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RFQ Number	NLM-QUO-24/087
Request for Quotation Date	23 April 2025
RFQ Closing Date	29 May 2025
RFQ Closing Time	17:00
Compulsory Site Briefing	Not compulsory but if more information required can be arranged
Contact Person	Catherine Matima
Quotation Validity	90 Days from the closing date
Submission Details	RFQ Response must be sent to: catherine.matima@necsa.co.za
RFQ Description	To supply a Blower as per the attached specification sheet

Dear Service Provider

Kindly provide a quotation for goods and or services as outlined in section 2 of this document.

1. Introduction

The South African Nuclear Energy Corporation Limited (Necsa) is a state-owned public company (SOC), registered in terms of the Companies Act, (Act No. 61 of 1973), registration number 2000/003735/06.

The Necsa Group engages in commercial business mainly through its wholly-owned commercial subsidiaries: NTP Radioisotopes SOC Ltd (NTP), which is responsible for a range of radiation-based products and services for healthcare, life sciences and industry, and Pelchem SOC Ltd (Pelchem), which supplies fluorine and fluorine-based products. Both subsidiaries, together with their subsidiaries, supply local and global markets, earning valuable foreign exchange for South Africa and are among the best in their field in their respective world markets.

Necsa's safety, health, environment and quality policies provides for top management commitment to compliance with regulatory requirements of ISO 14001, OHSAS 18001 and RD 0034 (Quality and Safety Management Requirements for Nuclear Installations), ISO 9001 and ISO 17025.

Necsa promotes the science, technology and engineering expertise of South Africa and improves the public understanding of these through regular communications at various forums and outreach programmes to the community. We are a proudly South African company continuously striving, and succeeding in many respects, to be at the edge of science, technology and engineering related to the safe use of nuclear knowledge to improve our world.

For more information on Necsa, please visit: WWW.Necsa.co.za

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2. Background

Necsa plans to establish a plasma gasification demonstration facility in a laboratory on-site to volumetrically reduce uranium-containing PTFE candle filters. The gas generated in the facility must be routed from the plasma reactor R82018 through a downstream quench H82019 and KOH scrubber S83123, and eventually discharged into the process ventilation system (see Refs. 02 and 03 in Section 4). A blower P83130, to be installed in the scrubber off-gas line, will be used for this purpose. Details of the blower are given in the attached Specification Sheet (see Ref. 01 in Section 4).

3. Scope of Work

Item Description	Quantity
The scope includes the supply of one (1) off Blower as per the attached Specification sheet (ENS-FDP-SPE-24017), furnishing of all labour, material and service for the sizing, selection, design, manufacturing, deliver to Necsa in Pelindaba, along with all its accessories.. All other equipment and components identified and referenced in Section 2 are outside the scope of work considered here.	1

General requirements

The general requirements of works include but not limited to the items listed below and detailed in the Specification sheet:

- Supply of the complete assembly blower, including all mountings liners and accessories,
- Any special tools required for commissioning and maintenance,
- Start-up and commissioning spared (detailed breakdown in the tender summary sheet),
- Equipment GA drawings,
- Equipment data books and operating/ maintenance manuals,
- Packaging and deliver to site at Necsa in Pelindaba,

4. Attachments

Ref #	DOCUMENT NAME	DESCRIPTION
01	ENS-FDP-SPE-24017	Specification Sheet for Blower B83130
02	ENS-FDP-PID-24002	PTFE Facility Destruction Project: P&I Diagram – Reactor System 820
03	ENS-FDP-PID-24003	PTFE Facility Destruction Project: P&I Diagram – KOH Scrubber System 831

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5. Pricing

- All price quoted to include all applicable taxes.
- Price must be fixed and firm
- Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable, disbursements etc.
- Quotation must be completed in full, incomplete quote could result in a quote being disqualified.
- Payment will be according to Necsa's General Conditions of Purchase.

6. Evaluation

6.1. Phase 1- Functionality Evaluation / Technical Evaluation

Where functional or technical evaluation criterion is applicable, assessment will be performed in terms of the criterion listed below and the criterion may include Technical, Performance, Quality and Risk.

If the Bidder's response to the Technical templates does not indicate that the Bidder can support an acceptable technical solution, the Bidder's response will be rejected and not evaluated further.

Item	Requirement	Weight	Points	Criteria
1	ISO 9001: 2015 (or latest) accredited Supplier must provide evidence (ISO 9001 certificate)	30	30	ISO 9001 accreditation of supplier of the required products. OR ISO 9001 accreditation of OEM and OEM letter listing local supplier as authorised supplier and service agent
2	Supplier must provide letter referencing after sales service and maintenance	25	25	Supplier having a service and repair workshop Supplier holds critical spares as stock items
			15	Supplier having a service and repair workshop
			10	Supplier outsources service and repair
3		25	25	Product available within 4 weeks of issue of Purchase Order

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Item	Requirement	Weight	Points	Criteria
	Supplier lead-time		15	Product available within 6 weeks of issue of Purchase Order
	Supplier must specify lead-time		10	Product available within 8 weeks of issue of Purchase Order
4	Suitability of Product	20	20	Supplier adequately demonstrates how the recommended product meets the user's requirements or specifications
Total		100		

Together the Technical, Performance & Quality and Risk criteria make up the functionality criterion and a Bidder's Proposal will be evaluated for functionality out of a possible 100 points. Only RFQ responses achieving an evaluation score of greater than the set threshold points out of the possible 100 points and which score a number of points for functionality that is greater than or equal to the set threshold points of the number of points achieved by the highest scoring Bid for functionality will be selected to progress to the second stage.

