

KAB/CHY/872/03/2021

**Embassy of India
Kabul**

Tender Number: KAB/CHY/872/03/2021

01 June, 2021

**Subject: Tender for Renovation of Heating system in New Chancery Complex,
Embassy of India, Kabul.**

2. This tender document contains the following:

Serial Number	Section/Annexure	Details
1.	Section-1	Notice Inviting Tender (NIT)
2.	Section-2	Pro-forma for "Letter of Bid"
3.	Section-3	Dates to Remember
4.	Section-4	Specification and Quantity of Equipment required and scope of work
5.	Section-5	Bids
6.	Section-6	Earnest Money Deposit (EMD)
7.	Section-7	Minimum Eligibility Criteria
8.	Section-8	Instructions to Bidders
9.	Annexure-1	Format for Submitting Financial Bid
10.	Annexure-2	Pro-forma of Bank Guarantee
11.	Annexure-3	Contact Details Form

(Madan Kumar Ghildiyal)
Counsellor (Head of Chancery)

SECTION-1: NOTICE INVITING TENDER (NIT)

1.1 Embassy of India, invites **Subject: Tender for Renovation of Heating system in New Chancery Complex, Embassy of India, Kabul** as per the specifications given in the tender documents.

1.2 The tender document can be received from EoI, Kabul from **27/05/2021** onwards. No fee for Tender Document will be charged.

1.3 The interested firms/agencies should submit their bids as explained in the tender document.

1.4 Earnest Money Deposit (EMD) of **US\$ 12,000/-** (US\$ Twelve Thousand only) in the form of bank Guarantee/Demand Draft in favor of "Embassy of India, Kabul" is required to be submitted along with tender bids.

1.5 Bids can be submitted on any working day from **02.06.2021 to 21.06.2021** (from 0930 hrs to 1700 hrs).

1.6 The Embassy of India, Kabul reserves the right to reject any or all the bids, or cancel the tender, without assigning any reason and the decision of the Embassy of India, Kabul shall be final and binding.

SECTION-2: LETTER OF BID**LETTER OF BID [To be printed on bidder's letterhead]**

Date: _____

To,

Shri Madan Kumar Ghildiyal,
Counsellor/Head of Chancery,
Embassy of India,
Wazir Akbar Khan, 14th Street,
Kabul, Afghanistan.

Reference: Tender No. KAB/CHY/872/03/2021

We, the undersigned, declare that:

1. We have examined and have no reservations to the Bidding Documents, including addenda issued in accordance with Instructions to Bidders.
2. We offer to execute in conformity with the Bid Documents for the **Tender for Renovation of Heating system in New Chancery Complex, Embassy of India, Kabul.**
3. Our bid shall be valid for a period of 180 days from the date fixed for the bid submission deadline in accordance with the Bidding Documents and shall remain binding upon us and may be accepted at any time before the expiry of the period.
4. If our bid is accepted, we commit to submit a Performance Security in accordance with the Bid Documents. Performance security will be 10 % of the amount quoted.
5. We also declare that the Government of India or any other Government body has not declared us ineligible or blacklisted us on charges of engaging in corrupt, fraudulent, collusive or coercive practices or any failure/lapses of serious nature.
6. We also accept all the terms and conditions of this bidding document and undertake to abide by them, including the condition that you are not bound to accept highest ranked bid/lowest bid or any other bid that you may receive.
7. We hereby undertake to confirm that the company have the necessary approvals and security clearances from local authorities in Kabul to carry out work at Embassy of India, Kabul situated inside the Green Zone.

Yours sincerely

(Full Name)

Designation

[Put the seal here]

SECTION-3: DATES TO REMEMBER

Crucial dates and time for the above tender would be as under:

Serial Number	Events	Date	Time
1)	Notice Inviting Tender	21.06.2021	1700 hours
2)	Site visit	02.06.2021 to 08.06.2021	0930 hours to 1700 hours
3)	Pre Bid meeting	02.06.2021 to 08.06.2021	0930 hours to 1700 hours
4)	Starting date for submission of bids	02.06.2021	0930 hours
5)	Last date for submission of bids	21.06.2021	1700 hours
6)	Opening of Technical bids	23.06.2021	1500 hrs
7)	Opening of Financial bids	27.06.2021	1500 hrs
8)	Period of completion of works specified.		90 days

Section 4: Scope of Work

The scope of work involving **Renovation of Heating system in New Chancery Complex, Embassy of India, Kabul** is placed at Annex-I.

