



**Refurbishment of Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in HVAC Plant at GIK Institute, Topi**

No. GIKI/Dir/Works/ 11

# TENDER DOCUMENTS

## Issued By

Director (Engineering Projects)

Ghulam Ishaq Khan Institute of Engineering Sciences &  
Technology, Topi, Swabi

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## RE-TENDER NOTICE

### Refurbishment of Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in HVAC Plant

1. GIK Institute invites interested and qualified contractors to submit proposals for the refurbishment of a Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in the HVAC Plant of our facility located at GIK Institute, Topi Swabi.
2. Scope of Work includes:
  - a. Replacement of the evaporator shell along with refrigerant coils, complete in all respects. Gas charging along with dryer cores replacement.
  - b. Repair or replacement of expansion valves and liquid line solenoid valves.
  - c. Checking and repairing of the electrical control system of each circuit.
  - d. Repair or replacement/checking of the motor protection circuit of each compressor.
  - e. Checking and repair of 3 Nos condensers.
  - f. Any other repair work found during the system check.
  - g. Testing and commissioning of the chiller to ensure it meets the required operational standards.
3. Interested contractors must meet the following requirements:
  - a. Prior experience and expertise in repairing and maintaining chillers in HVAC systems.
  - b. Valid license and certifications for carrying out HVAC repairs in Public/Private Sectors. Compliance with all local regulations and safety standards.
  - c. Submission of a detailed breakdown of costs, including labor, materials, taxes, and any additional charges.
4. Interested contractors are requested to download the tender documents from the GIK Institute website. The project will be required to be completed within one month.
5. Processing fee of Rs 2,000/- (Non refundable) shall be submitted with the proposal. All tenders must be submitted in two sealed envelopes, one for Technical and the other for Financial Proposals along with 2% bid security of the total bid cost in the name of GIK Institute. Envelopes should be clearly marked "Tender for Chiller Repair – HVAC System" and addressed to the Director (Engineering Projects) not later than 04 April 2024 at 1100 hrs. **The proposals will be opened in the presence of available bidders at 1130 hours on the same day** in the office of Director (Engineering Projects), GIKI, Topi, Swabi. The cost of each item should be declared separately. The Institute reserves the right to accept or reject any tender and to annul the tender process or reject all tenders at any time prior to the award without incurring any liability.

Director (Engineering Projects)

GIK Institute, Topi, Swabi

Email. [Director.engineeringprojects@giki.edu.pk](mailto:Director.engineeringprojects@giki.edu.pk)

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# **GENERAL RULES AND DIRECTIONS**

## *FOR GUIDANCE OF CONTRACTORS*

GIK Institute invites interested and qualified/eligible firms to participate in the tender for the repair and refurbishment of a 240-ton capacity Chiller. The objective of this project is to ensure the optimal performance and longevity of the Chiller system, contributing to the efficiency and sustainability of our operations.

### **Submission Guidelines:**

Please find enclosed the tender documents, which provide comprehensive details on the project requirements, technical specifications, qualification criteria, submission guidelines, and evaluation criteria. We kindly request that all interested parties adhere to the specified format and submit their tenders by 04 April 2024 at 11:00 AM. The cost of each item should be determined separately.

### **Pre-Tender Meeting:**

To ensure a clear understanding of the project, we will conduct a pre-tender meeting at the convenience of the firm within working hours on any day prior to the tender deadline. This meeting will offer an opportunity for potential contractors to seek clarification on any aspects of the project.

We look forward to receiving your tender and working together to ensure the successful repair and refurbishment of our Chiller system. Should you require any additional information or clarification, please do not hesitate to contact the office of Works Directorates.

### **Introduction**

GIK Institute extends an invitation to qualified and interested contractors for the submission of proposals to undertake the refurbishment of our Water-Cooled Reciprocating Chiller, bearing the model number WPCD-5270B, situated within the HVAC Plant at our esteemed institution in Topi Swabi. As a critical component of our HVAC system, the chiller's optimal functioning is pivotal to maintaining a conducive environment within our facility.

This tender aims to secure the services of experienced contractors capable of executing comprehensive repairs and refurbishments, ensuring the Chiller's sustained efficiency and compliance with operational standards. The scope of work encompasses a range of tasks, from the replacement of crucial components to meticulous testing and commissioning procedures. Interested parties are encouraged to carefully review the requirements outlined in the tender documents and submit their proposals in accordance with the provided guidelines.

