under. Further, **if the contractor is the system integrator, he shall carry out back to back AMC with OEM of chiller for a minimum of 14 years after DLP of 12 months.**

The tentative maintenance schedule shall include, but not limit to the following:

1. Chiller	Monthly Inspection and Service	1. Perform all function for monthly checks 2. Check refrigerant level, leak test with electronic Leak detector. 3. Inspect level and condition of oil. 4. Check the liquid line sight glasses for proper flow. 5. Check all operating pressures and temperatures. 6. Inspect and adjust, if required, all operating safety controls. 7. Check capacity control, adjust if necessary. 8. Lubricate vane/ linkage/ bearings. 9. Visually inspect machine and associated components, and listen for unusual sound or noise for evidence of unusual conditions. 10. Check lock bolts and chiller spring mount. 11. Review daily operating log maintained by Bank's operating personnel. 12. If any of the above found abnormal, trace and rectify the issues as necessary. Providing written report to the Bank, outlining services carried out, adjustment made, rectification carried out and if the deficiency is of a major nature, arrange with the Bank for shut- down to rectify equipment.

	Quarterly Inspection and service	1. Checking and tightening of electrical contacts 2. Inspection of system for optimum performance and control calibration 3. Reviewing alarm history and fault logs 4. Recommended safety checks, suction/discharge pressure, oil level, vibrations etc.
	Half yearly inspection	Contractor has to arrange visit of OEMs representative at least two times in a year (preferably half yearly) for inspection of the system.
	Annual Inspection and service	1. Check all flanges for tightness 2. Change oil in oil sump 3. Replace filter 4. Check oil temperature control 5. Check motor terminals 6. Check connections in starter Please note that oil filter gasket replacement shall deem to be included in the contract. 7. Check motor earthing, megger motor and connection wiring on each leg 8. Check motor temperature cut-out, tighten motor terminals. 9. Check starter contacts, arc shield, transformers. 10. Check dashpot oil, clean dashpot and replace oil when necessary. 11. Test and calibrate overload setting. 12. Inspect, calibrate and adjust to original specifications for all gauges, safety and operating controls including low temperature and high-pressure cut-out, oil pressure switch, load limit relay and electrical interlocks. 13. Descaling of tubes with chemical
Consumable materials	As and when required	1. All oils and greases required for lubrication of compressors, fan bearings, motors bearings, pivots and other moving parts. 2. All refrigerant required for topping up. Refrigerant loss if due to manufacturing defect or due to negligence shall be made good by the contractor. 3. All consumable filter elements/ rolls. All chemicals for the correct chemical treatment of the cooling tower and chilled water system. 4. All carbon brushes required to replace worn brushes in electric motors. 5. All electric contact points required to replace worn electric contact points in switchgears, motor starter gears, electronic control gears and electric relays. 6. All electric fuses required to replace blown fuses. Just before the expiry of the warranty of the contract, the contractor shall carry out a complete system operability test on all the systems or sub-systems as called for in the contract.

5.2 Penalty for delay in rectification during CAMC:

During the comprehensive annual maintenance service period ,any fault in the system shall be rectified within stipulated time on receipt of intimation of the defect in the system either telephonically or through email. The quoted rates shall, therefore, take into account all the cost, including travel cost from the nearest service station. In case of failure of attending the complaint within stipulated time, the penalty shall be imposed as follows that shall be deducted from the payable dues subject to maximum 10% of annual contract amount of AMC.

Sr.No.	Description of the Work (s)	**Complaint attending time**	**Penalty**
(a)	Not attending the defect /complaint on receiving the complaint either through telephone or email	1 day	Rs 1000/- per Day beyond stipulated time
(b)	If mandatory quarterly service is not done		Rs 5,000/- per service from payable dues
c)	if mandatory monthly inspection is not done		Rs 1000/- per inspection from payable dues
d)	If mandatory half yearly inspection is not arranged		Rs 5,000/- per service from payable dues

In addition to this, if the system is not rectified within the period of 10 days, the Bank shall have right to rectify the system at risk and cost of the contractor to be recovered from payable dues. The Bank shall have also right to invoke the Bank Guarantee as a penalty for non-responsiveness / non rendering of the AMC services by the contractor and terminate the contract, if service rendered by the contractor is found to be unsatisfactory.

5.3 Renewal and Payment of service charges during comprehensive annual maintenance service (CAMC):

The payment during the CAMS period shall be **made on quarterly basis** on rendering satisfactory service and submission of duly signed service reports in original along with invoice.

The service contract shall be renewed for a further additional period of at least 14 years after DLP of 1 year and the initial annual service contact period of one year. While renewing the contract the new contract amount will be arrived at based on following formula:

AC = AP [(15 + 50 x (EPIC/EPIP) + 35 x (CPIC/CPIP)] / 100	
A_C	The contract amount for the current year.
A_P	The contract amount for the previous year.
EPI_C	Wholesale Price Index for electrical products 6 months prior to the commencement date of contract for the current year.
EPI_P	Wholesale Price Index for electrical products 6 months prior to the commencement date of contract for the previous year.
CPI_C	Consumer Price Index for industrial workers (All India average) 6 months prior to commencement date of contract for the current year.
CPI_P	Consumer Price Index for industrial workers (All India average) 6 months prior to commencement date of contract for the previous year.

5.4 Minimum Base Rate for Comprehensive AMC

Minimum Base Rate for Comprehensive AMC is 5% (Five percent) of total capital cost. In case, the tenderer quotes the rates for comprehensive AMC lower than 5% (Five) of the quoted capital cost, then the 5% (Five) of the quoted capital cost will be considered as AMC for calculation of Total Cost of Ownership.

Note: Notwithstanding the above, the Bank shall pay only the quoted rate of the AMC during the currency of the committed contract period subject to renewal formulae indicated in the tender.

Section - IX

Technical Details to be filled by Bidder

(To be furnished by the tenderer in Central Air conditioning System only)

The technical details called for to be furnished by the tenderers without fail. The tender inot furnishing the data is liable for rejection. Replies like 'as per manufacturers standard', 'shall be furnished later", 'as per propriety design" etc shall not be considered as it will not help in evaluation of the bid and tender will be considered incomplete.

9.1	**Compressor**	Screw
a)	Manufacturers' Name	
b)	Model	
c)	Type of compressor: Screw (Hermetic/Semi-hermetic)	
d)	No. of compressors per machine	
e)	Capacity of chiller package at specified condition	
f)	COP at AHRI condition	
g)	IPLV at AHRI condition	
h)	RPM of compressor	
i)	RPM of drive	
j)	Type of gear	
k)	Refrigerant used	
l)	Quantity of refrigerant used	
m)	Power consumption (in KW per TR of refrigeration) at operating conditions	
	Full load 100 %	
	IKW at 100% load	
	IKW at 75% FL	
	IKW at 50% FL	
	IKW at 25% FL	
n)	Type of capacity control	
o)	Range of capacity variation	

Note: Manufacturer's AHRI Certified Selection Performance Sheet to be submitted to evaluate and verify the specified performance parameters.

9.2	**Motor (Compressor)**	
(a)	Make of motor	
(b)	Type of motor	
(c)	Motor KW Rated	
(d)	Class of insulation	
(e)	RPM	
(f)	Type of starter	

(g)	Electrical characteristics (Voltage/frequency with permissible tolerance in +/- %age)	
(h)	Make of starter	
(i)	Full load current (A)	
(j)	Starting current (A)	
(k)	No. of thermistor	
(l)	Overload/ under load/ voltage/ single phase protections provided (Yes or No)	
m)	VFD details	
	Make	
	Model	
	Power rating	
	Frequency range	
	Input voltage and current	
	Output voltage and current	
	Enclosure type	

9.3	**Condenser**	
(a)	Manufacturers' name	
(b)	Model	
(c)	Number of condensers in each package	
(d)	Fouling Factor (MKS)	
(e)	Material of tube	
(f)	Water flow rate (LPM)	
(g)	No. of circuits	
(h)	Water In temperature ^{0}C	
(i)	Water Out temperature ^{0}C	
(j)	Refrigerant condenser ^{0}C	
(k)	Whether any sub-cooling circuit is included (Say Yes or No)	
(l)	Heat rejection capacity Kcal/hour	
(m)	Pressure drop (Max in bars))	

9.4	**Chiller**	
(a)	Manufacturer's Name	
(b)	Model	
(c)	Type of chiller	
(d)	Number of chillers in each package	
(e)	Tube material	
(f)	No. of circuits	
(g)	Water flow (LPM)	

(h)	Water temperature IN ^{0}C	
(i)	Water temperature OUT ^{0}C	
(j)	Pressure drop of water (max in bars)	
(k)	Chilling capacity in Kcal/Hours and TR	
(l)	Whether any super heat provided	
(m)	Fouling Factor (MKS)	

9.5	**Overall size of water chilling machine**	
(a)	Overall dimension (mm)	
(b)	Type of vibration isolator	
(c)	Operating weight (Kg)	

9.6	**Microprocessor for chilling machine**	
(a)	Is microprocessor included?	
(b)	Give salient features of the microprocessor	Enclose separate sheet

9. 7	**Condenser water pump sets**	
(a)	Make	
(b)	Type	
(c)	Model	
(d)	Discharge (LPM)	
(e)	Head (M)	
(f)	Pump power in Kw	
(g)	Efficiency	
(h)	Type of seal	
(i)	**Motor**	
	a. Make	
	b. Type of motor	
	c. Motor rating in Kw	
	d. Class of insulation	
	e. RPM of motor	
9.8	**Chilled water pump sets**	
(a)	Make	
(b)	Type	
(c)	Model	
(d)	Discharge (LPM)	
(e)	Head (M)	
(f)	Pump power in Kw	
(g)	Efficiency	
(h)	Type of seal	
(i)	**Motor**	
	a. Make	
	b. Type of motor	
	c. Motor rating in Kw	

	d. Class of insulation	
	e. RPM of motor	
(j)	VFD details	
	a. Make	
	b. Model	
	c. Power rating	
	d. Frequency range	
	e. Input voltage and current	
	f. Output voltage and current	
	g. Enclosure type	

Note: - End of support from the OEMs for equipment should not be before December 2040. In support of the above, the tenderers have to submit a certificate from the OEMs of the offered makes and models as per the enclosed proforma, alongwith the tender part I.

Declaration

1. We hereby confirm that the offered equipment hardware and software are as per the tender specifications and deliver the objective and requirement of the Central Air conditioning System stated in the tender.
2. We also confirm that all the cables, etc. are as per tender specifications and other accessories etc. are as per industry standards.

Date: - **Seal and Signature of Tenderer**

Place:-

SECTION X

TESTING OF AIR CONDITIONING SYSTEM

1. Testing of Chillers:

The complete unit shall be factory tested at 25%, 50%, 75% and 100% capacity at constant condenser water temperature and may be witnessed by Representatives of the Bank or as given in bid document for performance at the rated conditions by simulating the actual design conditions. All the units shall be tested. All controls and switchgear shall be tested for proper functioning and set of design values. The capacity in TR / kcal/hr shall be calculated from measurements of temperature difference and flow rate of water, in condenser and chiller. The power consumption shall be checked from current measurement of the motor. All calculated and checked results shall match the specified data within tolerances as stipulated by AHRI.

All instruments and personnel for tests shall be provided by the contractor. Contractor shall inform the client about the chiller testing schedule min. 10 to 15 days before the chiller is ready for factory testing.

