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RFQ Number	RS-MSh-RFQ-22002
Request for Quotation Date	2023/06/22
RFQ Closing Date	2023/06/28
RFQ Closing Time	16:00
Compulsory Site Briefing	N/A
Contact Person	Tankiso Modise: ✉ Tankiso.modise@necsa.co.za ☎ 012 305 5734 📞 082 938 1032
Quotation Validity	90 Days from the closing date
Submission Details	RFQ Response must be sent to: ✉ Catherine.matima@necsa.co.za
RFQ Description	Request for Quotation for a design of a LAN

Dear Service Provider


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

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safe use of nuclear knowledge to improve our world.

In one such research initiative, a data communications network is required. This network will enable communications between thee key entities, namely a control room, a mining truck and a gantry. The service provider shall provide a design that best suites the requirements listed here for turnkey and fit for purpose solution.

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

2. Project Description

The Research and Technology development arm of the nuclear energy corporation of South Africa is currently undertaking research whereby shrouds that have become dislodged are detected. Figure 1 illustrates a shroud that is commonly found within construction and mining trucks. These shrouds are to be fitted with a safe radiological source whereby a data acquisition system coupled with a sensor shall be used to detect the presence of a shroud within the payload.

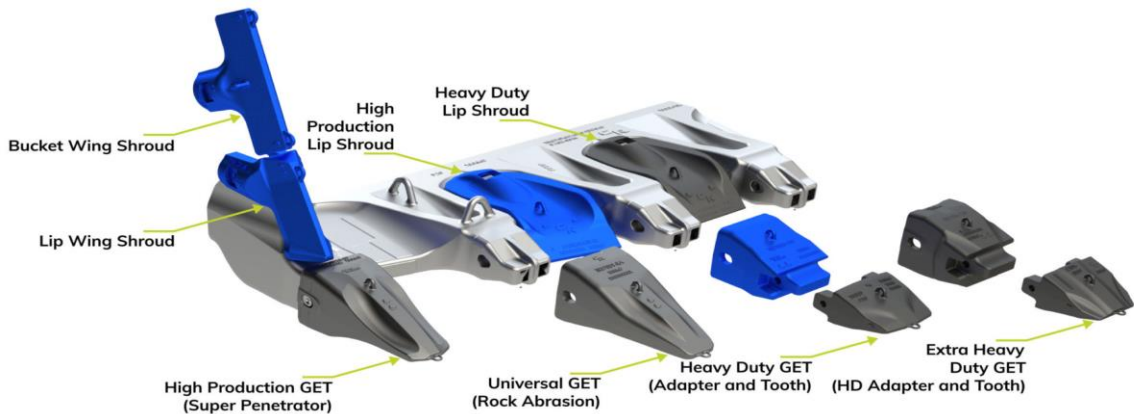



Figure 1 Mining Shroud attached to a mining bucket

The objective is to alert both the control room and the driver of the mining truck should the data acquisition system detect a radiological source within the payload. Figure 2 illustrates a typical system setup. Multiple gantries whereby mining trucks pass through shall be equipped with data acquisition systems as well as sensors. Once a radiological source is detected, a data packet is sent to the control room or central point of control. At most, there will be ten gantries communicating to a single base station or control room. Distance between the gantry and the control point is not expected to exceed 10 km. Data rate from each gantry is not expected to exceed 10Gbps. From each gantry, the driver of the mining truck is to receive information. The data packet to the truck is not expected to exceed 100Mbps. The service provider shall provide a solution that best fits this

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requirement. In addition, various computer equipment shall also be required for the purposes of testing the data acquisition system and functionality of the system. Apart from the recommended network topology that the service provider shall provide, a quotation for the following equipment shall also be provided (see table 1). The wireless network shall operate within the unlicensed band of the signal spectrum.