The following sections detail the specific requirements, scope of work, submission guidelines, and contact information for inquiries. We appreciate your interest in participating in this tender process and look forward to receiving your proposals.

### **Project Overview**

The GIK Institute is undertaking a critical initiative for the refurbishment of our Water-Cooled Reciprocating Chiller, identified by the model number WPCD-5270B, located within the HVAC

Plant at our facility in Topi Swabi. This project aims to address the essential maintenance and enhancement needs of a key component within our HVAC system, crucial for the consistent and efficient operation of our environmental control systems.

## **Chiller Details:**

Model: WPCD-5270B

Type: Water-Cooled Reciprocating Chiller

Capacity: 240-ton

Location: HVAC Plant, GIK Institute, Topi Swabi

## **Scope of Work**

The scope of work for the refurbishment of the Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in the HVAC Plant at GIK Institute, Topi Swabi, encompasses a comprehensive set of tasks and activities to restore the chiller to optimal working conditions. The selected contractor shall execute the following:

### **I. Evaporator Shell and Refrigerant Coils Replacement:**

Thorough assessment of the evaporator shell.

Replacement of the evaporator shell and refrigerant coils as necessary.

Ensuring completeness and functionality in alignment with industry standards.

### **II. Gas Charging and Dryer Cores Replacement:**

Gas charging to optimize refrigerant levels.

Replacement of dryer cores to maintain effective moisture removal.

### **III. Expansion Valves and Liquid Line Solenoid Valves:**

Inspection and repair or replacement of expansion valves.

Inspection and replacement of liquid line solenoid valves for proper functioning.

### **IV. Electrical Control System:**

Comprehensive checking and repair of the electrical control system for each circuit.

Verification of proper communication and coordination between electrical components.

### **V. Motor Protection Circuit:**

Inspection and repair or replacement of the motor protection circuit for each compressor.

Ensuring motor protection functions are in accordance with safety standards.

### **VI. Condenser Inspection and Repair:**

Thorough checking and repair of three (3) condensers.

Addressing any identified issues affecting condenser performance.

### **VII. System-Wide Checks and Repairs:**

Identification and rectification of any additional repair work found during the comprehensive checking of the system.

### **VIII. Testing and Commissioning:**

Rigorous testing of the chiller post-refurbishment.

Commissioning procedures to ensure the chiller meets required operational standards.

The selected contractor must adhere to the highest industry standards, safety protocols, and local regulations throughout the refurbishment process. The completion of this scope of work is

expected to contribute to the extended lifespan, enhanced performance, and overall reliability of the Water-Cooled Reciprocating Chiller within our HVAC system.

## **Technical Specifications**

### I. Chiller Details:

Model: SKM WPCD-5270B

Type: Water-Cooled Reciprocating Chiller

Capacity: 240-ton

Location: HVAC Plant, GIK Institute, Topi Swabi

### II. Evaporator Shell and Refrigerant Coils:

Material: High-grade corrosion-resistant material.

Replacement Criteria: Replace if damaged, corroded, or degraded performance.

Coil Material: Copper or other material meeting industry standards.

### III. Gas Charging and Dryer Cores:

Refrigerant: R22 (Gentran Honeywell USA)

Charging Procedure: Follow manufacturer guidelines.

Dryer Cores: High-efficiency cores meeting industry standards.

### IV. Expansion Valves and Solenoid Valves:

Replacement Criteria: Replace if malfunctioning or not meeting performance standards.

### V. Electrical Control System:

Components: Ensure functionality of relays, contactors, and controllers.

Communication Protocol: Confirm compatibility and coordination.

Safety Features: Verify proper functioning of safety interlocks.

### VI. Motor Protection Circuit:

Protection Devices: Overload relays, thermal protection devices.

Criteria for Replacement: Replace if not meeting safety standards.

### VII. Condensers:

Inspection Criteria: Check for corrosion, damage, or reduced heat exchange efficiency.

Repair: Address identified issues to restore optimal performance.

### VIII. Testing and Commissioning:

Performance Testing: Conduct comprehensive performance tests.

Commissioning Procedures: Follow industry-standard commissioning protocols.

Operational Standards: Ensure compliance with specified operational standards.

### IX. Quality Assurance:

Compliance: Ensure compliance with applicable industry standards and codes.

Testing and Inspection: Implement rigorous testing and inspection protocols.