The quotations will be evaluated according to the following selection criteria (based on information requested above):

6.2. **Phase 2 - Evaluation In Terms Of Preferential Procurement Policy Framework Act, 2022**

This bid will be evaluated and adjudicated according to the 80/20 point system, in terms of which a maximum of 80 points will be awarded for price and 20 points will be allocated based on the specific goals (B-BBE status level).

	POINTS
PRICE	80
SPECIFIC GOALS (B-BBEE status level)	20
Total points for Price and SPECIFIC GOALS	100

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Preference goal

B-BBEE status level contributor

B-BBEE Status Level of Contributor	Number of points (80/20 system)
1	20
2	18
3	14
4	12
5	8
6	6
7	4
8	2
Non-compliant contributor	0

7. Required Documentation

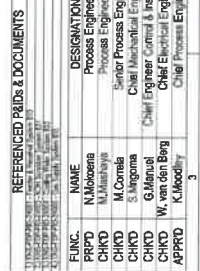
- Tax Clearance Certificate (Tax pin issued by SARS)
- Declaration of interest (SBD 4)
- BEE Certificate / Applicable Affidavit if classified as EME
- Letter of Good Standing (COID) only if Applicable due to the nature of work required
- Any other document or certification that might have been requested on this RFQ

8. Important

- 8.1. Quotation must be submitted on or before the RFQ closing date and time stated above.
- 8.2. Orders above R 30 000 will be evaluated according to the PPPFA 80/20-point system and a functionality scorecard where applicable and the ones above R 1 Million will be subjected to the tender process.
- 8.3. This RFQ is subjected to the Necsa's General Conditions of Purchase, Preferential Procurement Policy Framework Act 2000 and the Preferential Procurement Regulations, 2022, the General Conditions of Contract (GCC) and, if applicable, any other legislation or special conditions of contract
- 8.4. Failure on the part of a bidder to submit proof of B-BBEE Status level of contributor together with the bid, will be interpreted to mean that preference points for specific goals are not claimed.

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- 8.5. The purchaser reserves the right to require of a bidder, either before a bid is adjudicated or at any time subsequently, to substantiate any claim in regard to specific goals, in any manner required by the purchaser.
- 8.6. For a Bidder to obtain clarity on any matter arising from or referred to in this document, please refer queries, in writing, to the contact details provided above. Under no circumstances may any other employee within Necsa be approached for any information. Any such action might result in a disqualification of a response submitted in competition to this RFQ.
- 8.7. No goods and/or services should be delivered to Necsa without an official Necsa Purchase order.
- 8.8. Necsa reserves the right to; cancel or reject any quote and not to award the RFQ to the lowest Bidder or award parts of the RFQ to different Bidders, or not to award the RFQ at all.
- 8.9. The supplier shall under no circumstances offer, promise or make any gift, payment, loan, reward, inducement, benefit or other advantage, which may be construed as being made to solicit any favour, to any Necsa employee or its representatives. Such an act shall constitute a material breach of the Agreement and the Necsa shall be entitled to terminate the Agreement forthwith, without prejudice to any of its rights
- 8.10. By responding to this request, it shall be construed that: the bidder, hereby acknowledge to be fully conversant with the details and conditions set out in the Necsa's General Conditions of Purchase, Preferential Procurement Policy Framework Act 2000 and the Preferential Procurement Regulations, 2022, the General Conditions of Contract (GCC), Technical Information and Specifications attached, and hereby agree to supply, render services or perform works in accordance therewith



ENGINEERING SERVICES DEPARTMENT



BLOWER SPECIFICATION SHEET

Project	PTFE Filter Destruction	Unit Tag Number	B83130
Datasheet Document No.	ENS-FDP-SPE-24017	Revision	1
Description	Blower which provides the driving force to extract the off-gas from the wet scrubber S83123 in the PTFE Filter Destruction Facility and discharge the gas into the process ventilation system.		
Plant Location	Necsa, Pelindaba, North-West Province		
Equipment Location	PTFE Filter Destruction Facility - Inside Laboratory 131, Building V-H2		
Safety Classification	SC-2(C) and SC-3(N)		
Quality Classification	QC-2(C) and QC-3(N)		