SECTION-5: EARNEST MONEY DEPOSIT (EMD)

5.1 The amount towards EMD is **US\$ 12000/-** (US\$ Twelve Thousand only).

5.2 The tender documents should be accompanied by Earnest Money Deposit (EMD) of appropriate amount, in the form of Bank Guarantee, in favour of "**Embassy of India, Kabul**".

5.3 EMD will **not** be accepted in the form of Cash/Cheque/ or any other form except Bank Guarantee . No interest shall be payable on EMD.

5.4 Bids submitted without "EMD" will stand rejected.

5.5 The EMD will be returned to the bidder(s) within 30 days from the date of issuance of the Notification of Award of Work on the selected bidder or cancellation of the tender.

5.6 The EMD shall be forfeited:

a. If the bidder withdraws the bid during the period of bid validity specified by the bidder in the bid form.

b. In case of successful bidder, if the bidder

(i) fails to furnish required Performance Bank Guarantee in accordance with the terms of Tender Documents within the time frame specified in the tender document

(ii) fails or refuses to honor his own quoted prices for the services or part thereof.

SECTION- 6: MINIMUM ELIGIBILITY CRITERIA

6.1 The following shall be the Minimum Eligibility Criteria for selection of bidders at the technical stage of the bidding process:

- a. **Legally Valid Entity:** The bidder/bidding firm should necessarily be a legally valid entity either in the form of a Limited Company or a Private Limited Company registered under the relevant Act or a firm having valid Trade License granted by the City Corporation to do business.
- b. **Registration:** The bidder/bidding firm must have registration with the concerned authority in Afghanistan. The company should have the necessary permits and requisite security clearance to carry out work inside the Green Zone in Kabul.
- c. **Experience:** The bidder/bidding firm shall have any of the following experience in repair/renovation/overhauling or installation of new Heating system :
 - I) One work of similar nature of amount US \$ 4,80,000/- or more in last 03 years.
 - ii) Two work of similar nature of amount US \$ 3,60,000/- or more in last 03 years.
 - (iii) One work of similar nature of amount US \$ 2,40,000/- or more in last 03 years.
- d. **Company profile/information regarding key personnel:** The bidder/bidding firm shall also include in its bid, as per pro-forma at Annexure-3 to this tender document, details about the company and its key personnel.
- e. **EMD:** The bidder/bidding firm should attach the EMD of appropriate value.

6.2 Documents in support of Minimum Eligibility Criteria:

- a. As proof of having fully adhered to the minimum eligibility criteria at 6.1 (a) above, attested copies of certificates issued by the respective authority should be attached with the bid.
- b. As proof of having fully adhered to the minimum eligibility criteria at 6.1 (b) above, attested copy of Registration certificate should be attached with the bid.
- c. As proof of having fully adhered to the minimum eligibility criteria at 6.1 (c) above, attested copies of experience certificates for complete/ongoing work issued by Foreign Embassies/High Commissions/Government Ministries/Departments/Public Sector Companies/Reputed Corporate Organizations/ Multinational Companies should be attached with the bid.
- d. As proof of having fully adhered to the minimum eligibility criteria at 6.1 (d) above, copies of supporting documents for company profile/information about key personnel should be attached with Annexure-3 to this tender document.
- e. As proof of having fully adhered to the minimum eligibility criteria at 6.1 (d) above, the PO/DD towards EMD (in original) should be attached with the bid.

SECTION-7: BIDS

7.1 Preparation of Bids:

a. Two-bid system will be followed for this tender. In this system, bidder must submit his offer as explained below.

b. **Envelope No. 1: "Technical Bid":**

(i) Duly filled Technical Bid with proper seal and signature of authorized person on each page of the bid should be submitted.

(ii) All the necessary documents including those in support of Minimum Eligibility Criteria should be submitted with Technical Bid. These documents should be self-attested.

(iii) EMD should be submitted with the "Technical Bid".

c. **Envelope No. 2: "Financial Bid":**

(i) Bidders must quote the price in the format given in **Annexure-1** to this tender document.