Documentation: Maintain detailed records of all repairs and replacements.

### X. Safety Measures:

Adherence to Regulations: Comply with local safety regulations.

Personal Protective Equipment (PPE): Ensure the use of appropriate PPE during the refurbishment.

### XI. Warranty:

Warranty Period: [2 YEARS]

Coverage: Comprehensive coverage for all replaced components.

These technical specifications serve as a guideline for potential contractors to understand the requirements and expectations for the chiller repair and refurbishment. Contractors are expected to adhere to these specifications while proposing solutions for the project.

## **Qualification Criteria**

### **I. Experience and Expertise:**

Demonstrated experience in repairing and maintaining Water-Cooled Reciprocating Chillers, particularly SKM models.

Proven track record of successfully completing similar chiller refurbishment projects in the past five years.

### **II. Licenses and Certifications:**

Possession of a valid and relevant license for carrying out HVAC repairs in both Public and Private Sectors.

Certifications demonstrating expertise in chiller repair and maintenance.

### **III. Compliance with Regulations:**

Full compliance with all local regulations and safety standards related to HVAC systems and chiller operations.

Previous experience in adhering to environmental and occupational health and safety standards.

### **IV. Financial Stability:**

Financial stability and capability to manage the costs associated with chiller repair, including labor, materials, taxes, and additional charges.

Submission of audited financial statements for the past two years.

### **V. Detailed Cost Breakdown:**

Submission of a detailed breakdown of costs, including labor, materials, taxes, and any additional charges associated with the repair and refurbishment project.

Proof of insurance coverage for the duration of the project.

### **VI. Project Management Capabilities:**

Demonstration of effective project management capabilities, including the ability to meet deadlines and manage resources efficiently.

Evidence of successfully managing projects of similar size and complexity.

Compliance with ISO or other relevant quality management standards.

### **VII. Health and Safety Protocols:**

Demonstrated commitment to and implementation of robust health and safety protocols for personnel involved in chiller repair projects.

Evidence of a safety record with minimal incidents on previous projects.

### **VIII. Capacity and Resources:**

Confirmation of the contractor's capacity to handle the scope of work outlined in the tender.

Availability of skilled personnel, tools, and equipment necessary for the successful completion of the project.

Contractors meeting these qualification criteria are invited to participate in the tender process.

The GIK Institute reserves the right to evaluate and select contractors based on these criteria.

Certainly! Below are suggested submission guidelines for contractors interested in participating in the tender for the repair and refurbishment of the Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in the HVAC Plant at GIK Institute:

## **Submission Guidelines**

### **I. Tender Document Download:**

Interested contractors are requested to download the complete tender documents from the GIK Institute website.

### **II. Pre-Tender Meeting:**

A pre-tender meeting will be held before the tender submission date. Attendance is recommended to gain a thorough understanding of the project requirements and to seek clarification on any aspects of the tender.

### **III. Eligibility Check:**

Before preparing and submitting the tender, contractors must ensure that they meet all the qualification criteria outlined in the tender documents.

Contractors must submit two sealed envelopes:

Technical Proposal

Financial Proposal

Both envelopes should be clearly marked "Tender for Chiller Repair – HVAC System."

Technical Proposal:

The Technical Proposal envelope should contain the following documents:

Company Profile, including details of relevant experience and expertise.

Copies of valid licenses and certifications for HVAC repairs.

Details of compliance with local regulations and safety standards.

References from at least three clients for similar projects.

Documentation demonstrating financial stability and capability.

Detailed breakdown of costs for the repair and refurbishment project.

Financial Proposal:

The Financial Proposal envelope should include a detailed breakdown of the cost estimates, including labor, materials, taxes, and any additional charges associated with the repair and refurbishment project.

### **IV. Submission Labeling:**

Each envelope must be clearly labeled with the contractor's name, address, contact information, and the words "Technical Proposal" or "Financial Proposal."

### **V. Cost Declaration:**

The cost of each item within the Financial Proposal should be declared separately.

### **VI. Late Submissions:**

Tenders received after the specified deadline will not be considered. The Institute holds the right to reject late submissions.

### **VII. Tender Opening:**

The tender opening will take place on 04 April 2024 at 11:30 AM in the office of the Director of Engineering Projects, GIK Institute. Interested contractors are invited to attend the opening.

Evaluation Process:

The evaluation of tender proposals will be based on the criteria outlined in the tender documents.