1.2 FINAL INSPECTION

i. After completion of the entire installation as per specification in all respects, the AC contractor shall demonstrate trouble free running of the AC equipment and installation for a period of minimum 120 hours of running.

ii. After the trial run, the AC contractor shall offer the plant for the seasonal test, namely test for summer, winter and monsoon season.

iii. The Input KW of the unit / TR at full load and IPLV shall also be checked against contract requirements, if any.

iv. Pressure drops across chiller and condenser at specified flow rates shall be checked against the contract requirements.

v. All instruments for testing shall be provided by the AC contractor. All instruments must have valid calibration from Govt approved laboratory.

vi. The accuracy of the instruments shall be as follows:

(a) Temperature: Liquid in glass thermometer having accuracy + 1 deg. C as per IS: 4825.

(b) Wet bulb Temperature: Sling psychrometer conforming to IS:6017.

Scale Error:

For less than 0 deg. C : 0.3 deg C + 0.2 deg. C.

For over 0 deg. C : 0.2 deg. C + 0.1 deg. C.

Pressure Gauge: With the accuracy of + 1% for maximum scale value from 10 to 90%, and + 1.9% for maximum scale value for rest of the scale conforming to IS: 3695.

Water flow meter: Water flow shall be measured using the arrangement installed as per schedule of work. In case the tendering firms do not have testing instruments of the accuracy mentioned above, they should specify the accuracy of the instrument available with them for testing at the tender stage.

1.3 Testing, Adjusting and Balancing (TAB)

(a) TAB of Chillers Sound levels, Vibrations etc. of the Chiller system and pumps shall be carried out as per" Test & Balance Procedure" by Associated Air Balance Council, USA, or National Environment Balancing Bureau USA, or SMACNA or ASHRAE or ISHRE or BIS codes guidelines and provisions of this Specifications.

(b) TAB is the process of checking and adjusting all AC systems in a building to produce the design objectives. This process includes:

- balancing water Hydronic balancing,
- adjusting the total system and Equipment
- Measuring electrical performance of Chiller equipment,
- establishing quantitative performance of all Chiller equipment,
- sound and vibration measurement

(c) Report forms: Test data sheets arranged in logical order for submission and review. They should also form the permanent record to be used as the basis for any future TAB work.

(d) All TAB shall be carried out in the presence of Bank Engineer. The instrument shall be capable of storing data and then downloading into a Computer. The AC contractor shall provide a minimum but not limited to the following instruments:

- Microprocessor based calculation meter to measure DB and WB temperature,
- RH and Dew point
- Pitot tube
- Electronic rotary vane Anemometer
- Accubalance flow measuring hood
- Manometer
- Techo meter
- Anemometer
- Sound level meter
- Vibration analyzer
- Hygrometers
- Air differential pressure gauges
- Hydronic Differential pressure gauges
- Bourdon tube gauges
- Psychometers
- Flow meters

The contractor shall be responsible to provide necessary sockets and connections for fixing of the testing instruments, probes etc.

NOTE:

- All calibrated instruments for testing shall be provided by the air conditioning contractor.
- Thermometers used for measurement of temperature of water/ refrigerant shall have graduation of 0.1 deg C and shall be got calibrated from N.P.L. or any recognized test house beforehand.
- Thermometers used in the psychomotor shall have graduations of 0.2 deg C and shall be calibrated as at (2) above.
- Pressure gauges shall also be got calibrated beforehand from a recognized test house.
- Orifice type of flow meters shall be used for measuring flow rate through the condensers and chillers.

- If due to any reason, internal load mentioned in the tender specifications is not available psychometric computations for actual load conditions will be done and the plant, if found satisfactory will be accepted

For TAB & commissioning the third-party specialized agency having sufficient experience and competency for above work shall be associated by the agency and the credential for the same shall be submitted to Bank for approval. The specialized agency shall be engaged only after approval of credential by Engineer-in-Charge.

The all equipment, materials, labour, Technicians and skilled manpower, T&P, testing point, testing arrangements and other requirement for TAB is to be arrange by the contractor and it is included in the scope of work of the contractor.

1.4 Final documentation

a) The contractor shall leave the system operating in complete balance with water and air quantities as shown on drawings. Set stops on all balancing valves in proper position. Secure all automatic valve linkages in proper positions to provide correct operating ranges. Notify the Bank of any areas marginal or unacceptable system performance.
b) The above tests and procedures are mentioned herein, for general guidance and information only, but not by way of lamination to the provisions of conditions of contract and design/ performance criteria.
c) Upon commissioning and final handover of the installation vendor shall submit (within 4 weeks) to the Bank 3 (six) portfolios of the following indexed and bound together in hard cover ring binder (300 x 450 mm) in addition to the completion drawings:
    - Comprehensive operation and maintenance manual
    - Test certificates, consolidated control diagram and technical literature on all controls.
    - Equipment warranties from manufacturers.
    - Commissioning and testing reports (3 copies each) (in soft and hard copies)
    - Rating charts for all equipment
    - Logbooks as per equipment manufacturers standard format

1.5 Acceptance Test:

a) The Acceptance Test shall be carried out jointly by the representatives of the RBI and the Bidder, after the Chiller is configured and operationalized at the Site.

b) A comprehensive "Acceptance Test Plan" document, containing various aspects of the 'Acceptance Test' to demonstrate all the features of the Chiller System as envisaged in this tender document and claimed by the bidder shall be held accordingly. The Acceptance Test shall be deemed to be complete only on the issuance of the 'Acceptance Certificate' by the Bank to the bidder.

c) Without limiting the scope of the Acceptance Test, the Acceptance Test shall cover the following tests, to be carried out in this connection. On evaluation of the Acceptance Test results and if required in view of the performance of the AC plant system, as observed during the Acceptance Test, the Vendor shall provide necessary solution at his own cost thereof, to ensure the performance of the AC plant system is meeting the requirement, as envisaged in this document:

2.8.1	Outside conditions						
(a)	Season						
(b)	Dry bulb temperature 0C						
(c)	Wet bulb temperature 0C						
2.8.2	Inside conditions (For each area served by each AHU)	1	2	3	4	5	6
(a)	Dry bulb temperature 0C						
(b)	Wet bulb temperature 0C						
(c)	Relative humidity (%)						
2.8.3	Compressor (each compressor at 100%)						
(a)	Suction pressure Kg/Cm						
(b)	Discharge pressure Kg/Sq.Cm.						
(c)	Oil pressure Kg/Cm (PSI)						
2.8.4	Compressor Motor (each motor to be recorded at 100% load)						
(a)	Motor current (A)						
(b)	Voltage (V)						
(c)	Power (Kw)						
(d)	Power Factor						

2.8.5	Condenser (To be recorded at 100% load but with constant flow for each condenser for clean tube and after 3 months)	
(a)	Water flow rate (LPM)	
(b)	Entering water temperature 0C	
(c)	Leaving water temperature 0C	
(d)	Pressure drop through condenser (Kg/Sq.Cm.) (PSI)	
(e)	Tube condition	
2.8.6	Evaporator (To be recorded at 100% load but with constant flow for each condenser for clean tube and after 3 months)	
(a)	Water flow rate (LPM)	
(b)	Entering water temperature 0C	
(c)	Leaving water temperature 0C	
(d)	Pressure drop through condenser (Kg/Sq.Cm.) (PSI)	
(e)	Tube condition	

<u>Proforma for test results & notes on test instruments and capacity computations</u>

FACTORY ACCEPTANCE TEST **Location :**

Make : _____

Test Condition : 100%,75%,50%,25% (for each)

Model No : _____

Test Date : _____

Serial No. : _____

Test Time : _____

Refrigerant : _____ Kgs/lbs

Ambient Temp : C

Sl. No.	**Item**	**Test Results**	
1.	Ambient conditions	i) D.B.Temp ii)W.B.Temp iii) %RH	deg C deg C %

2.	Compressors (each compressor at 100%, 75%, 50%, 25%)	R.P.M Suction pressure Suction temperature Discharge pressure Condensing temperature Oil pressure	Rpm Kg/sq.cm ºC kg/sq.cm ºC kg/sq.cm (psi)
3.	Compressor Motors	R.P.M. Rated Capacity Rated Voltage Rated Current Starting current Voltage, currents and starting currents: (i)at 100% load (ii) at partial load (a) 75% (b) 50% (c)25% iii) Power factor	Rpm HP Volts amps amps V, A, A V, A, A V, A, A V, A, A (lag)
4.	Water Chillers (to be recorded at 100%, 75%, 50%, 25% load, but with constant flow for each condenser for clean tube and after 3 months)	Refrigerant evaporating pressure Refrigerant evaporating temperature Water flow rate Water temperature Entering Leaving Water pressure Entering Leaving Tube condition	Kg/sq.cm deg C LPM deg C deg C -Kg/sq.cm -Kg/sq.cm

5.	Condensers (to be recorded at 100%, 75%, 50%, 25% load, but with constant flow for each condenser for clean tube and after 3 months)	Refrigerant condensing pressure Refrigerant condensing temperature Water flow rate Water temperature Entering Leaving Water pressure Entering Leaving Tube condition	Kg/sq.cm deg C LPM deg C deg C -Kg/sq.cm -Kg/sq.cm
11.	Controls	Function of each control shall be tested and report furnished	

Performance Results:

Chiller-1:

The temperatures of inlet and outlet water and water flow shall be measured as for the condenser.

The capacity of chiller in BTU/Hr = Water flow through chiller (Lb/hr) X dT (deg.F)

% Capacity % KW/Ton

$$\frac{\textit{Actual Capacity}}{\textit{Design Capacity}} \times 100\% = \qquad \frac{\textit{Actual Kw/Ton}}{\textit{Design Kw/Ton}} \times 100\% =$$

$$\textit{Heat Balance} = \frac{Q_{evap} + W_{input} - Q_{cond}}{Q_{cond}} \times 100\%$$

The capacity of the plant in TR = {Water flow through chiller (in gpm) x dT(F)}/24

Where dT(F) = Temperature of entering water - Temperature of leaving water

2. **Condensers:**

Heat rejection by the condenser in tons = (water flow through the condenser x temperature difference) / 24

The capacity of the plant = Heat rejection by condenser in tons - {(compressor motor KW x 3400)/12000)

3. **Compressor**

BHP/ton of the compressor = Power input in KW / (0.746 x compressor capacity in tons)

Test Certificate and Maintenance Guarantee

I/We certify that the installation have been installed by me/us and tested and that to the best of my/our knowledge and belief, it complies with Indian Electricity rules as amended from time to time.

Electrical installation at

_____

Voltage and system of supply

_____

	Particulars of work	Nos.	Capacity	Test results *
1				
2				
3				

* Add extra sheets if required.

	Description	**Values**
	Earthing	
1	Type of material & size of electrode	
2	Number of electrodes	
3	Size of material of earth wire	
	Test results	
1	Insulation resistance for the whole installation	
	(i) Between conductors	
	(ii) Between each conductor and earth	
2	Resistance of earthing electrode or earthing system	
3	Maximum earthing resistance of installation	

4	Insulation resistance at underground cables	
5	Polarity test	

I/We guarantee the installation for a period of twelve months against defective materials and workmanship, the guarantee commencing from the date the installation is taken over by the owner and during the period of guarantee I/we shall rectify or replace defects in material or workmanship free of cost to the owner.

I/We submit herewith six sets of drawings showing the installation and layout as actually executed.

_____	_____
(Signature of Supervisor)	(Signature of Contractor)
Name _____	Name _____
Address _____	Address _____

SECTION XI

Deviations (if any)

A) Schedule of Commercial Deviations

We confirm that all commercial terms and conditions of the Bank except for deviations listed below are acceptable to us.