(ii) No other documents except "Price Schedule" may be submitted along with Financial Bid otherwise the bid shall stand rejected.

(iii) All amounts are to be quoted only in **US\$**. The price quoted shall be considered firm and no price escalation will be permitted. The prices quoted should be inclusive of charges for freight, insurance, packing, after sales service etc.

d. Both the technical bid and financial bid envelopes should be sealed separately and clearly marked as "Envelope No. 1 - Technical Bid" and "Envelope No. 2 - Financial Bid".

e. Both the sealed envelopes should be placed in a third larger envelope clearly mentioning "Technical Bid & Financial Bid " **Tender for Renovation of Heating system in New Chancery Complex, Embassy of India, Kabul.**

f. Please write Tender Number viz. No. **KAB/CHY/872/03/2021** on each envelope and seal all the envelopes.

7.2 Submission of Bids:

a. The bid complete in all respect may be submitted to the Head of Chancery, Embassy of India, Wazir Akbar Khan, 14th Street, Kabul. *The bids viz. Technical and Financial Bids should be submitted in two sets - one original and one copy.*

b. The bid should be neatly arranged, plain and intelligible. The language of the bid should be **English** as far as possible.

c. Each page of the bid should be signed by the authorized official of the company..

d. Bid should not contain any terms and conditions, printed or otherwise, which are not applicable to the Bid. The conditional bid will summarily be rejected.

e. Insertions, postscripts, additions, conditions and alterations in the bids submitted shall not be recognized, unless confirmed by bidder's signature.

7.3 Deadline for Submission of Bids:

a. Bids must be submitted on or before **21.06.2021 (1700 hrs)** which is the last date for submission of bids.

b. In the event of the specified date for the submission of bids being declared a holiday for the Embassy of India, Kabul, deadline for submission of bids will stand extended to the next working day up to the same time.

c. The Embassy of India, Kabul may extend the deadline for submission of bids by amending the bid document and the same shall be notified on the website of the Embassy of India, Kabul.

d. No bid (s) will be accepted after the deadline for submission of the bids.

7.4 Validity of Bids:

a. Bids shall remain valid and open for acceptance **for a period of 180 days** from the last date of submission of bids.

b. A bid valid for a shorter period shall stand rejected.

c. The Embassy of India ,Kabul may ask for extension of validity of bids for another period of 60 days, without any modifications and without giving any reasons thereof. Such request and the response shall be made in writing only.

d. In case, the Embassy of India, Kabul calls the bidder for negotiation then this shall not amount to cancellation or withdrawal of original offer which shall be binding on the bidder.

7.5 Bid Opening Procedure:

a. **Technical Bids (Envelope-A)** will be opened in the Conference Room of the Embassy of India, Wazir Akbar Khan, 14th Street, Kabul Afghanistan.

b. Bids will be opened **at 1500 hrs on 23/06/2021** in presence of participating bidders or their representatives and the Tender Evaluation Committee (TEC) constituted by the competent authority of the Embassy of India, Kabul.

c. After evaluation of the Technical Bids, the qualified bidders will be shortlisted.

d. **Financial Bids (Envelope-B)** of shortlisted bidders only shall be opened on a subsequent date which will be intimated to them by email/fax.

f. The date fixed for opening of bids, if subsequently declared as holiday by the Government, the revised date of schedule will be notified. However, in absence of such notification, the bids will be opened on next working date and the time will remain unchanged.

g. A letter of authorization shall be submitted by the bidders' representatives before opening of the bids.

h. Absence of any bidders or their representatives shall not impair the legality of the opening procedures.

i. The authorized representative of bidders, present at the time of opening of the bids shall be required to sign an attendance sheet as a proof of having attended the financial bid opening.

SECTION-8: INSTRUCTIONS TO BIDDERS

8.1 Notification of Award of Work:

a. Embassy of India, Kabul shall award the work to the eligible bidder whose bid will be accepted and determined as the lowest evaluated commercial bid.