Server x 1	Network switch x 4	Mobile Workstation x 3
Ryzen 9 CPU (min 16 cores) or similar Windows 11 OS 64 GB DDR5 RAM 1 TB SSD Tempered Glass case; Connectivity: Wifi/usb/hdmi 34 UHD curved monitor	DIN rail mount industrial network switch that is weather proof At least one FSP connector for fibre At least x 5 10/100/1000 Base T Ethernet port	Ryzen 9 CPU (min 8 cores) or similar Base clock>3 GHz Windows 11 OS 32 GB DDR5 RAM 1 TB SSD

Table 1 Communicating System Requirements

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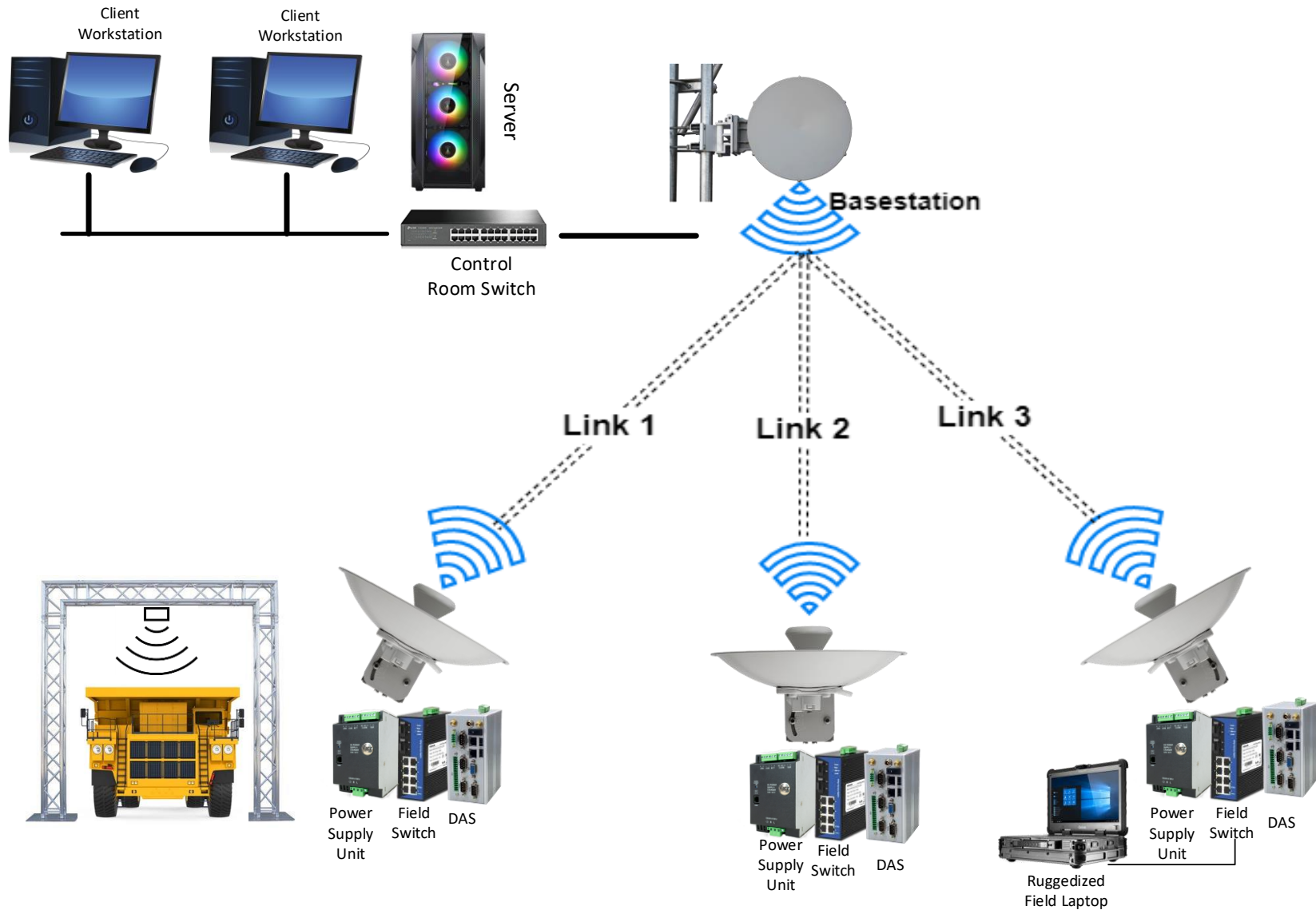



Figure 2 LAN Topology

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3. Expected Deliverables


1. Detailed design and specifications of all equipment's – The detailed design must address the following as a minimum:

A section that describes a problem statement and provides a background to the design. The following points must be clearly covered as subsections within this section.

