



NATIONAL LIBRARY OF SOUTH AFRICA

228 Johannes Ramakhoase Street
Private Bag X397
Pretoria
0001

5 Queen Victoria Street
Cape Town
8001

TERMS OF REFERENCE FOR HVAC SYSTEM

CLOSING DATE: 08 August 2024

TIME: 11:00

NB. Should you want to submit a quotation, please email it to: Quotations@nlsa.ac.za

1 BACKGROUND

- 1.1** The National Library of South Africa hereafter referred to as NLSA, is a world-class African National Library and Information Hub. The NLSA is responsible for collecting, recording, preserving, and making available the national documentary heritage of South Africa. The NLSA promotes awareness, appreciation, and access to published documents, nationally and internationally and in doing so contributes to the development and prosperity of South Africa. The NLSA has Campuses in Pretoria and Cape Town.
- 1.2** The National Library of South Africa in its efforts to minimise unplanned interruptions and downtime on the HVAC System; seeks to appoint an experienced service provider for six months to conduct routine preventative maintenance and corrective maintenance (as and when required) at its Pretoria Campus located at 228 Johannes Ramakhoase

2 SCOPE OF WORK

The scope of work includes minor and major routine services as well as corrective maintenance (as and when required) for SIX months. The scope of work below applies.

2.1 Chillers and Reciprocating Units

EQUIPMENT LIST

3x Chillers
9x Compressors
20x Pumps
3x Cooling Towers
1x Water Tank

2.1.1 Five Monthly Minor Services.

- a) Do visual inspections
- b) Review of operational characteristics and history log
- c) Ensure the efficient functioning of all relevant components

2.1.2 One Major Service

- a) Review of operational characteristics and history
- b) Testing and inspection
- c) Start the unit and observe the operation
- d) Check compressor for proper operation
- e) Check discharge and suction gas pressure
- f) Check controls for proper operation
- g) Setpoint point and control adjustments
- h) Check unit for noise and vibration
- i) Instrument calibrations
- j) Refrigerant and oil removal and charging
- k) Processing of spent fluids or gasses off-site
- l) Refrigerant leak testing
- m) Observe and verify purge control and operation
- n) Provide Oil / Refrigerant analysis (if necessary)
- o) Verification of safeties
- p) Unit shut down and startup as necessary with NLSA approval
- q) Descaling condenser tube with a nylon brush, if necessary
- r) Inspect gasket and look for leaks
- s) Check and record chiller & condenser water pressure for any blockages
- t) Check the oil pressure of the compressor
- u) Check piping and valves for leaks
- v) Check for corrosion

Pumps

- w) Check that mounting points are secure
- x) Inspect the mechanical seal and packing
- y) Inspect the pump flanges for leaks

- z) Inspect the couplings
- aa) Inspect and clean filters
- bb) Lubricate the motor and pump bearing per manufacturer's guidelines

Electrical / Motor Inspection

- cc) Check that all terminations are tight
- dd) Inspect motor vents and windings for dust/dirt build-up and clean according to manufacturer's guidelines
- ee) Inspect starter/contractor for arcing, overheating, etc.
- ff) Use a megohmmeter on the windings to check for insulation failure

Replace damaged seals and hoses

- gg) If any hoses, seals, or O-rings show wear or damage, replace them immediately.

2.2 Air Handling and Reciprocating Units

EQUIPMENT LIST

15x Split Units
3x Air handling units
14x DB-AIRE
18x Extractor Fans
155x FCU's

2.2.1 Five Monthly Minor Services

- a) Clean filters and diffusers
- b) Do diagnosis to identify problems (if necessary)

2.2.2 ONE Major Service

- a) Check gas level and refill if necessary
- b) Pressure switches
- c) Clean the filters and diffusers.
- d) Replacement of filters if necessary
- e) Do pressure checks
- f) Do diagnosis to identify problems
- g) Condenser Coil – Clean as required
- h) Refrigerant Charge - Check by superheat/subcooling method (Thermo-charging)
- i) Controls & Safeties - Inspect & test
- j) Relays & Contactors - Inspect & clean
- k) Crankcase Heater - Operationally inspect

- l) Unit Wiring - Inspect & loose connections tighten
- m) Temperature & Pressures - record
- n) Capacitors – Test
- o) Unit Disconnect – Test
- p) Lubrication - Application to motors & bearings
- q) Belts & Pulleys - Inspect & adjust
- r) Condensate Drain - Check to assure it is open
- s) Voltage & Amps – for blower motor, compressor & condenser fan motor check & record
- t) Thermostat - Check & calibrate
- u) Motors - Clean & inspect

All the work carried out in the routine services must be recorded with the test results on a Routine Maintenance Sheet; signed off by the Client's representative, a copy is then left at the premises. For all the purchase and installation of parts and equipment, the three-quote system shall apply with prior approval by the Client.