8.2 Contact information:

Shri Madan Kumar Ghildiyal,
Counsellor/Head of Chancery,
Embassy of India,
Wazir Akbar Khan, 14th Street,
Kabul, Afghanistan.
Email: hoc.Kabul@mea.gov.in

8.3 Amendment of Tender Document

a. At any time prior to the deadline for submission of bids, The Embassy of India, Kabul may, for any reason, whether on its own initiative or in response to the clarification request by a prospective bidder, modify the bid document.

b. Any corrigendum/addendum to the above tender document, if required, will be hosted on the website of the **Embassy of India, Kabul** as given above.

8.4 Purchaser's Right to amend Scope of Work:

If, for any unforeseen reasons, the Embassy of India, Kabul is required to change the Scope of Work, this change shall be acceptable to the bidder without any change in the price quoted.

8.5 Interpretation of the clauses in the Tender Document

In case of any ambiguity/dispute in the interpretation of any of the clauses in this Tender Document, Embassy of India's interpretation of the clauses shall be final and binding on all parties.

8.7 Performance Security (PS):

a. The successful bidder has to deposit Performance Security in the form of a Bank Guarantee drawn in favour of the Embassy of India payable at Kabul. If it is Bank Guarantee, the same should be as per the format given in **Annexure-2** to this tender document.

b. Performance Security will be of an amount equivalent to **10%** (ten percent) of the price quoted by the bidder.

c. Performance Security should be submitted within **Fifteen (15) days** after the acceptance of the Notification of Award of Work by the successful bidder.

d. Performance Security shall remain valid for a period of sixty (60) days beyond the date of completion of all the contractual obligations of the bidder (Service Provider).

e. No interest shall be payable on Performance Security.

8.8 Payments:

- a. 90% of Contract Price will be paid on successful completion of work of **Renovation of Heating system** as per tender document and to the satisfaction of Embassy of India, Kabul.
- c. Balance 10% of Contract Price will be paid after completion of **Defect Liability period**, which will be 1 year from the date of completion of work.
- d. All payments shall be made in Afghanistan, Kabul by means of bank transfer/cheque.

8.9 **Penalty for delayed Services:**

- a. The work should be completed within **90 days** of awarding the work. The Embassy of India, Kabul reserves the right to levy penalty @ of 1 % of Contract Price per week of delay beyond the scheduled deliveries/execution of the order successfully, subject to maximum of 5% of the Contract Price.
- b. The Embassy of India, Kabul reserves the right to cancel the order in case the delay is more than five (05) weeks.
- c. The penalties, if any, shall be recovered from the 10% claim due after installation & commissioning or from the Performance Security.

8.10 **Force Majeure:**

The Embassy of India, Kabul may consider relaxing the penalty and delivery requirements, as specified in this document, if and to the extent that, the delay in performance or other failure to perform its obligations under the contract is the result of an Force Majeure. Force Majeure is defined as an event of effect that cannot reasonably be anticipated such as acts of nature (like earthquakes, floods, storms etc.), acts of states, the direct and indirect consequences of wars (declared or undeclared), hostilities, national emergencies, civil commotion and strikes at successful Bidder's premises.

ANNEXURE-1

[On the letterhead of the bidding firm]

Date:..... , 2021

Format for submitting the Price Schedule for Tender for Renovation of Heating system in New Chancery Complex, Embassy of India, Kabul.Reference: **Tender No KAB/CHY/872/03/2021**
dated : _____Shri Madan Kumar Ghildiyal,
Counsellor/Head of Chancery,
Embassy of India,
Wazir Akbar Khan, 14th Street,
Kabul, Afghanistan.
Email: hoc.Kabul@mea.gov.in**Price Schedule**

S. No.	Item Description	Total Bid Quantity	Unit Price in(US\$)	Total price (in US\$)
1	2	3	4	5

Yours faithfully

(Signature of Authorized Signatory)
(Name)

Designation

Seal of the company

Annexure-2**PROFORMA OF BANK GUARANTEE**
(On non-judicial paper of appropriate value)

To,
Shri Madan Kumar Ghildiyal,
Counsellor/Head of Chancery,
Embassy of India,
Wazir Akbar Khan, 14th Street,
Kabul, Afghanistan.