The Institute reserves the right to accept or reject any tender and to annul the tender process without incurring any liability.

Inquiries and Clarifications:

For inquiries or clarifications regarding the tender, interested contractors may contact:  
Director (Projects), GIK Institute, Topi, Swabi -  
Deputy Director (Works)

## **Technical Evaluation Criteria (Total 100 marks)**

### **1. Experience and Expertise (40 points):**

Past Experience in repairing and maintaining Water-Cooled Reciprocating Chillers, particularly SKM models (20 points).

In hand projects of similar chiller refurbishment (20 points).

### **2. Financial Stability and Detailed Cost Breakdown (20 points):**

Financial stability and capability to manage costs associated with chiller repair (10 points).

Submission of a detailed breakdown of costs, including labor, materials, taxes, and additional charges (10 points).

### **3. Health and Safety Protocols (10 points):**

Demonstrated commitment to and implementation of robust health and safety protocols for personnel involved in chiller repair projects.

### **4. Capacity and Resources (30 points):**

Confirmation of the contractor's capacity to handle the scope of work outlined in the tender (15 points).

Availability of skilled personnel, tools, and equipment necessary for the successful completion of the project (15 points).

## **Budget and Payment Terms**

I. The payment schedule for the project will be as follows:

Milestone 1 (Advance Payment): No advance payment is allowed.

Milestone 2 (Progress Payment): 30% secured advance is allowed against the material delivered on site subject of submission of delivery challan and original invoice.

Milestone 3 (Final Payment): Final payment shall be made on the total contract amount upon the successful testing and commissioning of the chiller and final acceptance by GIK Institute.

II. Invoice Submission:

Invoices for each milestone should be submitted in accordance with the payment schedule.

Invoices must include a detailed breakdown of costs, including labor, materials, taxes, and any additional charges.

Invoices should be addressed to the Director (Engineering Projects) at GIK Institute.

III. Performance Security:

The successful contractor will be required to provide a performance security, in the form of a bank guarantee or another acceptable instrument, equivalent to 10 % of the total contract amount.

The performance security should be submitted within 10 days after the signing of the contract.

IV. Retention Amount:

A retention amount of 10 % of each milestone payment will be retained by GIK Institute until 03 months after the successful completion and acceptance of the entire project.



The retention amount will be released to the contractor after 03 months of the final acceptance of the chiller.

V. Currency:

All amounts mentioned in the budget and payment terms are in PKP.

VI. Taxation:

All applicable taxes, duties, and levies imposed by local authorities will be borne by the contractor and should be included in the cost breakdown.

VII. Currency Fluctuations:

Any adverse currency fluctuations affecting the project cost will be the responsibility of the contractor.

**Timeline**

The following timeline outlines key milestones and deadlines associated with the repair and refurbishment of the Water-Cooled Reciprocating Chiller (SKM Model No. WPCD-5270B) in the HVAC Plant at GIK Institute. Contractors are advised to carefully adhere to the specified schedule to ensure a smooth and efficient tendering process:

I. Tender Release:

The tender documents is available for download from the GIK Institute website.

II. Tender Submission Deadline:

All tender proposals must be submitted in two sealed envelopes (Technical and Financial) by 04 April 2024 at 11:00 AM. Late submissions will not be considered.

III. Tender Opening:

The opening of the tender proposals will take place on 04 April 2024 at 11:30 AM in the office of the Director (Engineering Projects). Interested contractors are welcome to attend the opening.

IV. Evaluation Period:

The evaluation of tender proposals will be conducted promptly after the opening, with the results communicated to successful contractors.

V. Contract Signing:

The successful contractor is expected to sign the contract after finalizing and selecting the lowest competent bidder based on technical and financial evaluation.

VI. Commencement of Work:

The contractor is expected to commence work immediately after signing the contract agreement and proceed with the refurbishment project within 01 month.

VII. Project Milestones:

Specific milestones, including progress payments and testing/commissioning, will be outlined in the contract.

VIII. Final Acceptance:

The final acceptance of the refurbished chiller is anticipated by, marking the successful completion of the project.

Performance Security Submission:

The successful contractor must submit the performance security within one week after signing the contract.

IX. Retention Release:

The retention amount will be released after 03 months of the final acceptance of the chiller and completion of all contractual obligations.

Note: The Institute reserves the right to adjust the timeline as needed and will communicate any changes to the interested contractors in a timely manner. Contractors are encouraged to monitor the Institute's website and official communications for updates.

