RFQ Number	**SRS-RND-RFQ-25002**
Request for Quotation Date	**17 December 2025**
RFQ Closing Date	**16 January 2026**
RFQ Closing Time	**12h00**
Compulsory Site Briefing	**No**
Contact Person	**Thato Sello (Thato.Sello@necsa.co.za); Graham Clinton Daniels (Graham.Daniels@necsa.co.za).**
Quotation Validity	**90 Days from the closing date**
Submission Details	**RFQ Response must be sent to: Thulile Sokhela Thulile.sokhela@ntp.co.za**
RFQ Description	**Consulting services to complete a technical assessment of the use of electron based accelerators for isotope production.**

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

2. Scope of Work

Item Description	Quantity
The report should address the following requirements for electron accelerators : **1. Technical Feasibility** • Review the current report compiled by the internal team which assesses short-listed technologies for Molybdenum-99 production; • Provide a high-level assessment of the pros and cons of electron accelerators versus cyclotron accelerators for Mo-99 production indicating the most feasible route • Include additional isotopes namely Ac-225 and Cu-67 to the overall assessment of the electron accelerator route ; • Provide an in-depth assessment of the pros and cons of LINACS versus Rhodotron accelerators in relation to the production of the indicated isotopes. The assessment should include: o A description of the ideal operational energy of the accelerator to take advantage of the full cross section of interaction for each of the isotopes mentioned; o A description of the possibility/challenges in being able to vary the energy of the accelerator system; o Sections on the ease of installation and operability of the different technologies from a commercial perspective; o Indicate/recommend the number of beam lines that would be ideal for a mixed operation of production and research. o Quantify the bunker/shielding requirements for each of the different technologies mentioned above; o Identify and quantify utilities required for operations; o Comment on challenges encountered during operations; • Comment on maintenance services including availability and frequency thereof.	1

2. Financial Viability • Identify suitable electron accelerator based technologies for production capacities equivalent to total local demand for Molebdenum-99, Ac-225 and Cu-67; • Identify suitable suppliers of the electron accelerators and quantify their costs; • Provide CAPEX costs for the technologies evaluated above; • Provide a break-down of OPEX costs for the different technologies evaluated above; • Provide cost-of-sales figures separately from OPEX costs; • Provide utility costs separately from OPEX costs.	

Quotations are requested from consulting firms that specialise in accelerator technologies and that have a proven track record. The services are required immediately when the purchase order is made.

3. Expected Deliverables

1. Detailed report – The detailed report must address the following as a minimum:

- A section that describes the overview of the problem statement.
    - A section that indicates the most feasible route for Mo-99 production in terms of electron accelerators versus cyclotron accelerators
- The next section must cover the technical feasibility as described in the scope of work above, for the additional isotopes.
- The following section must cover the financial viability as described in the scope of work above:
    - The final section should provide recommendations to the investment committee regarding an investment decision.

2. All references used must be included in the final report and are considered part of the deliverables.

4. Minimum qualification requirements

Potential consultants will be eliminated if they fail to provide the following information;

• At least a minimum of 3 contactable references for previous work done on similar systems i.e. accelerator based systems (service providers must provide telephone numbers and email addresses).

• A demonstrable track record and involvement in the technologies of interest.

- Provide Company Profile.

5. Pricing

- All price quoted to include all applicable taxes.
- Prices must be in South African Rands.
- 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.

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.

Item	Requirement	Weight	Points	Criteria	Score
1	Adherence to the technical requirements.	60	60	• Description of the overview of the problem statement. • Indication the most feasible route for Mo-99 production in terms of electron accelerators versus cyclotron accelerators • Technical feasibility as described in the scope of work above, for the additional isotopes.	
2	Adherence to the financial viability	20	20	• The financial viability as described in the scope of work. • Recommendations to the investment committee regarding an investment decision.	
3	Track record of performing studies for the technologies of interest (including references)	20	20	Assess the level and quality of the expected work through previous studies performed.	
Total		**100**	**100**		

Minimum points to score: 70

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**

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.

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.