BANK GUARANTEE NO:

DATE:

Dear Sir(s)

This has reference to the Notification of Award of Work No. _____ dated _____ placed by the Embassy of India, Kabul to M/s (Name & Address of vendor) for

The conditions of this order provide that the vendor shall,

1. Arrange to deliver the items listed in the said order to the consignee, as per details given in said order, and
2. Arrange to install the items listed in said order at the Embassy of India, Wazir Akbar Khan Road, 14th Street, Kabul, Afghanistan to the entire satisfaction of the Embassy of India, Kabul and
3. Arrange for the comprehensive warranty service support towards the items supplied by vendor on site across Afghanistan, as per the warranty clause in said purchase order.

M/s (Name of Vendor) has accepted the said purchase order with the terms and conditions stipulated therein and have agreed to issue the performance bank guarantee on their part, towards promises and assurance of their contractual obligations vide the No. _____ dated _____ M/s (name of vendor) holds a current account with us and has approached us and at their request and in consideration of the promises, we hereby furnish such guarantees as mentioned hereinafter.

The Embassy of India, Kabul shall be at liberty without reference to the Bank and without affecting the full liability of the Bank hereunder to take any other undertaking of security in respect of the supplier's obligations and /or liabilities under or in connection with the said contract or to vary the terms vis-a-vis the supplier or the said contract or to grant time and or indulgence to the supplier or to reduce or to increase or otherwise vary the prices or the total contract value or to forebear from enforcement of all or any of the obligations of the supplier under the said contract and/or the remedies of the Embassy of India, Kabul under any security(ies) now, or hereafter held by the Embassy of India, Kabul and no such dealing(s) with the supplier or release or forbearance whatsoever shall have the effect of releasing the bank from its full liability of the Embassy of India, Kabul hereunder or of prejudicing right of the Embassy of India, Kabul against the bank.

Tender for Renovation of Heating system in New Chancery Complex, Embassy of India, Kabul

This undertaking guarantee shall be a continuing undertaking guarantee and shall remain valid and irrevocable for all claims of the Embassy of India, Kabul and liabilities of the supplier arising up to and until date_____ .

Your right to recover the said sum of US\$._____ /- (US\$_____ Only) from us in manner aforesaid will not be affected or suspended by reason of the fact that any dispute or disputes have been raised by the said M/s_____ and/or that any dispute or disputes are pending before any officer, tribunal or court or Arbitrator.

Our liability under this guarantee is restricted to US\$_____ (US\$_____ Only) Our guarantee shall remain in force until unless a suit action to enforce a claim under guarantee is filed against us within six months from (which is date of expiry of guarantee) all your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there under.

We have power to issue this guarantee in your favour under Memorandum and Articles of Association of our Bank and the undersigned has full power to do under the power of Attorney dated.

Notwithstanding anything contained herein:

A. Our liability under this guarantee shall not exceed US\$..... (in words)

B. This bank guarantee shall be valid up to...& unless a suit for action to enforce a claim under guarantee is filed against us within six months from the date of expiry of guarantee. All your rights under the said guarantee shall be forfeited and we shall be relieved and discharged from all liabilities there after i.e. after six months from the date of expiry of this Bank guarantee

C. We are liable to pay the guaranteed amount or any parts thereof under this bank guarantee only and only if you serve upon us a written claim or demand or before.....

D. The Bank guarantee will expire on

Granted by the Bank

Yours faithfully,

For (Name of Bank)

SEAL OF THE BANK
Authorized Signatory

Annexure-3

CONTACT DETAILS FORM

GENERAL DETAILS OF BIDDER

NAME OF THE COMPANY

NAME AND DESIGNATION OF AUTHORISED REPRESENTATIVE

COMMUNICATION ADDRESS.....

PHONE NO./MOBILE NO.....

FAX/ E-MAIL I.D.....

PARTICULAR DETAILS OF THE BIDDER'S REPRESENTATIVE

NAME OF THE CONTACT PERSON

DESIGNATION

PHONE No.

MOBILE No.

E-MAIL ID

DETAILS ABOUT KEY PERSONNEL OF THE BIDDING COMPANY
(With ID proof/supporting documents)

- 1.
- 2.
- 3.
- 4.
- 5.

Scope of Work

The following works are required to be carried out:

1. Replacement of 3 Burners along with control panels,
2. Replacement of 3 Boilers,
3. Replacement of “collector pipes” for 3 boilers, re-configuration of distribution network in Boiler Room to remove heat ex-changers system,
4. Replacement of circulation pumps,
5. Replacement of old gauges and valves in distribution system inside boiler room.