Sr. No.	Section No.	Clause No.	Deviation proposed
1	2	3	4

B) Statement of deviations from Bank's Technical Specification

The following are the particulars of deviations from the requirements of the Technical Specification: -

Sr. No.	**Section No.**	**Clause No.**	**Deviation proposed**	**Remarks (Including justification)**
1	2	3		4

Signature of the contractor _____

Name of the firm _____

Seal of the firm _____

Section – XII

Un-priced bill of quantity
(Image of price bid/part II)

Sr.No	Description	Nos	Unit	Rate (in ₹)	Amount (in ₹)
1	**WATER COOLED MULTI/ Single COMPRESSORS SCREW CHILLERS**				
1.1	Supply, installation, testing and commissioning (SITC) of AHRI certified and ECBC compliant, ASME stamping water cooled packaged screw (with single/multiple compressors) chiller of minimum 250 TR, ecofriendly refrigerant, min BEE 4 star rated capacity with VFD, of specified design conditions and conforming as per technical specification mentioned in the tender.	3	Sets		
1.2	Supply, installation, testing & commissioning of Chilled Water Line Flow Switch with required modification in the pipeline as per site requirement.	4	Nos		
2	**Remote monitoring system**				
2.1	Supply, Installation, Testing and Commissioning of Client Workstation for remote viewing of all three chiller parameters with required operating system, mouse and keyboard complete as per detailed specifications and integration of 32`` colour graphics LED Monitor to view and monitor the various parameters of all the three chiller plants. It should be controlled through window licensed Software including supply of all required connecting cables, connectors, any other required hardware, software licenses etc. compatible with BMS platform to complete the job as per detailed technical specifications mentioned in the tender. Chiller Plant Monitoring Software - On Premise, should work without internet and data cannot be uploaded to Cloud, Not-recurring charges yearly, Customizable	1	No		

Sr.No	Description	Nos	Unit	Rate (in ₹)	Amount (in ₹)
	Dashboards/GUI, is hall included Decision table and Network diagram, shall be upgradable to Control and Optimize later if required by the Client, with open integration via Banat/IP and Modbus TCP/IP; the platform shall be scalable and upgradeable in future to Chiller Plant Control & Optimization (CPO), including sequencing and optimization, if required by the Client, without replacement of the complete monitoring platform. PC/Workstation with i5, 8GB RAM and 512GB SSD, MS Office Software. 32" monitor Field server/Gateway cat 6 cable				
3	**CHILLED WATER PUMPSETS**: SITC of End suction / Horizontal Split Casing type **30HP 2500 LPM and min head 30 meter chilled water Pump set with VFD control** and IE4 type for air conditioning system. Complete with TEFC motor, base plate, mechanical seal, coupling with guard, gauges etc. for flow and operating head and insulation of pump set body with electrical/ control cable connection, hardware, paint as per approved drawing etc. shall be BMS Compatible as per technical specifications mentioned in the tender. The matching VFDs of IP20 rating with pulse width modulation (PWM)type, one dedicated microprocessor-based pump controller with parallel pumping software is to be duly installed. The Pump Controller shall have programs to safeguard the system against the following conditions Pump flow surges, System Hunting, End of curve protection. and capable of running each individual pumps	3	sets		
4	**CONDENSER WATER PUMPSETS:** SITC of End suction / Horizontal Split Casing type condenser water pump set of **size 40 HP, 3200 LPM and min head 30 mtr** and IE4 , for air conditioning system. Complete with TEFC motor, base plate, mechanical seal, coupling with guard, gauges etc. for flow and operating head and	3	sets		

Sr.No	Description	Nos	Unit	Rate (in ₹)	Amount (in ₹)
	insulation of pump set body with electrical/ control cable connection, hardware, paint as per approved drawing etc. and shall be BMS Compatible as per technical specifications mentioned in the tender.				
5	**INSULATED VALVES** SITC of following valves, strainers, gauges in the water pipeline with the same specifications as the connected piping and adequately supported as per technical specifications mentioned in the tender and required modifications in the existing pipeline including welding, elbows, tees, flanges, or spool etc. as per site requirement.				
5.1	**BALANCING VALVE** : SITC of insulated balancing valve with built in measuring facility with CI body flanged construction with EPDM coated disc with long pitch with protected out pipe insulation and PN16pressure rating for chilled and hot water circulation of size **200 mm dia**. with built in measuring facility complete with insulated flanges, bolts, etc. as per technical specification mentioned in the tender	4	Nos		
5.2	**Butterfly valve** :SITC of buttefly valve with CI body SS disc nitrile sheet O ring and PN 16 pressure rating as specified **of 200 mm dia.** with built in measuring facility complete with insulated flanges, bolts, etc. as per technical specification mentioned in the tender and duly insulated	8	Nos		
5.3	**NON-RETURN VALVE (NRV)** :SITC of insulated NRV with dual plate of CI body SS plates vulcanized NBR seal flanged end and pressure rating as specified of **size 200 mm** dia. complete with insulated flanges, bolts, etc. as per technical specification mentioned in the tender	6	Nos		
5.4	**Industrial type pressure gauges**: SITC of insulated pressure gauge of size 200 mm dia. complete with insulated flanges, bolts, etc. as per technical specification mentioned in the tender	24	Nos		

Sr.No	Description	Nos	Unit	Rate (in ₹)	Amount (in ₹)
5.5	**Industrial temperature gauges**:SITC of Industrial type temperature gauge (0-50 deg. C) with valve and all mounting accessories as per technical specification mentioned in the tender.	6	Nos		
6	**Insulated Chilled water piping(nitrile rubber insulation)**: Supplying, laying/ fixing, testing and commissioning of following nominal sizes of chilled water piping inside the Central Air conditioning System as per technical specifications mentioned in the tender.				
6.1	250 mm dia. having 38 mm (or 19 mm x 2nos) thick insulation	11	mtr		
6.2	200 mm dia. having 38 mm (or 19 mm x 2nos) mm thick insulation	20	mtr		
7	**Condensor water piping**: Supplying, laying/ fixing, testing and commissioning of following nominal sizes of condensor water piping inside the Central Air conditioning System as per technical specifications mentioned in the tender.				
7.1	250 mm dia.	10	mtr		
7.2	200 mm dia.	20	mtr		
8	Dismantling of existing chiller system	1	job		
	Total cost of work (A)				
9	**Rebate for Buyback**				
9.1	**Chiller package:** Centrifugal compressors - 1 nos (Semi Hermetic) Make: Kirloskar McQuay Model: WSC 079 Motor: Reliance Electric - 230 kW hermetic sq. cage Condenser - 1 nos. Make: Kirloskar McQuay Model: C3012 Chiller- 1 no. Make: Kirloskar McQuay Model: E3012 Type: flooded, shell & tube	2	nos		
9.2	**Condenser pump set:**				

Sr.No	Description	Nos	Unit	Rate (in ₹)	Amount (in ₹)
	Make: Beacon Model: SDB 125x150 Type: Horizontal Split Case Capacity: 3600 LPM 30 mtrs40 HP	3	nos		
9.3	**Chilled water pump set:**				
	Make: Beacon Model: SDC 100/125 Type: Horizontal Split Case Capacity: 2800 LPM 30 mtrs 30 HP	3	nos		
	Total rebate (B)				
10.	**CAMC Cost (C) of 1st year** All-inclusive Comprehensive Annual maintenance contract (CAMC) for three (3) Nos. of Chiller units including spares required during CAMC applicable after one year of warranty period (i.e., Defect Liability Period) as per terms and conditions specified in Part-I. Rates to be quoted are yearly for all-inclusive CAMC of one (01) Nos. of Chillers system, chiller parameter monitoring system and pumps, VFD system provided by the contractor, etc. (The rates quoted should be inclusive of GST and other applicable taxes).	3	nos		
	Net cost of work D= A-B+(10.06*C)				

Note:

- **The amount/rates quoted above should be inclusive of loading/unloading charges/shifting charges to designated location in the bank/labor charges, transit cost, statutory taxes etc.as applicable**
- **Total Cost of Ownership = Cost of the capital work (A) – Buyback (B)+(10.06 *AMC rate (C) of 1st year**
- **Bill shall be paid as per actual measurement basis for measurable items.**
- **Evaluation- As per section III(A)of the tender**

Place

Date Signature with seal

N.B. – Price to be quoted in online mode, at CPPP portal only.

Annexure – I

FORMAT FOR POWER OF ATTORNEY FOR SIGNING OF PROPOSAL

(On Non-Judicial Stamp Paper of appropriate value)

Know all men by these presents, We……..……(Name of the Bidder and address of their registered office) do hereby constitute, appoint and authorize Mr. / Ms. …… ……(Name and residential address of Power of Attorney holder) who is presently employed with us and holding the position of ……as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our bid for the **"Design, Supply, Installation, Testing and commissioning (DSITC) of 3 no's of 250 TR water cooled screw Chillers for the Bank's Office Building at Kanpur"** including signing and submission of all documents, deputing persons in pre-bid meeting and providing information / responses to RBI, representing us in all matters before RBI, and generally dealing with RBI in all matters in connection with our proposal for the said Project.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Note:

Power of Attorney should be properly stamped and notarized Power of Attorney furnished shall be irrevocable.

Signature/(s) of the Bidder Name/(s)

Stamp/Seal of the Bidder

(NB: This guarantee will require stamp duty as applicable in the state, where it is executed and shall be signed by the official whose signature and authority shall be verified.)

Annexure II

Important Instructions Regarding E-tender

This is an e-procurement event of RBI. The e- procurement Service Provider/Bidder is the Central Public Procurement Portal (CPPP).
https://etenders.gov.in/eprocure/app

Process of E-tender : Bidder manual kit is available on home page.

A) Registration for new bidder: The process involves vendor's registration with CPP portal which is free of cost.
https://etenders.gov.in/eprocure/app?page=BiddersManualKit&service=page

For any technical related queries please call at 24 x 7 Help Desk Number

0120-4001 002

0120-4001 005

0120- 4493395

International Bidders are requested to prefix +91 as country code

E-Mail Support:
For any Issues or Clarifications relating to the published tenders, bidders are requested to contact the respective Tender Inviting Authority

Technical - support-eproc@nic.in

Policy Related - cppp-doe@nic.in

Annexure-III

Detail of participating firm/bidder on firm's letterhead

1.	Bidder Name	
2.	Status of Firm	Proprietorship Firm/Partnership firm/ Limited/Others If Others Specify:_____ [Enclose certificate of Registration]
3.	Name of Proprietor/ Partners/ Directors of the firm/ company	
4.	Number of Years in Operation	
5.	Address of Registered Office:	
6.	Address of manufacturing plant	
7.	Bidder's address where order/contract is to be placed	
8.	Telephone Number of address where order is to be placed Website & Email ID	_____ (Country Code) (Area Code) (Telephone No.) _____
9.	PAN No.	_____ [Also, Enclose copy of PAN Card]
10.	GST No. (refer sl. no. 8 above)	_____ [Also, Enclose copy of GST Certificate]
11.	EPF Registration No.	_____ [Also, Enclose copy of EPF Registration Certificate]
12.	ESI code No.	_____ [Also, Enclose copy of relevant document]

13.	Whether Micro / Small / Medium Enterprise	(Bidder to submit documents as specified it ITB)
14.	**Banker Detail (The account for receiving payment)** [Also, Enclose copy of cancelled Cheque]	
I.	Banker's Name	
II.	Branch	
III.	Bank account number	
IV.	IFSC	
15.	**Detail of Service Setup**	
I.	Address	
II.	Email	
III.	Telephone/Mobile No	
IV.	No of person stationed	

Place: **[Signature of Authorized Signatory of Bidder]**
Date: **Name:**
Designation:
Seal:

Annexure – IV

List of Clients on firm's letterhead

As per eligibility criteria details of qualifying works

		For work experience (Work to be completed before 5 years)	**Minimum value of each completed work (Work to be completed within 5 years)**		
		Client	**Client 1**	**Client 2**	**Client 3**
1	**Description of the work**				
2	**Detail of client address, telephone number & contact person & email**				
3	**Work order/ Letter of award detail (Enclosed)**				
4	**Value of the work**				
5	**Date of start of work**				
6.	**Date of finish of work**				
7.	**Completion period as per work order**				
8.	**Whether works completed in time or not (No. of days of delay)**				
9.	**Whether works are under Comprehensive Annual Maintenance Contract (CAMC)**				

Place: **[Signature of Authorized Signatory of Bidder]**
Date: **Name:**
Designation:
Seal:

ANNEXURE - V

On the Letter Head of company/firm/organization

Please always quote in your correspondence

Ref. No. _____ Date: _____

The Regional Director
Reserve Bank of India
Kanpur

Dear Sir,

Name of Work: _____

Client's Certificate regarding performance of the Bidder

We confirm that M/s. (Name of the bidder) _____ have carried out the following work/s for us. The firm may be considered sound for entrusting captioned costing up to .