- I. Problem scope statement
 - II. Design requirements for the communications system.
2. The next section must cover the design description – this section will cover the proposed solution and how the solution will work to address the problem statement. The following points must be clearly covered as subsections within this section.
 - I. Design overview.
 - II. Detailed design description focusing on the communications range, security, stability and lifetime.
 - III. Installation/Setup method (Use of design)
 3. Lastly a section that provides an evaluation of the design, and covers the following sections:
 - I. Approach and an overview of the test plan for evaluating the design
 - II. Computer models utilised to test the communications range, security, stability and lifetime.
 - III. Testing and results
 - IV. Assessment of the design (strength and weaknesses of each design component)
 - V. How must Necsa use the design (indicate areas that still need further design due to inadequate of information at this moment of the RFQ).
 - VI. Hardware list to implement the design
 - VII. Any limitation to the design and the hardware selected
 4. Hardware as per table1 and figure 2 and any additional hardware required to execute the scope of work.

4. Duration

The duration to supply the services must not exceed two (2) months.

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5. List of compulsory information and documentation

The potential suppliers should supply the following information and documentation in response to the RFQ, failure to do so will disqualify the potential supplier:

- a. Provide Company Profile.


For further information regarding this matter, please contact Tankiso Modise at 012 305 5745 or 071 686 1379. Email: Tankiso.Modise@necsa.co.za

6. Pricing

- Use table to itemize your offer, taking into account the scope of work as defined above.
- 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.

Table 2: Costing table

Ref #	Item description	Quantity	Unit Cost	Line Total
01				
02				
03				
04				
05				
06				
07				
08				
09				
10				
11				
TOTAL				

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7. Evaluation

• 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.

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

Item	Requirement	Weight	Points	Criteria
1	Technical proposal Ability to provide the proposed market report as per the scope of work (Provide Summary understanding of what is required) Project Plan: The service provider is expected to provide a project plan to demonstrate how it will achieve the Scope of Work in Section 2 in its proposal, with specific focus on: <ul style="list-style-type: none"> The key milestones will be used as the measure of performance in the project The use of its resources to allocate tasks. The timing of deliverables (intermediate and final). 	20	20	Project plan with detailed activities, milestones, timeframes and resources allocation.
			15	Project plan with detailed activities, milestones, timeframes but no resources allocated.
			10	Project plan with detailed activities, milestones but no timeframes and resources allocated.
			0	No project plan attached.
2	Company Experience	50	50	Four (4) reference letters from the companies the suppliers did the work for.

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Item	Requirement	Weight	Points	Criteria
	Traceable reference with design of wireless communication network. Provide reference letter from previous clients. The reference letters must contain the following information: 1. Contact details of the company 2. Company logo 3. Purchase order amount 4. Nature of the service rendered by the supplier.		40	Three (3) reference letters from the companies the suppliers did the work for.
			30	Two (2) reference letters from the companies the supplier did the work for.
			20	One (1) reference letter.
			0	1 No reference letter.
3	Team Members Experience Combined experience of personnel to be involved in executing the scope of work (Minimum 15 years) Team Members Experience: Personnel to be involved in executing the scope of work to submit their CVs detailing their experience in the scope of work, clearly indicating which projects they have worked on. Only project with a minimum budget of kR500 must be referenced.	30	30	The combined experience of the team members is 15 years or more.
			20	The combined experience of the team members is <15 years => 10 years
			10	The team members combined experience is < 10 years => 5 years
			0	The combined team members experience is below 5 years
Total		100		

IMPORTANT: A bidder/s that scores less than **80 points out of 100** in respect of functionality will be regarded as submitting a non-responsive bid and will be disqualified. Should the relevant bidder/s meet the minimum required percentage or minimum points, they will be evaluated as per Phase 2 evaluation outlined below.

- 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-BBEE status level).

	POINTS
PRICE	80

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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

8. 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

9. Important

1. Quotation must be submitted on or before the RFQ closing date and time stated above.
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.
3. This RFQ is subjected to the Necsa's General Conditions of Purchase, Preferential Procurement Policy Framework Act 2000 and the Preferential Procurement Regulations,

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2022, the General Conditions of Contract (GCC) and, if applicable, any other legislation or special conditions of contract

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.
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.
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.
7. No goods and/or services should be delivered to Necsa without an official Necsa Purchase order.
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.
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
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