For the Central heating system all existing equipment should be replaced. The equipment includes circulation pumps, fuel pumps, pressure gauges, thermometers, Butterfly valves, gate valves, Boilers and burners installed in Mechanical room. They should be removed and replaced with new equipment by same capacity and same specification.

The new equipment to be **supplied** and **installed** in the heating system should be of:

1. Same capacity or higher than existing ones,
2. Same quality and latest
3. With available spare parts in the Afghanistan market,
4. Easy to maintain by Afghanistan market’s equipment and technician.
5. The new burners and boilers should be 900,000 Kcal rather than existing 800,000 Kcal.

The replaced equipment should be as per the following standard:

- 6 x 20 Hp pumps for circulation of hot water. The new pump should be Etablock type and IP 55. Their capacity should be increased to 23 HP. For detail specification the contractor should check the attached drawing and also if it is necessary check the existing pumps. The RPM and dimensions of in and out pipe of new pumps should be exactly similar to existing pumps but the flow and head should be 10% higher, otherwise the contractor should coordinate with site engineer of Embassy of India.
- 3 diesel boilers with 900,000 Kcal capacity, from renowned brand
- Replace all existing gauges, thermometers and valves.
- Removal of 3 existing 5 Hp pumps for circulation of hot water. New pumps are not required.

- Remove existing heat ex-changers with their collector. New heat ex-changers are not required.
- 3 x Fuel pumps by 1 Hp power and details available in the attached drawings. The new fuel pumps should be exactly similar to existing pumps. Otherwise the contractor should coordinate with site engineer of Embassy of India.
- 3 x Diesel burner with 900,000 Kcal capacity and other details that are available in the attached drawings. The new diesel burners should be exactly similar to existing ones except capacity that should be higher. Otherwise the contractor should coordinate with site engineer of Indian Embassy. The burner should be German/European type.
- Provide all the spare parts for all of equipment according to recommendation of manufacturers.

Note : All equipment should have atleast **1 year warranty**.

GENERAL NOTES:

1. All materials, equipment, devices, etc. shall be available in the local market.
2. The work shall be performed with minimum interruption in the accessibility to the affected areas and the availability and use of existing systems. It shall be mandatory for all contractors to become thoroughly familiar with the physical and functional operation of the affected areas. In addition, the work must be carefully scheduled and executed to assure the availability of workers, material and equipment on the job site when needed. Coordinate and cooperate as required with all other trades which share space in common areas to maximize the access to each system and their respective components.
3. The contractor shall be responsible for and will be required to visit the project site to verify dimensional data and review the existing conditions before proceeding with the work. Any conflicts with the existing conditions shall be immediately brought to the attention of the engineer.
4. Cut, patch and restore all existing surfaces not receiving new finishes or disturbed during execution of the work. Materials and finishes used shall be similar to adjacent surfaces and the complete repair shall meet the approval of the architect and the owner's representative.
5. Normal functions of occupied areas adjacent, above and below to the subject area must continue during the construction phases. Every effort shall be made to insure such functions are not disturbed.
6. Schedule any work which may be required in occupied areas during unoccupied hours and obtain prior approval by the owner's representative.