2. Other particulars are given below for your perusal and record:

Sr. No.	**Particulars**	**Comments of the Client**
1	Name of the eligible work with brief particulars	
2	Work order No. and date	
3	Project/work cost	
4	Date of commencement of work	
5	Stipulated date of completion	
6	Actual date of completion	
7	Details of compensation levied for delay (indicate amount), if any	
8	Gross amount of the work completed and paid for	
9	**Performance Report:**	Outstanding / Very Good / Good / Fair / Satisfactory / Poor

Sr. No.	Particulars	Comments of the Client
	(i) Quality of executed work (indicate grading)	
	(ii) If firm is maintaining the system under Annual maintenance Contract (AMC). Indicate grading for performance of AMC	
10	Comments of the Client on the capabilities of the M/s. _____ (Indicate Grading): Outstanding / Very Good / Good / Fair / Satisfactory / Poor	
	(a)Technical proficiency	
	(b) Financial soundness	
	(c) Mobilization of Manpower	
	(d) General Behavior	
11	Any other information which you consider will help us in making our decision.	

Office Seal of the Client

Yours faithfully,

(Signature of the Responding Officer*)
For S.E.(E) / Executive Engineer (E)

* Regarding performance report/ clients certificate, for works carried out for Government/ public sector companies, the certificate should be signed by the concerned Executive Engineer or an officer in an equivalent or higher rank. For works carried out for Private companies, Copy of TDS has to be submitted for proving the credentials/contract amount.

(i) All columns should be filled .in properly

(ii) The Client Certificates should be submitted in a sealed cover addressed to the Reserve Bank of India, Kanpur for each of the Prequalification work/s

Annexure VI

On the Letter Head of Bank

Please always quote in your correspondence

Ref. No. _____ Date: _____

The Regional Director
Reserve Bank of India
Kanpur

Dear Sir,

Name of Work: _____

Banker's Certificate

We confirm that M/s. _____ are banking with us. They may be considered financially sound for entrusting with any contract to ₹ …….

2. Other particulars are given below for your perusal and record:

Sr. No.	Particulars	Comments of the Bank
1	Composition of the firm (Whether partnership / proprietorship /Public Ltd.)	…….
2	Names of the proprietor/ partners / Directors of the firm	
3	Credit facility / overdraft facility enjoyed by them	
4	Dealings	
5	The period from which the firm has been banking with your Bank	
6	Any other remarks	

3. This certificate is issued without any Guarantee or responsibility on the bank or any of its officers.

Yours faithfully,

Seal of the Bank

(Signature)
Authorized Signatory
For the Bank

Annexure – VII

PROFORMA OF BANK GUARANTEE FOR EARNEST MONEY DEPOSIT

(On Non-Judicial Stamp Paper of appropriate value)

The Regional Director
Reserve Bank of India
Kanpur

Dear Sir,

Name of Work ……

Ref.: NIT/Advt.No. date

WHEREAS The Reserve Bank of India, Kanpur having its Central Office at Shahid Bhagat Singh Road, Mumbai (hereinafter called the 'RBI') has invited tenders for the captioned work (hereinafter called "the said tender") on the terms and conditions mentioned in the said tender documents. It is one of the terms of invitation of tenders that the bidder shall furnish a Bank Guarantee for a sum of Rs. (Rupees only) as Earnest Money Deposit (EMD). M/s. (Name of the Bidder/Bidder) _____, (hereinafter called as "the Bidder/ Bidder"), who are our Clients/Constituents intend to submit their tender/ Bid for the said work and have requested us to furnish Bank Guarantee to RBI in respect of the said sum of Rs. (Rupees only) in respect of EMD. NOW THIS GUARANTEE WITNESSETH

1. We (Name of the Bank) do hereby agree with and undertake to RBI, their Successors, Assigns that in the event of the RBI coming to the conclusion that the Bidder have not performed their obligations under the said conditions of the tender or have committed a breach thereof, which conclusion shall be binding on us as well as the said Bidder; we shall on demand by the RBI, pay without demur to the RBI, a sum of Rs. (Rupees only) or any lower amount that may be demanded by the RBI. Our guarantee shall be treated as equivalent to the Earnest Money Deposit for the due performance of the obligations of the Bidder under the said Conditions, provided, however, that our liability against such sum shall not exceed the sum of Rs. (Rupees only).

2. We also agree to undertake to and confirm that the sum not exceeding Rs. (Rupees only) as aforesaid shall be paid by us without any demur or protest, merely on demand from the RBI on receipt of a notice in writing stating that the amount is due to them and we shall not ask for any further proof or evidence and the notice from the RBI shall be conclusive and binding on us and shall not be questioned by us in any respect or manner whatsoever. We undertake to pay the amount claimed by the RBI within a period of one week from the date of receipt of the notice as aforesaid.

3. We confirm that our obligation to the RBI under this guarantee shall be independent of the agreement or agreements or other understandings between the RBI and the Bidder.

This guarantee shall not be revoked by us without prior consent in writing of the RBI. We hereby further agree that –

a) Any forbearance or commission on the part of the RBI in enforcing the conditions of the said agreement or in compliance with any of the terms and conditions stipulated in the said tender and/or hereunder or granting of any time or showing of any indulgence by the RBI to the Bidder or any other matters in connection therewith shall not discharge us in any way and our obligation under this guarantee. This guarantee shall be discharged only by the performance by the Bidders of their obligations and in the event of their failure to do so, by payment by us of the sum not exceeding Rs. (Rupees only).

b) Our liability under these presents shall not exceed the sum of Rs. (Rupees only).

c) Our liability under this agreement shall not be affected by any infirmity or irregularity on the part of our said constituents/clients in tendering for the said work or their obligations there under or by dissolution or change in the constitution of our said constituents.

d) This guarantee shall remain in force upto (six months from the last date of receipt of tender) provided that if so desired by the RBI, this guarantee shall be renewed for a further period as may be indicated by them on the same terms and conditions as contained herein.

e) Our liability under these presents will terminate unless these presents are renewed as provided hereinabove on the or on the day when our said constituents comply with their obligations, as to which a certificate in writing by the RBI alone is the conclusive proof whichever date is later. Unless a claim or suit or action is filed against us within or any extended period, all the rights of the RBI against us under this guarantee shall be forfeited and we shall be released and discharged from all our obligations and liabilities hereunder.

Yours faithfully,

For and on behalf of Bank.

Authorised Official (with seal)

(NB: This guarantee will require stamp duty as applicable in the state, where it is executed and shall be signed by the official whose signature and authority shall be verified).

Annexure VIII

Deviation in Techno- Commercial Conditions (on firms letter head)

We confirm that all commercial condition /technical specification of the Bank except for deviations listed below.

Sr. No.	Section No.	Clause No.	Deviation proposed Commercial condition
Sr. No.	**Section No.**	**Clause No.**	**Deviation proposed technical specification**

(Submit nil if there is no deviation)

Place: [Signature of Authorized Signatory of Bidder]
Date: Name:
Designation:
Seal:

Annexure IX

Format of Article of Agreement /Contract Agreement

(For successful bidder)

(On non-judicial stamp paper of appropriate value as per the applicable Stamp Act)

THIS CONTRACT AGREEMENT is made the_____ day of_____, 2026 between the Reserve Bank of India, Kanpur, body corporate constituted under the Reserve bank of India, Act 1934, having its registered office at: Central Office Building, Shahid Bhagat Singh Road, Mumbai – 400 001 (hereafter called "The Bank") represented by ……..which expression shall include its successors and assigns of the one part and _____ _____incorporated under _____and having its registered office at _____ (thereinafter called "the Contractor")) which expression shall include its successors, legal representatives and assigns of the other part.

WHEREAS the Bank desires to engage the Contractor to **Design, Supply, Installation, Testing and commissioning (DSITC) of 3 no's of 250 TR water cooled screw Chillers for the Bank's Office Building at Kanpur** and the Contractor has agreed to such engagement upon and subject to the terms and conditions hereinafter appearing.

AND WHEREAS the Bank had called for tenders from eligible contractors to provide services for providing "……." as has been indicated in the scope of work and other documents attached to the tender.

AND WHEREAS the Contractor and others submitted the tender and the Bank has awarded the contract, to provide ……." as stated in the scope of work attached to the Tender Document, to the Contractor.

AND WHEREAS the Contractor has agreed to execute the assigned work subject to the conditions set forth herein and to the conditions set forth in the Tender Documents (Part I, Part II, annexures and amendments thereof) as modified and finally accepted by both the parties (all of which are collectively hereinafter referred to as "the said Conditions") the works described in terms and conditions and included in the detailed scope of work as stated in the Tender Documents (Part I, Part II, annexures and amended thereof) 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:	
1	**Contract Agreement:** The following documents shall constitute the Contract between the Bank and the Contractor, and each shall be read and construed as an integral part of the Contract: a) This Contract Agreement and the Appendices hereto b) Letter of Award . Ref. No c) Minutes of pre-bid meeting d) All emails and letters exchange during the tendering process

	e) Part I (Techno commercial bid) and Part II (Price bid) Bid submitted by the bidder f) Notice Inviting Tender (NIT), along with any corrigenda/addenda.
2	**Contract Price:** The Bank hereby agrees to pay to the Bidder the Contract Price in consideration of the performance by the Bidder of its obligations hereunder. The Contract Price shall be the aggregate of *[Fill: amount of local currency in words]*, *[Fill: amount in figures]*, or such other sums as may be determined in accordance with the terms and conditions of the Contract.
3	**Earnest Money Deposit**: Contractor has deposited an Earnest Money Deposit (EMD) equal to ₹ 6,46,000/- along with the tender document in the form of NEFT in favour of Reserve Bank of India, Kanpur in the A/c No: Bank's account no.**186003001 IFSC RBIS0KNPA01 , (Please read 0 as zero)** through NEFT transaction remarks. No interest will be payable on the EMD. The Earnest money paid by the Contractor will be released after submission of Security deposit in the form of Performance Bank Guarantee.
4	**Performance Bank Guarantee (PBG):** The Contractor shall deposit PBG @5 %of the contract amount in favour of Reserve Bank Of India, Kanpur, within *14* days of the award of contract with its validity towards entire period of currency of Contract (work completion+DLP+60 days) for due fulfilment of the Contractual obligations by the contractor. No interest will be paid on it. This Performance Bank Guarantee (PBG) shall be initially valid for a period of contract duration plus 60 days and shall be suitably extended till DLP of the work plus 60 days in case of extension of contract period. **The Performance Bank Guarantee (PBG) may be submitted as an ePBG, a physical copy, or via NEFT for the equivalent amount.** The PBG deposited by the Contractor shall be liable to be forfeited or appropriated in the event of unsatisfactory performance of the Contractor and / or loss/ damage if any sustained by the Bank on account of failure or negligence of the workers deployed by him or in the event of breach of the terms and conditions of the agreement. However, the issue of letter of acceptance/ work order by the Bank shall be construed as a binding contract, as though such an agreement has been executed and all the terms and conditions shall apply on this contract. Submission of PBG shall be ensured as stipulated in the tender. In case of delay in submission in unavoidable circumstances, charges for delay in submission of PBG shall be recovered from the bills of the contractor at Bank rate.
5	**Payment Terms:** Payment shall be made by the Bank to the Contractor as per the provisions of Part I of the tender. The Contractor shall ensure that wages & allowances paid to his workers are in compliance with Government wage regulations. Proof of paying minimum wages