NB. All the works must be done according to respective equipment manufacturer's specifications.

3 NLSA'S RIGHTS

The NLSA is entitled to amend any condition of this RFQ, the validity period, terms of reference, or extend the RFQ's closing date, all before the closing date. All Bidders, to whom the quotation documents have been issued, and where the NLSA has a record of such Bidders, may be advised in writing of such amendments in good time and such changes will also be posted on the NLSA's website under the relevant Bid information. All prospective Bidders must, therefore, ensure that they visit the NLSA website regularly to ensure that they are updated on any amendments in this regard.

4 DURATION OF THE PROJECT

4.1 The Routine Maintenance Service required shall be for six months.

4.2 The NLSA will advise on the start and end date of the service.

5 CONDITIONS OF BID

5.1 The NLSA reserves the right not to accept the lowest proposal.

5.2 The NLSA reserves the right to appoint one or more Bidder.

5.3 The NLSA reserves the right to have any documentation, submitted by the successful Bidder checked or inspected by any other person or organisation.

5.4 The NLSA will not be held responsible for any costs incurred by the Bidder in the preparation and submission of the RFQ.

5.5 No upfront Payment will be done by NLSA.

5.6 The quotations shall remain valid for 60 days and may be extended at the discretion of the NLSA.

6 EVALUATION CRITERIA

Bidders will be evaluated in three stages.

6.1. Stage One: Pre-Evaluation (SCM Compliance)

6.1.1. Standard bid documents

Fully completed SBD4 and SBD6.1,

NB. If there are any omissions on required SBD's, bidders will be afforded a maximum of two days to respond and correct the omissions.

6.1.2. Mandatory requirements

Provide a valid company document demonstrating the following:

1. Company registered with SARRACA. (South African Refrigeration and Air conditioning contractors' association.)
2. Company registered with CIDB for Mechanical Engineering Grade 2 or above.
3. Valid Air-conditioning and Refrigeration Trade Test Artisan certificates for at least two Artisans to be assigned to this project.

NB. If no valid documents are provided, the bidder will be disqualified.

6.2 Stage Two: Functionality / Technical evaluation

No	Element	Weight	Points	Score
	Technical			
1.	Experience of service provider in rendering required services: Provide reference letters on official letterhead for HAVC repair and maintenance projects/services successfully rendered in the past ten years. The letters must be on the client's letterhead and must include, Referee's name, signature, contact number, duration of the contract and scope of work. • 5+ compliant reference letters = 50 points • 4 compliant reference letters = 40 points • 3 compliant reference letters = 30 points • 2 compliant reference letters = 20 points • 1 compliant reference letter = 10 points • No compliant letter = 0 points	50		
2	Qualified Technicians Provide CV's of at least two qualified Artisans to be assigned to this project. CV must clearly demonstrate years of experience in the installation, repairs and maintenance of the HVAC systems, indicating companies where technicians was employed, the position, responsibilities in that position and period of employment. • 5+ Years of relevant experience = 50 points • 4 Years of relevant experience = 40 points • 3 Years of relevant experience = 30 points • 2 Years of relevant experience = 20 points • 1 Year of relevant experience = 10 points • No experience or experience not relevant = 0 points	50		

7. PRICING

7.1 Provide detailed quotation as per the following: **Monthly Routine Maintenance Services**

The total amount per service	Price
3x Chillers (5x Minor + 1 major)	
9x Compressors (5x Minor +1x Major)	
20x Pumps (5x Minor +1x Major)	
3x Cooling Towers (5x Minor + 1x Major)	
15x Split units (5x Minor + 1x Major service)	
3x Airhandling units (5xMinor+1Major service)	
18x Extraction Fans (5xMinor + 1Major service)	
14x DB-Aire (5xMinor + 1Major service)	
155x FCU's (5xMinor + 1Major service)	
Safety File (if not included above)	
Onsite resource (Qualified Artisan)	
Onsite resource (Assistant Artisan)	
TOTAL VALUE OF CONTRACT	

8. ENQUIRIES

All enquiries regarding this RFQ must be directed to the SCM Office:

Kindly send any bid related enquiries to the email address below quoting the bid number and bid description as a reference to Daniel.tladi@nlsa.ac.za and Lorraine.mongwe@nlsa.ac.za