7. The mechanical drawings are diagrammatic and indicate the general arrangement of systems and work included. Refer to the architectural drawings for dimensions and details of construction. Exact measurements shall be established at the job site.
8. The contractor shall verify exact measurements at the job site and coordinate with existing conditions where insufficient detail and dimensions are available.
9. Refer to the architectural ceiling plan for the location of all visible ceiling mounted devices.
10. The contractor is responsible for obtaining the required permits and providing the labor, materials and equipment necessary to perform testing and inspections.
11. All labor, materials, apparatus, accessories, options, support devices, and appliances essential to the complete functioning of the systems described and indicated herein, or which may be reasonably implied as essential whether mentioned in the contract documents or not, shall be furnished and installed by the contractor.
12. The equipment and systems provided for this project shall be suitable for the intended service, location, and environment of the project.
13. The equipment and systems provided for this project shall be coordinated between the mechanical, plumbing, fire protection, controls, electrical, and all other trades in a timely manner; and shall not be purchased or installed prior to the resolution of any conflicts or coordination that could result in additional cost to the owner.
14. In cases of doubt as to the work intended, or in the event of need for explanation thereof, the contractor shall request supplementary information from the architect and engineer prior to proceeding with the work.
15. The contractor shall be responsible for the review of, and compliance with the base building project documents for installation requirements and coordination.
16. The word "provide" means to furnish and install complete and ready to use. The word "piping" includes pipe, fittings, controls, valves, insulation and hangers.
17. The intent of the plans is to provide a complete and operable system installed in a workman like manner.
18. A complete and operable system shall be defined as one which has been furnished, mounted, installed, placed in operation, balanced for air and water, tested for conformance to the rated capacities and design conditions corresponding to the contract documents installed and adjusted in accordance with the manufacturer's recommendations and warranty requirements.
19. With exceptions as specified and/or indicated on the drawings or in the specifications, the contractor shall apply, install, connect, erect, use, clean and condition

manufactured articles, materials, and equipment as per manufactures' current printed recommendations. All products, materials, and equipment provided on this project shall be suitable for the intended service and location at which they are installed.

20. The mechanical contractor shall run all control wiring or tubing between all mechanical equipment. The wiring or tubing shall be in accordance with the manufacturers' diagrams and instructions.

21. The electrical contractor shall be responsible for all equipment wiring as delineated on the electrical drawings and in the electrical specifications unless otherwise indicated.

22. The intent of the mechanical system design is to allow enough clearance below rectangular ductwork for the installation of light fixtures. It shall be the responsibility of the contractor to coordinate this requirement with the existing conditions.

23. The contractor shall protect all work and material from damage by his work, workmen, subcontractor's work or subcontractor's workmen and shall be liable for all damage thus caused.

24. Equipment has been chosen which will fit into the physical spaces provided and indicated, allowing ample room for access, servicing, removal and replacement of parts, etc. Adequate space shall be allowed for clearance in accordance with the code requirements. However, since space requirements and equipment arrangement vary according to each manufacturer, the responsibility for initial access and proper fit rests with the contractor.

25. The contractor shall review the complete set of mechanical, electrical, plumbing, and fire protection documents to determine the complete scope and division of responsibility for control wiring.

26. The contractor will be responsible for review and coordination of all final duct or piping installation locations to insure no duct or piping is installed directly above any electrical panel in accordance with the national electrical code clearance requirements.

27. The contractor shall be responsible for removing and/or disposing of all items that are not necessary in the completion of the project and shall clean the area of construction after the completion of the project.

28. The contractor shall be responsible for all cutting and patching of building including roof and all work and replacement shall match existing construction. Roof work shall be done by a sub-contractor approved by the building owner.

The Bill of quantity is as under :

Item	Description	Availability	Quantity	Unit	Unit Cost	Total Cost
1	23 HP pump Etablock for hot water	Shakti, Available	6	PCS		
2	Hot water boiler Cast iron, 900,000 Kcal with all accessories	Budross, From Europe	3	set		
3	Pressure gage 15 bar	From Europe	18	PCS		
4	Temperature gage	From Europe	18	PCS		
5	Flow meter	From Europe	6	PCS		
6	Gate valve flange outlet, 3 inch, cast iron	Available	18	PCS		
7	Flexible pipe joint 3 inch, temperature resistant	Available	20	pcs		
8	temperature resistant gasket 3 inch	Available	20	pcs		
9	pipe flange 3 inch	Available	20	PCS		
10	Nut and bolt 12 mm 2 inch long GI	Available	200	PCS		
11	Fuel pump to burner, centrifugal, 1 hp	Available	3	Set		
12	Diesel Burner 930 KW	Available	3	set		
13	8 Inch Black steel pipe	Available	72	L/s		
14	3 inch black steel pipe sch. 40	Available	72	L/S		
15	Pipe insulation 8 inch 5 cm thickness fiber glass	Available	72	LM		
16	Pipe insulation 3 inch, 5 cm thickness fiber glass	Available	72	LM		
17	Piping Jacket piping, Aluminium GA 22 or higher	Available	100	SqM		
18	Pipe testing		1	L/S		
Grand Total						