	shall be submitted by the Contractor to the Bank. The percentage of wage increase shall be given as per percentage revision of wages by the Government. The workmen should be paid minimum wages under the Minimum Wages Act, 1948 & rules made thereunder or under any other applicable law. Besides, the workmen should be given Employees Provident Fund as per Employees Provident Funds & Miscellaneous Provisions Act, 1952 and / or dividends as per Payment of Bonus Act, 1965 and ESI under ESI Act, 1948 as applicable. In the absence of ESI, the contractor should undertake the liability under the coverage of Insurance such as Workmen's Compensation Insurance under Employees Compensation Act, 1923. The Workmen Compensation policies shall be valid till the validity of contract with the Bank. If the contractor does not provide these policies, the Bank reserves the right to take the above insurance policies themselves and recover the cost thereof from the bill of the contractor. The total premium shall be borne by the contractor. The contractor shall have a valid EPF Account for making EPF Contribution for its workmen. In case of any complaint regarding non-compliance of any statutory payments; the same shall be deducted from the bill without prejudice to the Bank's right to terminate the contract. The Contractor shall abide by all the statutory provisions of the Labour Codes, shall not engage a person below the age of 18 years. Contractor shall be responsible for implementing the requirements of the applicable laws. f) The Contractor shall ensure timely payment of wages/salary within **five (05) days** of subsequent month to the persons employed for the purpose of this agreement (through cheque or by crediting to the bank account) and a certificate to the effect that the salaries/wages are being paid regularly shall be furnished to the bank every monthPayment shall be made by the Bank to the Bidder as per the provisions of Part I of the tender.
6	**Insurance:** The contractor shall, at his own expense, effect and maintain with effect from the date of commencement till issue of the completion certificate under this contract, with an approved insurance company, an All Risks Policy for insurance for an amount equal to the amount of the contract including earthquake risk in the joint names of the Bank and the contractor (the name of the former being placed first in the policy) against all risks as per the standard all risk policy for contractors and deposit such policy or policies with the Bank before commencing the works. The Contractor shall be held to be reasonably liable for all injury to persons, animals or things, and for all structural and decorative damage to property which may arise from the operation or neglect of the Contractor or its workers or of any nominated Sub-Contractor or any employee or either, whether such injury or damage arises from carelessness, accident or any other cause whatever, in any way connected with the carrying out of this Contract. The liability under this clause shall be held to include inter alia, any damage to Building, whether immediately adjacent or otherwise, and any damage to roads, streets, footpaths, bridges or ways as well as all damage caused to the Building and other structures and works forming the subject matter of this Contract. The contractor shall also be

responsible for any damage caused to the Building and other structures and works forming the subject matter of this Contract by frost, rain, wind or other inclemency of weather. The Contractor shall indemnify and keep indemnified the Bank and hold him harmless in respect of all and any loss and expenses arising from any such injury or damage to persons or property as aforesaid and also against any claim made in respect of injury or damage, whether under any Statute or otherwise and also in respect of any award of compensation or damages consequent upon such claim.

The Contractor shall reinstate all damage of every sort mentioned in this Clause, so as to do delivery of the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties. The Contractor shall also indemnify and keep indemnified the Bank against all claims which may be made against the Bank by any person/ member of the public or other **third party** in respect of anything which may arise in respect of the works or in consequence thereof and **shall at his own expense arrange to effect and maintain, with effect from the date of commencement until the completion of the Contract, with an approved Insurance company a policy of Insurance in the joint names of the Bank and the Contractor(the name of the former being placed first in the policy) against such risks and deposit such Policy or Policies with the Bank before commencement of the work**. The minimum limit of coverage under the policy shall be as defined elsewhere under General Condition of Contract. The Contractor shall also similarly indemnify the Bank against all claims which may be made upon the Bank whether under the **Workmen Compensation Act** or any other statute in force during the currency of this contract or at Common Law in respect of any employee of the Contractor or any Sub-Contractor and **shall at his own expenses effect and maintain, with effect from the date of commencement until the completion of the Contract, with an approved Insurance company a policy of Insurance in the joint names of the Bank and the Contractor(the name of the former being placed first in the policy) against such risks and deposit such Policy or Policies with the Bank from time to time during the currency of the Contract**. In default of the contractor ensuring as provided above, the Bank may so ensure and may deduct the premiums paid from any money due or which may become due to the contractor.

The Contractor shall be responsible for any liability which may be excluded from the Insurance Policies above referred to and also for all other damages to any person, animal or property arising out of and incidental to the negligent or defective carrying out of this Contract, whatever may be the reasons due to which the damage shall have been caused. He shall also indemnify and keep indemnified the Bank in respect of all and any costs, charges or expenses arising out of any claim or proceedings relating to the works and also in respect of any award of compensation or damages, arising therefrom. Without prejudice to the other rights of the Bank against contractor in respect of such default, the Bank shall be entitled to deduct from any sums payable to the Contractor the amount

	of any damage, compensation, costs, charges and other expenses paid by the Bank and which are payable by the contractor under this clause. The contractor shall upon settlement by the insurer of any claim made against the insurer pursuant to a policy taken under this clause proceed with due diligence to rebuild or repair the works destroyed or damaged. In this event all the money received from the insurer in respect of such damage shall be paid to the contractor and the contractor shall not be entitled to any further payments in respect of the expenditure incurred for Building or repairing of the materials or goods destroyed or damaged. The contractor, in case of re-Building or reinstatement after damage shall be entitled to such extension of time for completion as the Bank may deem fit, but shall, however, not be entitled to reimbursement by the Bank of any shortfall or deficiency in the amount finally paid by the insurer in settlement of any claim arising as set out herein. Without prejudice to his liability under this clause, the contractor shall also cause all nominated sub-contractors to effect, for their respective portions of works similar policies of insurance in accordance with the provisions of this clause and shall produce or cause to produce to the Bank such policies. The contractor shall not permit a nominated sub-contractor to commence work at site unless said insurance policies are submitted. In the event of failure of the sub-contractor to take out such policy or policies of insurance before commencing the works at site, the contractor shall be responsible for any claim or damage attributable to the said sub-contractor. In order to fulfil all the insurance-related conditions mentioned above, the contractor shall, within 14 days from the date of issue of the work order, insure the works at his cost and keep them insure until the virtual completion of works, against loss or damage by fire with an office in the joint names of the Bank and the contractor (the name of the Bank i.e. "RESERVE BANK OF INDIA" being placed first in the policy). It shall cover the following risks. i. **Contractors all risk (CAR) policy** insurance inclusive of Storage, erection, testing and commissioning policy for the full contract value including fire risk and Transit insurance for transportation from manufacturer's works to site (by Air/Sea/Road etc. as applicable. ii. **Workmen compensation policy** for the employees of the contractor at site. iii. **Third party liability policy** with a limit of Rs 2 lakh per accident maximum upto 3 accidents.
7	**Time of Completion:** The completion period of the project shall be reckoned from the 14th day of issuance of Letter of Award/Work Order. Time shall be considered the essence of this Contract, and the Contractor hereby agrees to commence the work immediately after the site is handed over to him to complete the entire work as provided in the said conditions, subject nevertheless to the provisions for extension of time.

8	**Appendices**: The Appendices listed in the attached list of Appendices shall form an integral part of this Contract Agreement. Reference in the Contract to any Appendix shall mean the Appendix attached hereto, and the Contract shall be read and construed accordingly.
9	**Jurisdiction**: All disputes arising out of or in any way connected with this Agreement shall be deemed to have arisen at Kanpur and only Courts in Kanpur shall have jurisdiction to determine the same
10	**Language**: The Tender form shall be filled in English or in Hindi. In the event of any discrepancy or ambiguity between the English and Hindi version of the documents, the English version shall prevail in matters of interpretation. All communications, drawings, designs, data, information, codes, specifications, and other documents supporting the bid or otherwise exchanged under the Contract shall be in English or in Hindi
11	**Non-disclosure:** i. The contractor shall not disclose directly or indirectly any information, materials and details of the Bank's infrastructure/systems/equipment etc., which may come to the possession or knowledge of the Service Provider and /or the DB Developer during the course of discharging their contractual obligations in connection with this agreement, to any third party and shall at all times hold the same in strictest confidence. The contractor shall treat the details of the contract as private and confidential, except to the extent necessary to carry out the obligations under it or comply with applicable laws. The contractor shall not publish, permit to be published, or disclose any particulars of the services/works in any trade or technical paper or elsewhere without the previous written consent of the Second Party. Failure to observe the above shall be treated as breach of contract on the part of the contractor, as the case may be, and the Second Party shall be entitled to claim damages and pursue legal remedies. ii. The contractor shall take all appropriate action with respect to its employees to ensure that the obligations of non-disclosure of confidential information under this agreement are fully satisfied. iii. Without prejudice to the formal Contract Agreement, all confidentiality and non-disclosure obligations binding the Contractor under this tender shall survive the expiration, completion, or termination of this Agreement for any reason whatsoever.
12	**PREVENTION OF SEXUAL HARASSMENT AT WORKPLACE** i. The Contractor shall be solely responsible for full compliance with the provisions of "the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013". In case of any complaint of sexual harassment against its own employee within the premises of the Bank, the complaint will be filed before the Internal Complaints Committee constituted by the Contractor who shall ensure appropriate action under the said Act in respect to the complaint. ii. Any complaint of sexual harassment from any aggrieved employee of the Contractor against any employee of the Bank shall be taken cognizance of by the Regional Complaints Committee constituted by the Bank. iii. The Contractor shall be responsible for any monetary compensation that may need to be paid in case the incident involves the employee of the

	Contractor, for instance any monetary relief to the Bank's employee, if sexual violence by the employee of the Contractor is proved. The Contractor shall be responsible for educating its employees about prevention of sexual harassment at workplace and related issues.
13	**Termination of Contract by the Bank** If the Contractor being an 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 the supervision of the Court and the Official Assignee or the Liquidator, in such acts of insolvency or winding up, as the case may be, shall be unable, within seven days after notice to him requiring him to do so, to show the reasonable satisfaction of the Bank that he is able to carry out and fulfil the Contract and to give security therefor, if so required by the Bank. Or if the Contractor (whether an individual, firm or Incorporated Company) shall suffer execution or other process of Court attaching property to be issued against the Contractor, Or shall suffer any payment under this Contract to be attached by or on behalf of any of the creditors of the Contractor, Or shall assign or sublet this Contract without the consent in writing of the Bank first had and obtained, Or shall charge or encumber this Contract or any payments due or which may become due to the Contractor hereunder, Or if the Bank determine that the Contractor has abandoned the Contract, or has failed to commence the works, or has without any lawful excuse under those Conditions suspended the progress of the works for 14 days after receiving from the Bank notice to proceed, or has failed to proceed with the works with such due diligence and failed to make such due progress as would enable the works to be completed within the time agreed upon, or has failed to remove materials from the site or to pull down, and replace work for seven days after receiving written notice that the said materials or work were condemned and rejected by the Bank under these Conditions or has neglected or failed persistently to observe and perform all or any of the acts, matters or things by the Contract to be observed and performed by the Contractor for seven days after written notice shall have been given to the Contractor requiring the Contractor to observe or perform the same.