FLUID PROPERTIES

Fluid	Off-gas mixture containing CO ₂ , HF, O ₂ and N ₂ ^{Note 4*}		
Solids content	Trace (<0,001) ^{[3], Note 5*}		
Moisture Content	Trace (<0,001) ^{[1], Note 6*}		
Installation	Outdoor ☐ Indoor ☒		
Corrosive due to	Hydrogen Fluoride (HF) gas - produced at 7.92 g/h		
PARAMETERS	UNITS	MINIMUM	MAXIMUM
Operating temperature	°C	40 ^[1]	60 ^[1]
Suction	kPa(a)	75,2 ^[4]	83,3 ^[4]
Discharge	kPa(a)		88,0
Fluid density	kg/m ³	1,20 ^[4]	1,27 (Note 1*)
Viscosity	Pa.s	1,70E-05	-
Mass flow rate	kg/h	4,6 ^{[5], Note 4*}	22,1 ^{[5], Note 4*}
Volume flow rate	m ³ /s	0,005 ^{Note 2*}	0,0055 ^{Note 2*}
Pressure differential	kPa	4,7 ^[4]	12,8 ^[4]

MECHANICAL, ELECTRICAL & GENERAL PROPERTIES

Type of fan recommended	Regenerative	Insulation		TBD Vendor	Application	Off-gas extraction
Electrical (Y/N)	Y	Volts		TBD Vendor	Phase, Frequency	TBD, 50 Hz
Wheel diameter	TBD Vendor			Blade Type	TBD Vendor	
Fan length	TBD Vendor			Fan width	TBD Vendor	
Shaft dimensions	TBD Vendor					
Vibration Sensor (Y/N)	TBD Vendor					
Instruments on equipment	Run (Status) Indicator ^[2] - to communicate with centralized plant monitoring system in control room					
Motor specifications	Variable speed adjustment required. Supplier to advise further.					

PROCESS CONNECTION

Pipe Suction Nozzle	Size	100NB	Rating	150#	Flange Spec.	SS, ASTM A182-F304/304L, ASME B16.5, RF
Pipe Discharge Nozzle	Size	100NB	Rating	150#	Flange Spec.	SS, ASTM A182-F304/304L, ASME B16.5, RF

MATERIAL OF CONSTRUCTION

Casing	TBD Vendor	Shaft	TBD Vendor	Shaft sleeves	TBD Vendor
Fan Impellor	TBD Vendor	Base Plate	TBD Vendor	Seal type	TBD Vendor
Hub	TBD Vendor	Belt	TBD Vendor	Helical Time gear	TBD Vendor

VENDOR DATA REQUIRED WITH TENDER

1 Fan performance curve		4 Fan dimensions	
2 Fan duty		5 Fan sound pressure level	
3 Fan efficiency		6 Fan rotational speed	

ACCESSORIES

Inlet & Outlet Silencer	To Be Included
Common Base Plate	To Be Included

REFERENCE DRAWINGS AND DOCUMENTS

[1] ENS-FDP-CLC-24015: Energy Balance Calculation for the PTFE Filter Destruction System.
[2] ENS-FDP-PID-24003: PTFE Filter Destruction Project P&ID Diagram - KOH Scrubber System 831
[3] ENS-FDP-DES-24004: PTFE Filter Destruction Process Description.
[4] ENS-FDP-CLC-24019: Pressure Balance across the PTFE Filter Destruction System
[5] ENS-FDP-CLC-24014: Mass Balance across the PTFE Filter Destruction System

NOTES			
Note 1. This density is realised at the operating pressure and at the minimum temperature conditions of 40 °C that can be expected in the event that the upstream Electrical Heater H83127 is faulty.			
Note 2. These volumetric flowrates are obtained by taking the product of the line velocities obtained in [4] with the cross-sectional area for a 100 NB pipe.			
Note 3. Inspection and testing shall be done in supplier facility.			
Note 4. Gas composition (% w/w) is 0.32% CO ₂ , 0.17% HF, 34.83% O ₂ and 64.68% N ₂ at the minimum flow rate, and 79.06% CO ₂ , 0.04% HF, 7.32% O ₂ and 13.59% N ₂ at the maximum flow rate.			
Note 5. Two HEPA filters F83128A&B and F83129 are installed upstream of the blower			
Note 6. A moisture trap Y83153 is installed in the suction line upstream of the blower.			
Note 7. Inspection and testing shall be done in supplier facility.			
	Name	Signature	Date
Compiled by	Mr M.K Nkadameng	 Signed by: Mr M.K Nkadameng Date: 2023/07/10 10:00:00	
Checked	Mrs M. Correia	 Signed by: Mrs M. Correia Date: 2023/07/10 10:00:00	
Mechanical	Mr M. Msane	 Signed by: Mr M. Msane Date: 2023/07/10 10:00:00	
Mechanical	Mr S. Mngoma	 Signed by: Mr S. Mngoma Date: 2023/07/10 10:00:00	
Electrical	Mr W. Van den Berg	 Signed by: Mr W. Van den Berg Date: 2023/07/10 10:00:00	
Instrumentation	Dr G. Manuel	 Signed by: Dr G. Manuel Date: 2023/07/10 10:00:00	
Approved by	Dr K. Moodley	 Signed by: Dr K. Moodley Date: 2023/07/10 10:00:00	