### **Terms and Conditions**

#### I. Eligibility and Qualification:

Only contractors meeting the specified eligibility criteria outlined in the tender documents are eligible to participate.

GIK Institute reserves the right to disqualify any bidder who fails to meet the eligibility and qualification criteria.

#### II. Submission of Proposals:

Contractors must submit proposals in accordance with the specified format and guidelines outlined in the tender documents.

Late submissions will not be considered.

#### III. Confidentiality:

All information provided by the contractors during the tender process shall be treated as confidential.

Contractors must not disclose any details of their proposals to third parties without prior written consent from GIK Institute.

#### IV. Validity of Proposals:

Contractors must ensure that their proposals remain valid for a minimum period of 90 days from the submission deadline.

#### V. Advance Payment: No advance payment is allowed.

The contractor is responsible for implementing and maintaining robust health and safety protocols for all personnel involved in the project.

#### VI. Insurance:

The contractor must maintain comprehensive insurance coverage, including liability insurance, throughout the duration of the project.

#### VII. Dispute Resolution:

In case of disputes, both parties agree to resolve issues through negotiations and, if necessary, arbitration in accordance with Institute policies.

#### VIII. Force Majeure:

Neither party shall be liable for any delay or failure to fulfil its obligations due to circumstances beyond its reasonable control.

#### IX. Amendments to Tender Documents:

GIK Institute reserves the right to amend the tender documents at any time. Amendments will be communicated to all registered bidders.

Note: These terms and conditions are subject to change, and GIK Institute reserves the right to modify or update them as needed.

### **Format of Contract Agreement**

This Contract Agreement (the "Agreement") is entered into on this [Insert Date], by and between:  
GIK Institute

[Insert Organization's Full Legal Name and Address]

Hereinafter referred to as the "Institute"

and

[Contractor's Full Legal Name]

[Insert Contractor's Address]

Hereinafter referred to as the "Contractor"

1. Scope of Work:

The Contractor agrees to perform the repair and refurbishment of the Water-Cooled Reciprocating Chiller, identified as SKM Model No. WPCD-5270B, located in the HVAC Plant at GIK Institute, Topi Swabi, in accordance with the specifications and scope of work outlined in Exhibit A attached hereto.

2. Contract Price and Payment Terms:

2.1 The total contract price for the repair and refurbishment services is [Insert Amount], inclusive of all taxes, duties, and charges.

2.2 Payment will be made in accordance with the payment schedule outlined in Exhibit B attached hereto.

2.3 The Institute shall make an advance payment of [Insert Percentage]% upon the signing of this Agreement.

3. Commencement and Completion:

3.1 The Contractor shall commence work on [Insert Date].

3.2 The refurbishment project must be completed by [Insert Date], subject to adjustments based on mutually agreed-upon changes or unforeseen circumstances.

4. Performance Security:

The Contractor shall provide a performance security in the form of a [Insert Type of Instrument] equivalent to [Insert Percentage]% of the total contract amount within [Insert Timeframe] after the signing of this Agreement.

5. Quality Assurance:

The Contractor shall adhere to all quality assurance measures specified in Exhibit A to ensure that all repair and replacement activities meet industry standards.

6. Health and Safety:

The Contractor is responsible for implementing and maintaining robust health and safety protocols for all personnel involved in the project, in compliance with local regulations.

7. Insurance:

The Contractor shall maintain comprehensive insurance coverage, including liability insurance, throughout the duration of the project.

8. Retention:

The Institute shall retain [Insert Percentage]% of each milestone payment until the successful completion and acceptance of the entire project.

9. Dispute Resolution:

In case of disputes, both parties agree to resolve issues through negotiations and, if necessary, arbitration in accordance with [Specify Applicable Laws].

10. Applicable Laws:

This Agreement shall be governed by and construed in accordance with the laws of [Specify Jurisdiction].

11. Amendments:

Any amendments to this Agreement must be made in writing and signed by both parties.

12. Termination:

Either party may terminate this Agreement in accordance with the termination provisions outlined in Exhibit C attached hereto.

IN WITNESS WHEREOF, the parties hereto have executed this Contract Agreement as of the date first above written.

GIK Institute

Signature: \_\_\_\_\_

[Name and Title of Authorized Signatory]

[Contractor's Full Legal Name]

Signature: \_\_\_\_\_

[Name and Title of Authorized Signatory]