	Then and in any of the said cases, the Bank may, notwithstanding any previous waiver, after giving seven days' notice in writing to the Contractor, determine the Contract and liabilities of the Contractor, the whole of which shall continue in force fully as if the Contract had not been so determined, and as if the works subsequently executed had been executed by or on behalf of the Contractor and further, the Bank by his agents or servants may enter upon and take possession of the works and all plant, tools, scaffoldings, machinery and materials lying upon the Estate or the adjoining lands or roads, and use the same as his own property or may employ the same by means of his own servants and workmen in carrying on and completing the works or by employing any other Contractor or other person or persons to complete the works, and the Contractor shall not in any way interrupt or do any act, matter or thing to prevent or hinder such other contractor or other person or persons employed for completing and finishing or using the materials and plant for the works. When the works shall be completed or as soon thereafter as convenient, the Bank shall give a notice in writing to the Contractor to remove his surplus materials and plant, and should the Contractor fail to do so within a period of fourteen days after receipt thereof by him, the Bank may sell the same by public auction, and give credit to the Contractor for the net amount realised. The Bank shall thereafter ascertain and certify in writing under his hand what (if anything) shall be due or payable to, or by the Bank, for the value of the said plant and materials so taken possession of by the Bank and the expense or loss which the Bank shall have been put to in procuring the works to be completed, and the amount, if any, owing to the Contractor and the amount which shall be so certified shall thereupon be paid by the Bank to the Contractor or by the Contractor to the Bank, as the case may be, and the decision of the Bank shall be final and conclusive between the parties.
14	**Termination of Contract by Contractor** If payment of the amount payable by the Bank under certificate of the Bank's Engineer shall be in arrears and unpaid for thirty days after notice in writing requiring payment of the amount as aforesaid shall have been given by the Contractor to the Bank or if the Bank shall repudiate the Contract, or if the works be stopped for three months under the order of the Bank or by any injunction or other order of any Court of Law, then and in any of the said cases, the Contractor shall be at liberty to determine the Contract by notice in writing to the Bank and he shall be entitled to recover from the Bank, payment for all works executed and for any loss he may sustain upon any plant or materials supplied or purchased or prepared for the purpose of the Contract. In arriving at the amount of such payment, the net rates contained in the Contractor's original Tender shall be followed, or where the same may not apply, valuation shall be made in accordance with Clause 19 of section IV.
15	**Penalty** The penalty shall be deducted as 0.25% of contract value for per week delay in the completion of project as per clause 1 of section V of the tender , subject to maximum deduction against liquidated damages upto 10% of contract value..

IN WITNESS WHERE OF the Bank and the Bidder/Bidder have caused this Agreement to be duly executed by their duly authorized representatives the day and year first above written.

Signed by for and on behalf of the Bank
[Signature]
[Name & Title]
In the presence of:

1. [Witness 1 Signature & Details]
2. [Witness 2 Signature & Details]

Signed for and on behalf of the Bidder
[Signature]
[Name & Title]
In the presence of:

1. [Witness 1 Signature & Details]
2. [Witness 2 Signature & Details]

Annexure – X

Proforma Of Bank Guarantee For Performance Security Deposit/ Retention Money

(On Non-Judicial Stamp Paper of appropriate value purchased in the name of the issuing bank)

Place : _____
Date : _____

The Regional Director
Reserve Bank of India
Kanpur

Dear Sir,

Name of work: _____ - Bank Guarantee For PERFORMANCE SECURITY DEPOSIT/ Retention Money

WHEREAS Reserve Bank of India, Kanpur having its Central Office at Shahid Bhagat Singh Road, Mumbai, (hereinafter called “the RBI”) has awarded the Contract for the captioned project (hereinafter called the "Contract") to M/s _____ (Name of the Bidder) (hereinafter called " the said Bidder" which expression shall include its successors and assigns). AND Whereas the Bidder is bound by the said Contract to submit to RBI a Performance Security for a total amount of ₹._____ (Rupees___ _____ only) (Amount in figures and words) for the due fulfilment by the said bidder of the terms and conditions contained in the contract. We, _____ (Name of the Bank), (hereinafter called “the Bank”), at the request of M/s _____, the bidder, do hereby undertake to pay to the RBI an amount not exceeding Rs _____ as Performance Guarantee for due fulfilment of the terms and conditions of the contract.

NOW THIS GUARANTEE WITNESSETH

1. We (Name of the Bank) do hereby agree with and undertake to RBI, their Successors, Assigns that in the event of the RBI coming to the conclusion that the Bidder has not performed his obligations under the said conditions of the contract or have committed a breach thereof, which conclusion shall be binding on us as well as the said bidder; we shall on demand by the RBI, pay without demur to the RBI, a sum of Rs. (Rupees only) or any lower amount that may be demanded by the RBI. Our guarantee shall be treated as equivalent to the Performance Guarantee Amount for the due performance of the obligations of the Bidder under the said Contract, provided, however, that our liability against such sum shall not exceed the sum of Rs. (Rupees only).

2. We also agree to undertake to and confirm that the sum not exceeding Rs. (Rupees _____only) as aforesaid shall be paid by us without any demur or protest, merely on demand from the RBI on receipt of a notice in writing stating that the amount is due to them and we shall not ask for any further proof or evidence and the notice from the RBI shall be conclusive and binding on us and shall not be questioned by us in any respect or manner whatsoever. The Bank shall pay to RBI any money so demanded notwithstanding

any dispute/disputes raised by the Bidder in any suit or proceedings pending before any Court, Tribunal or Arbitrator/s relating thereto and the liability under this guarantee shall be absolute and unequivocal. We undertake to pay the amount claimed by the RBI within a period of one week from the date of receipt of the notice as aforesaid.

3. We confirm that our obligation to the RBI under this guarantee shall be independent of the agreement or agreements or other understandings between the RBI and the Bidder.

4. This guarantee shall not be revoked by us without prior consent in writing of the RBI. We hereby further agree that –
a) Any forbearance or commission on the part of the RBI in enforcing the conditions of the said agreement or in compliance with any of the terms and conditions stipulated in the said Contract and/or hereunder or granting of any time or showing of any indulgence by the RBI to the Bidder or any other matters in connection therewith shall not discharge us in any way and our obligation under this guarantee. This guarantee shall be discharged only by the performance by the Bidder of their obligations and in the event of their failure to do so, by payment by us of the sum not exceeding Rs. (Rupees only).
b) Our liability under these presents shall not exceed the sum of Rs. (Rupees only) .
c) Our liability under this agreement shall not be affected by any infirmity or irregularity on the part of our said constituents/clients or their obligations thereunder or by dissolution or change in the constitution of our said constituents.
d) This guarantee shall remain in force upto (60 days beyond the Defect liability period) provided that if so desired by the RBI, this guarantee shall be renewed for a further period as may be indicated by them on the same terms and conditions as contained herein.
e) Our liability under these presents will terminate unless these presents are renewed as provided hereinabove on the or on the day when our said constituents comply with their obligations, as to which a certificate in writing by the RBI alone is the conclusive proof whichever date is later. Unless a claim or suit or action is filed against us within or any extended period, all the rights of the RBI against us under this guarantee shall be forfeited and we shall be released and discharged from all our obligations and liabilities hereunder. In witness whereof I/We of the Bank have signed and sealed this guarantee on the -------- -- day of ---------- (Month) (Year) being herewith duly authorized. For and on behalf of _____ (Name of the Bank) Signature of authorized Bank official Name: Designation Stamp/ Seal of the Bank Signed, sealed and delivered for and on behalf of the Bank by the above named in the presence of: Witness
1 Signature …… Name …… Address …… (NB: This guarantee will require stamp duty as applicable in the state, where it is executed and shall be signed by the official whose signature and authority shall be verified).

Annexure XII

Proforma for Undertaking / Declaration / Certificate by the Bidder regarding country sharing land border with India

(To be submitted by bidders on their letter head duly sealed and signed by the authorized signatory)

To, Date:
The Regional Director
Reserve Bank of India
Kanpur

Ref: Application for _____

Madam,

I / We ……. (Name and address, including Country of location of bidder) have read and understood the contents of the Office Memorandum (OM) F. No. 6/18/2019-PPD dated July 23, 2020 and its subsequent orders / revision issued by Public Procurement Division, Department of Expenditure, Ministry of Finance, Government of India regarding the restrictions on procurement from a bidder of a country which shares a land border with India.

2 I / We certify that …… (Name of the bidder)

2.1 is not from a country sharing land border with India, or
2.2 is from a country sharing land border with India and has been registered with the Competent Authority, the certificate of which is enclosed, or
2.3 is from a country sharing land border with India where Government of India has extended lines of credit, or
2.4 is from a country sharing land border with India where Government of India is engaged in development projects.

(Strikeout whichever of the above is not applicable).

3 I /We further certify that ……. (Name of bidder) fulfils all requirements in this regard and is eligible to be considered under the provision of the above referred Office Memorandum and its subsequent orders / revision. I/We also undertake that even in case of contracts where we are permitted by the Bank/RBI to sub- contract I/we ……..……(Name
of bidder) will not sub-contract any work to a bidder from country(ies) sharing land border with India, unless such bidder fulfils all the requirements contained in the above referred office memorandum / order.

4. I/We know and understand that, if this Undertaking / Declaration / Certificate submitted by us is found to be false, the Bank shall be free to reject / terminate our tender / Work Order and that the Bank shall also be free to initiate any legal action in accordance with law including forfeiting of Earnest Money Deposit / Performance Bank Guarantee / Security Deposit and / or debarring us from participating in tenders invited by the Bank in future.

Signature and name of the authorized signatory of the Bidder with Rubber Stamp
Date:
Place:

Annexure XIII

Undertaking on Legal Actions / Civil Lawsuits / Litigation / Arbitration by the Bidder
[On the Letter head of the Applicant]

Date:

To,
The Regional Director
Reserve Bank of India
Kanpur

Ref: Application for _____

Madam,
1 I/We …… (Name of the bidder) declare that no legal action(s) have been
/ is being taken against us for any cause in any legal jurisdiction.

1. I/We …… (Name of the bidder) declare that the followings legal action(s) have been/ is being taken against us:

…… (detail of the legal action, project under consideration, legal authority involved etc.) …..

…….

However, we affirm that the above legal action does not affect our ability to deliver the requirements of the Bank as per the Application for Empanelment.

(Note: strike out one of the above two declarations which is not applicable)

2. Further, we ……. also declare that no cases of civil lawsuits / litigation / arbitration etc. have been initiated in any in any of our executed projects

2. Further, we ……. also declare that the following civil lawsuits / litigation / arbitration cases were/are initiated in our executed projects:
……. (detail of the project and type of action etc.) .....
……
(Note: strike out one of the above two declarations which is not applicable)

Signature and name of the authorized signatory of the Bidder
with Rubber Stamp

Date:

Place:

Annexure XIV

Undertaking to be included in tender regarding declaration of debarment by public institution(s):

(To be submitted by the tenderer on their letterhead)

Name of Work: Design, Supply, Installation, Testing and commissioning (DSITC) of 3 no's of 250 TR water cooled screw Chillers for the Bank's Office Building at Kanpur

1. I/We ……. (Name of the bidder) declares that
   a) I/we or any of our allied firm* is/ are not debarred / suspended / blacklisted by any public institution / entity in India or any other country as on ……(last date of submission of bid).
   b) I/ We or any of our allied firm* have not made any transgression in respect of the code of integrity (as mentioned in the tender) with any public institution / entity in India or any other country in last three years as on ……...(last date of submission of bid).
   c) I/we or any of our allied firm* is/ are not debarred by any procuring entity for violation of Public Procurement (Make in India) Order, 2017as on last date of submission of the bid.)
   d) we will inform the Bank in writing, in case, I/we or any of our allied firm* is/are debarred / suspended / blacklisted by any public institution / entity in India or any other country on or before award of work for the captioned work.
2. I/We ……..(Name of the bidder) declares that I/we or our allied firm* ……(Name of the allied firm(s)) is/ are debarred / suspended / blacklisted by ……..……..(Name and address of public institution in India or any other country) and the same effective upto ……(date). A copy of such letter is attached for your information and record.

(seal and signature of the bidder)
Date
Place
(Note: strike out one of the above two declarations which is not applicable)

*Allied firm: A firm would be termed as "allied firm" if the management is common, or substantial or majority shares are owned by the banned/ suspended firm and by virtue of this it has a controlling voice. Further all successor firms will also be considered as allied firms.

Annexure XV

वार्षिक रखरखाव अनुबंध के लिए समझौता

(**100** रुपये गैर न्यायिक स्टांप पेपर पर)

Articles of Agreement for Annual Maintenance Contract

(On Rs 100 non-judicial stamp paper)

यह समझौता अनुबंध भारतीय रिजर्व बैंक, कानपुर है (और_____के मध्य दिनांक_____ को) इसके बाद" नियोक्ता" और" ठेकेदार "कहा जाएगा(निष्पादित किया गया।

जबकि नियोक्ता _____(कार्य का नाम (हेतु _____ की अवधि के लिए वार्षिक रखरखाव अनुबंध का इच्छुक है और उसने किए जाने वाले कार्यों की विशिष्टताओं और मात्राओं के अनुरूप अपेक्षित कार्य के लिए हस्ताक्षरित अथवा पार्टियों द्वारा या इसके लिए हस्ताक्षरित किए गए हैं ।

और जबकि ठेकेदार इस विषय के काम पर यहां निर्धारित शर्तों और विशेष शर्तों में उल्लिखित और अनुबंध की मात्राओं और शर्तों की अनुसूची में संशोधित करके अंतत :दोनों पक्षों द्वारा स्वीकृति के लिए सहमति हुई है

)इन सभी सामूहिक रूप से इसके बाद" उक्त शर्तों "के रूप कहा जाएगा ,(उक्त मानचित्रों पर दिखाए गए कार्यों और/या उक्त विनिर्देशों में वर्णित और संबंधित दरों में मात्रा की अनुसूची में शामिल है, उसके बाद निकाली गई राशि या अन्य राशि के रूप में इसके तहत देय) इसके बाद" उक्त अनुबंध राशि "के रूप में संदर्भित (होगा।

ARTICLES OF AGREEMENT made the _____ day of _____ between the **Reserve Bank of India**, **Kanpur** (hereinafter called "the Bank") of the one part and _____ (hereinafter called "the Bidder") on the other part.

WHEREAS the Bank is desirous of Annual Maintenance Contract for the _____ for_____(*Name of the work)* and has caused specifications and Bill of Quantities describing the works to be done which have been signed by or on behalf of the parties hereto.

AND WHEREAS the Bidder 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 Bill 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 Bill 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").

यह एतदद्वारा अब सहमति के साथ इस प्रकार है :

NOW IT IS HEREBY AGREED AS FOLLOWS:

1.	यह वार्षिक रखरखाव अनुबंध (प्रणाली के सभी भाग) _____की अवधि के लिए है। अनुबंध की दर को इस समझौते के उपबंध 3B के अनुसार नवीनीकृत किया जाएगा। This Annual maintenance contract (i.e. all parts of the system) for the period of_____. Rate of the contract shall be renewed as per the clause 3B of this agreement.
2.	बैंक _____ में _____ के रख-रखाव कार्य के निष्पादन हेतु फ़र्म को रू_____ के लिए भुगतान किया जाएगा। **The firm will be paid Rs. _____ for _____by the Bank for _____**

3	**B. Scope of work during warranty/Defect liability period and Comprehensive annual maintenance contract period after:** i. Providing all-inclusive onsite service with supply of all spares including microprocessors/display etc. during warranty period and subsequent Comprehensive Annual Maintenance Contract for the committed period of 14 years (minimum) from the date of expiry of 1-year Defect Liability Period (DLP) to the Bank. The DLP of one (01) years will commence after virtual completion of entire work in all respect. After completion of two years period Chillers will be under Comprehensive AMC contract. ii. **The scope of comprehensive AMC shall include chillers, chiller parameter monitoring system and pumps, VFD system provided by the contractor.** iii. The work during DLP and AMC shall include filling/topping of refrigerant, replacement of compressor oil /other spares at regular intervals or any other maintenance related activities as recommended by OEM for optimum running of chillers, without any additional cost. iv. The vendor has to perform the monthly/ quarterly inspection and services as mentioned in the tender. v. There is no payment during DLP. However, the CAMC payment shall be made on **quarterly** on rendering satisfactory service vi. The annual maintenance service contract rate shall also consider all the cost, including labor, travel cost from the nearest service station, all spares parts, oil, cables, and upgradation of technologies and relocation of system as and when required, consumable items etc. required for smooth functioning of the system. vii. The tentative maintenance schedule shall include, but not limit to the following:

1. Chiller	Monthly Inspection and Service	1. Perform all function for monthly checks 2. Check refrigerant level, leak test with electronic Leak detector. 3. Inspect level and condition of oil. 4. Check the liquid line sight glasses for proper flow. 5. Check all operating pressures and temperatures. 6. Inspect and adjust, if required, all operating safety controls. 7. Check capacity control, adjust if necessary. 8. Lubricate vane/ linkage/ bearings. 9. Visually inspect machine and associated components, and listen for unusual sound or noise for evidence of unusual conditions. 10. Check lock bolts and chiller spring mount. 11. Review daily operating log maintained by Bank's operating personnel. 12. If any of the above found abnormal, trace and rectify the issues as necessary. Providing written report to the Bank, outlining services carried out, adjustment made, rectification carried out and if the deficiency is of a major nature, arrange with the Bank for shut-down to rectify equipment.

		Quarterly Inspection and service	1. Checking and tightening of electrical contacts 2. Inspection of system for optimum performance and control calibration 3. Reviewing alarm history and fault logs Recommended safety checks, suction/discharge pressure, oil level, vibrations etc.
		Half yearly inspection	Contractor has to arrange visit of OEMs representative at least two times in a year (preferably half yearly) for inspection of the system.
		Annual Inspection and service	7. Check all flanges for tightness 8. Change oil in oil sump 9. Replace filter 10. Check oil temperature control 11. Check motor terminals 12. Check connections in starter Please note that oil filter gasket replacement shall deem to be included in the contract. 14. Check motor earthing, megger motor and connection wiring on each leg 15. Check motor temperature cut-out, tighten motor terminals. 16. Check starter contacts, arc shield, transformers. 17. Check dashpot oil, clean dashpot and replace oil when necessary 18. Test and calibrate overload setting. 19. Inspect, calibrate and adjust to original specifications for all gauges, safety and operating controls including low temperature and high-pressure cut-out, oil pressure switch, load limit relay and electrical interlocks.
	Consumable materials	As and when required	7. All oils and greases required for lubrication of compressors, fan bearings, motors bearings, pivots and other moving parts. 8. All refrigerant required for topping up. Refrigerant loss if due to manufacturing defect or due to negligence shall be made good by the contractor. 9. All consumable filter elements/ rolls. All chemicals for the correct chemical treatment of the cooling tower and chilled water system. 10. All carbon brushes required to replace worn brushes in electric motors. 11. All electric contact points required to replace worn electric contact points in switchgears, motor starter gears, electronic control gears and electric relays. 12. All electric fuses required to replace blown fuses. Just before the expiry of the warranty of the contract, the contractor shall carry out a complete system operability test on all the systems or sub-systems as called for in the contract.
	B. Renewal of Rate of Comprehensive AMC:		

The amount of service contract shall be renewed for an additional period of at least 13 years after two years (one-year defect liability period and one-year AMC on quoted rates). While renewing the contract amount will be arrived at based on following formula.

AC = AP [(15 + 50 x (EPIC/EPIP) + 35 x (CPIC/CPIP)] / 100

A_C	The contract amount for the current year (excluding taxes)
A_P	The contract amount for the previous year (excluding taxes)
CPI_C	Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the current year
CPI_P	Consumer Price Index for Industrial Workers (All India Average) 6 months prior to the commencement date of contract for the previous year
EPI_C	Wholesale Price Index for **as per required commodity** 6 months prior to the commencement date of contract for the current year.
EPI_P	Wholesale Price Index **for as per required commodity** 6 months prior to the commencement date of contract for the previous year.

4 **Penalty :** During the comprehensive annual maintenance service period ,any fault in the system shall be rectified within stipulated time on receipt of intimation of the defect in the system either telephonically or through email. In case of failure of attending the complaint within stipulated time, the penalty shall be imposed as follows that shall be deducted from the payable dues subject to maximum 10% of annual contract amount of AMC.

Sr.No.	Description of the Work (s)	**Complaint attending time**	**Penalty**
(a)	Not attending the defect /complaint on receiving the complaint either through telephone or email	1 day	Rs 1000/- per Day beyond stipulated time
(b)	If mandatory quarterly service is not done		Rs 5,000/- per service from payable dues
c)	if mandatory monthly inspection is not done		Rs 1000/- per inspection from payable dues
d)	If mandatory half yearly inspection is not arranged		Rs 5,000/- per service from payable dues

In addition to this, if the system is not rectified within the period of 10 days, the Bank shall have right to rectify the system at risk and cost of the contractor to be recovered from payable dues. The Bank shall have also right to invoke the Bank Guarantee as a penalty for

	non-responsiveness / non rendering of the AMC services by the contractor and terminate the contract, if service rendered by the contractor is found to be unsatisfactory.
5	**भुगतान शर्त :**सेवा अनुबंध के लिए यह दर संतोषजनक सेवा प्रदान करने पर त्रैमासिक आधार पर 1 वर्ष के भुगतान की अवधि के लिए मान्य है। **Payment Condition**: This rate for the service contract is valid for a period of 1 year and payment shall be made on **quarterly basis** on rendering satisfactory service and submission of duly signed service reports along with invoice.
6	**Performance Bank Guarantee for Comprehensive Annual Maintenance Contract (CAMC- PBG):** To ensure due fulfilment of the terms and obligations of the AMC period of total **14 years** (after completion of defect liability period) by the contractor, the contractor, **one month prior** to the end of defect liability period, shall submit a Bank guarantee as security deposit for an amount equal **to 5% of the value of work (capital work) executed as per contract**, which shall remain valid till **fourteen years of AMC** period from the day of completion of defect liability period for due fulfilment of contractual obligations against CAMC. **The PBG (as mentioned in Section V clause 2.ii. above) shall be released only after submission of this Bank Guarantee.**
6	इस अनुबंध के तहत नियोक्ता द्वारा सभी भुगतान केवल Reserve Bank of India, Kanpur में किए जाएंगे। All payments by the Bank under this Contract will be made only at Reserve Bank of India, Kanpur .
7	इस समझौते से जुड़े या किसी भी तरह से उत्पन्न होने वाले सभी विवादों को में उत्पन्न माना जाएगा और केवल Kanpur की अदालतों को ही यह निर्धारित करने का क्षेत्राधिकार होगा। All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen only Courts in Kanpur shall have jurisdiction to determine the same.
8	गैर-प्रकटीकरण खंड :बोलीकर्ता ,बैंक के बुनियादी ढांचे/प्रणालियों/उपकरणों आदि की प्रत्यक्ष या अप्रत्यक्ष रूप से किसी भी जानकारी, सामग्री और विवरण का किसी तीसरे पक्ष को खुलासा नहीं करेगा, जो इस समझौते के संबंध में अपने संविदात्मक दायित्वों के निर्वहन के दौरान बोलीकर्ता के कब्जे या ज्ञान के पास आ सकता है, और हर समय इस पर विश्वास रखेगा। बोलीदाता सिवाय इसके तहत दायित्वों को पूरा करने या लागू कानूनों का पालन करने के लिए आवश्यक सीमा के अलावा अनुबंध के विवरण को वैयक्क और गोपनीय मानेगा। बोलीकर्ता नियोक्ता की पिछली लिखित सहमति के बिना किसी भी व्यापार या तकनीकी पत्र या अन्य जगहों पर कार्यों के किसी भी विवरण का खुलासा, प्रकाशित होने की अनुमति नहीं देगा। बोलीकर्ता , किसी भी गोपनीय जानकारी के प्रकटीकरण के परिणामस्वरूप नियोक्ता को होने वाले किसी भी नुकसान के लिए नियोक्ता को क्षतिपूर्ति करेगा। उपर्युक्त का पालन करने में विफलता को बोलीदाता की ओर से अनुबंध का उल्लंघन माना जाएगा और नियोक्ता नुकसान का दावा करने और कानूनी उपचारों को आगे बढ़ाने का हकदार होगा। बोलीकर्ता अपने कर्मचारियों के मध्य सभी उचित कार्रवाई करेगा ताकि यह सुनिश्चित किया जा सके कि इस समझौते के तहत गोपनीय सूचनाओं का प्रकटीकरण न करने के दायित्व पूरी तरह से संतुष्ट हों । गैर-प्रकटीकरण और गोपनीयता के संबंध में बोलीकर्ता के दायित्व किसी भी कारण से इस समझौते की समाप्ति या समाप्ति से बच जाएंगे। **Non-Disclosure clause:** The Bidder shall not disclose directly or indirectly any information, materials and details of the Bank's infrastructure/systems/equipment etc., which may come to the possession or knowledge of the Bidder during the course of discharging its contractual obligations in connection with this agreement, to any third party and shall at all times hold the same in strictest confidence. The Bidder 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 Bidder shall not publish, permit to be published, or disclose any particulars of the works in any trade or technical paper or elsewhere without the previous

	written consent of the Bank. The Bidder shall indemnify the Bank for any loss suffered by the Bank 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 Bidder and the Bank shall be entitled to claim damages and pursue legal remedies. The Bidder 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 Bidder's obligations with respect to non-disclosure and confidentiality will survive the expiry or termination of this agreement for whatever reason.
9.	यौन उत्पीड़न की रोकथाम संबंधी उपबंध Prevention of Sexual harassment clause/ ठेकेदार/एजेंसी कार्य स्थल) रोकथाम, निषेध और निवारण (अधिनियम 2013 में महिलाओं के यौन उत्पीड़न के प्रावधान के पूर्ण अनुपालन के लिए पूरी तरह जिम्मेदार होगी। बैंक के परिसर के भीतर अपने कर्मचारी के खिलाफ यौन उत्पीड़न की किसी भी शिकायत के मामले में ठेकेदार/एजेंसी द्वारा गठित आंतरिक शिकायत समिति के समक्ष शिकायत दर्ज की जाएगी और ठेकेदार/एजेंसी शिकायत के संबंध में उक्त अधिनियम के तहत उचित कार्रवाई सुनिश्चित करेगी । बैंक के किसी भी कर्मचारी के खिलाफ ठेकेदार के किसी भी गंभीर कर्मचारी से यौन उत्पीड़न की किसी भी शिकायत का बैंक द्वारा गठित क्षेत्रीय शिकायत समिति द्वारा संज्ञान लिया जाएगा यदि ठेकेदार के कर्मचारी द्वारा यौन हिंसा साबित हो जाती है, तो ठेकेदार किसी भी मौद्रिक मुआवजे के लिए जिम्मेदार होगा, जिसे घटना में कर्मचारी शामिल होने की स्थिति में भुगतान करने की आवश्यकता हो सकती है। ठेकेदार अपने कर्मचारी को कार्यस्थल पर यौन उत्पीड़न की रोकथाम और संबंधित मुद्दे के बारे में शिक्षित करने के लिए जिम्मेदार होगा। ठेकेदार अपने कर्मचारी की एक पूरी और अद्यतन सूची प्रदान करेगा जो बैंक के परिसर के भीतर तैनात हैं। The bidder/Agency shall be solely responsible for full compliance with the provision of “the sexual Harassment of women at work place (Prevention, Prohibition and Redressal) Act 2013”.In case of any complaint of sexual harassment against its employee within the premises of Bank, complaint will be filed before the Internal complaint committee constituted by the Bidder/Agency and the Bidder/Agency shall ensure appropriate action under the said Act in respect to the complaint. Any complaint of sexual harassment from any aggravated employee of the bidder against any employee of the Bank shall be taken cognizance of by the Regional Complaints Committee constituted by the Bank The Bidder shall be responsible for any monetary compensation that may need to be paid in case the incident involves the employee, if sexual violence by the employee of the bidder is proved. The bidder shall be responsible for educating its employee about prevention of sexual harassment at work place and related issue. The bidder shall provide a complete and updated list of its employee who are deployed within the Bank’s premises.

सेवा प्रदाता के हस्ताक्षर
सील सहित
Signature of service provider
) With seal)

बैंक प्रतिनिधि के हस्ताक्षर
सील सहित
Signature of Bank Representative
(With Seal)

ANNEXURE XVI

Proforma for Letter of Authorization and confirmation for manufacturer's obligation to extend uninterrupted after sales service to RBI

(To be issued by the manufacturers/OEM of chillers separately on their letterhead and shall be uploaded by the bidder with the tender)

To, Date:

The Regional Director
Reserve Bank of India
Mall Road, Kanpur – 208001

Dear Sir,

Name of Work: E-tender: Design, Supply, Installation, Testing and Commissioning (DSITC) of 3 no's of 250 TR water cooled Chillers for the Bank's Main Office Building, RBI Kanpur

We _____, (name and address of the manufacturer) the manufacturers of _____ having factories at _____ (addresses of manufacturing / development locations) do hereby authorize M/s _____ (name and address of the tenderer) to bid, negotiate and conclude the contract with you against the above mentioned tender for the above equipment developed by us.

S. No.	Name of Equipment	Model No.	Country of Origin	End of Sale (MMYY)	End of Support (Should not be before March 31, 2042) (MMYY)

1. In the unlikely event of M/s _____ (name and address of the tenderer) not remaining our authorized dealer/ partner at any time during the next 15 years (committed support period) and refusing to provide after sales support to you as per the contract conditions, we undertake to extend required after sales support, including supply of spares, either directly ourselves or through any other authorized dealer/ partner.

2. The compliance sheet for the technical specifications for the above products have been confirmed and signed by us.

4. We have agreed with M/s …… to provide Back-to-Back onsite support for comprehensive maintenance of the above products for at least fifteen years from handing over of the system at their quoted rates.

5. Further, We _____ undertake to provide continued after sales service including but not restricted to the following services:

i) To guarantee uninterrupted supply of spare parts throughout the designed life of chiller units of 15 years as indicated elsewhere in the technical bid.

ii) To assist RBI in investigation of failure/malfunctioning of any part or system as and when called for by RBI during and after defects liability period.

iii) We shall propose with cost estimate, any modification / up gradation of safety features, design modification / improvements to be incorporated in the chiller units subsequent to completion of the contract and suggest a time schedule to implement the same to enhance performance, reliability / life of chillers.

iv) We hereby undertake to provide the above services and respond to RBI's queries/requests in reasonable time notified by RBI during the design life of the chillers.

v) Any breach of above undertaking will entail RBI to take any or all actions mentioned below as deemed fit by RBI.

a) To place on record the performance of firm either in the RBI website or other publications.

b) Intimate the Regulatory Authorities / bodies or other Banks.

c) Restrict the firm's participation in further tendering in RBI.

Yours faithfully,

For and on behalf of

M/s _____ (Name of the manufacturer)

Seal and Signature:

Name:

Designation:

Address:

Note: The Content of the letter should not be altered. If any addition or deletion or modification in the content of this letter submitted by the tenderer is noticed, the tender is liable for rejection.

Annexure XVII

Proforma of undertaking for comprehensive maintenance confirmation by the tenderer

(on letter head of bidder)

To, Date:

The Regional Director
Reserve Bank of India
Mall Road, Kanpur – 208001

Dear Sir,

Name of Work: E-tender: Design, Supply, Installation, Testing and Commissioning (DSITC) of 3 no's of 250 TR water cooled Chillers for the Bank's Main Office Building, RBI Kanpur

We hereby undertake to maintain the (name of the equipment)_____to be installed by us in your Premises satisfactorily, for a period of not less than 14 years, after expiry of the defect liability/warranty period of one year, under comprehensive annual maintenance service contract at the quoted rates in tender and terms and conditions as per the contract conditions with a provision for annual price revision on the basis of the relevant indices based formula, as provided in the tender document.

In the unlikely event of M/s _____, the Original Equipment Manufacturer, failing to provide support in terms of spares etc. due to technological obsolescence or for any reason, we shall continue to provide all-inclusive service to your satisfaction, by arranging required spares etc. ourselves, within the rate quoted by us for the all-inclusive maintenance contract for the period accepted as above.

Note: The AMCs in the Bank are co-terminus with the financial year i.e., April to March, therefore, first and last AMCs may be for a period of less or more than a year.

Yours faithfully,

( )

Authorised signatory

(Name and address of the company with Company Seal)

Date:

Yours faithfully,

For _____Authorised signatory

Annexure XVII

Proforma for Indemnifying the Employer Against Non-Compliance to Contract labour Rules/ regulations.

(To be submitted by **successful** bidder on Non-Judicial Stamp Paper of appropriate value)

To, Date:

The Regional Director
Reserve Bank of India
Mall Road, Kanpur – 208001

Dear Sir,

Name of Work: E-tender: Design, Supply, Installation, Testing and Commissioning (DSITC) of 3 no's of 250 TR water cooled Chillers for the Bank's Main Office Building, RBI Kanpur -

We, M/s …… (Name of contractor), hereby undertake that we shall comply with all the statutory rules/ regulations with regard to the employment of contract labor and their payment. We also hereby fully indemnify and keep indemnified the Employer, i.e. Reserve Bank of India, against payments to be made to the contract labor and for the observance of the laws in this regard without prejudice to our right to claim indemnity from our sub-contractors. Yours faithfully,

Yours faithfully,
For and on behalf of
M/s _____ (Name of the manufacturer)

Authorised signatory :-
Name and Address of The Contractor:
Sign & Seal of The Contractor:
Date:
Place:

Annexure XIX

Declaration for Local Content

(To be given on Company Letter Head for tender value below Rs.10 Crores and by Statutory Auditor/Cost Auditor/Cost Accountant/CA for tender valuing Rs.10 Crores or above)

Date: _____

To Whomsoever It May Concern

Subject: **Declaration of Local Content**

Tender Reference No: _____

Name of Tender / Work: _____

1. Country of Origin of Goods being offered: _____

2. We hereby declare that items offered has _____% local content which qualifies us as _____(Class I Local/Class II Local/Non-local) supplier:

3. Details of location at which local value addition will be made / made (Complete address to be mentioned): _____

"Local Content" means the amount of value added in India which shall be the total value of the item being offered minus the value of the imported content in the item (including all customs duties) as a proportion of the total value, in percent.

"False declaration will be in breach of Code of Integrity under Rule 175(1)(i)(h) of the General Financial Rules for which a bidder or its successors can be debarred for up to two years as per Rule 151 (iii) of the General Financial Rules along with such other actions as may be permissible under law."

Yours Faithfully,

{Signature of the Bidder, with Official Seal}