

Expression of Interest (EOI)

**for suitable service providers within the RF
Development domain, to conduct research in
partnership with the CSIR**

EOI No. 8064.1/27/01/2023

Date of Issue	13 January 2023
Closing Date	27 January 2023 at 16h30
Place	tender@csir.co.za
Enquiries	tender@csir.co.za
CSIR business hours	08h00 – 16h30
Category	Engineering

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SECTION A – TECHNICAL INFORMATION

1 INTRODUCTION

The Council for Scientific and Industrial Research (CSIR) is one of the leading scientific research and technology development organisations in Africa. In partnership with national and international research and technology institutions, CSIR undertakes directed and multidisciplinary research and technology innovation that contributes to the improvement of the quality of life of South Africans. The CSIR's main site is in Pretoria while it is represented in other provinces of South Africa through regional offices.

2 BACKGROUND

This is an expression of interest with the aim of developing the South African Defence industry. This program will run for a period of three financial years (2022/23, 2023/24 and 2024/25), with the option of extending the program by a financial year (2025/26). This program aims to SMMEs or EMEs with at least 51% black ownership or BBBEE status level 1, and with experience in the Radio Frequency (RF) domain, to conduct research in partnership with the CSIR.

3 INVITATION FOR EXPRESION OF INTEREST

Expressions of Interests are hereby invited from suitable service providers within the RF Development domain, to conduct research in partnership with the CSIR.

4 EOI SPECIFICATION

All proposals are to be submitted in the format specified in this this document. However, applicants are welcome to submit additional / alternative information over and above the originally specified format.

SPECIFICATION

- The applicant must have at least a Master's Degree in Electronic Engineering (Specializing in RF).
- The applicant must have RF experience of a minimum of 5 years (post studies).
- The applicant must be proficient in RF simulation package, like Altair Feko (or equivalent)
- The applicant must have experience with practical RF measurements, post studies.
- The applicant must submit an up-to-date CV/ company profile
- The applicant must provide at least 3 references

- In addition, the supplier must submit an answer to the following task: **Describe an experiment that will determine the distance at which the NVIS (near vertical incident skywave) is dominant over ground wave propagation at 5.5 MHz.**

5 FUNCTIONAL EVALUATION CRITERIA

5.1 The evaluation of the functional detail of the EOI will be based on the requirements listed in the table below:

Requirement	Acceptance Criteria and score	Weight	Sub weight
The applicant must have at least a Master's Degree in Electronic Engineering (Specializing in RF).	Proof of qualification <ul style="list-style-type: none"> • No relevant engineering qualification (0) • Bachelor's degree in electronic/electrical engineering (5) • Master's degree in electronic/electrical engineering (specialising in RF) (7) • Ph.D. in electronic/electrical engineering (specialising in RF) (10) 	25%	
The applicant must have RF experience of a minimum of 5 years (post studies).	Proof of 5 years work experience, post studies. <ul style="list-style-type: none"> • No work experience (0) • 5 or more years' experience (10) 	45%	15
The applicant must be proficient in RF simulation package, like Altair Feko (or equivalent) The applicant must be able to perform complex simulations, for example multiple antennas on moving platforms in the land and sea environment.	Examples of complex simulations performed in chosen simulation package. <ul style="list-style-type: none"> • No example provided/insufficient (0) • Example provided is suitable (10) 		15
The applicant must have experience with practical RF measurements, post studies.	Proof of RF measurement experience. <ul style="list-style-type: none"> • No experience in RF measurements (0) 		15

	<ul style="list-style-type: none"> • Proof of RF measurement provided (10) 		
The applicant must submit an up-to-date CV/ company profile.	Copy of CV / Company Profile <ul style="list-style-type: none"> • No CV or company profile (0) • Company profile provided (10) 	15%	
The applicant must provide at least 3 references.	List of references. <ul style="list-style-type: none"> • No references provided – 0 • 3 or more references (10) 	15%	
TOTAL		100%	100

5.2 Proposals with functional points of less than the pre-determined minimum overall percentage of 70% will be eliminated from further evaluation.

In addition, the supplier must submit an answer to the following task:

Describe an experiment that will determine the distance at which the NVIS (near vertical incident skywave) is dominant over ground wave propagation at 5.5 MHz.

Background

The applicant must plan an experiment to measure two different propagation paths for a High Frequency (HF) signal: groundwave propagation and NVIS (Near Vertical Incident Skywave) propagation. When testing NVIS antennas, it is important to know that only the NVIS propagation path is tested, and that the ground wave path is excluded. Often ground wave signals are present and this makes the NVIS antenna performance measurements inaccurate. Of course, groundwave propagation can be blocked, e.g. by having a mountain between the transmitter and receiver. However, this is not always practical. For this test setup, assume that the test will take place over level farmland.

The applicant must use half-wave dipole antennas for the transmitter and the receiver.

The purpose of this test is to determine the minimum distance for a NVIS test where the groundwave propagation plays a negligible role in the test results. This groundwave propagation distance will change with frequency. To simplify the test setup, a frequency of 5.5 MHz must be used.

Task

The incumbent must write a test plan, giving an overview of the planning and execution of such a test. Some calculations and/or simulations will be required for the test setup.

Expected report contents

Below are a few suggestions for contents of the report:

- An overview of the proposed software packages and what each one will be used for
- Simulations/ calculations required for optimum NVIS propagation
- Antenna setup calculations for transmit and receive antennas
- A list of the environmental factors to be taken into account for the test setup and execution
- A list of the test and measurement equipment required for the test execution
- An estimated distance between the transmitter and receiver that will be required
- Equipment and antenna preparation
- Proposed ways to distinguish between NVIS and ground wave propagation
- Possible risks and shortfalls

The scoring of this task will be out of 100.

6 PRE-QUALIFICATION CRITERIA

Only the following enterprises will be considered for this tender:

- SMMEs or EMEs with at least 51% black ownership or BBBEE status level 1

7 ELIMINATION CRITERIA

Proposals will be eliminated under the following conditions:

- Submission after the deadline;
- Proposals submitted at incorrect location
- Non submission of completed declaration by tenderer, SBD 1, and SBD 4 forms
- Companies listed on the National Treasury list of defaulters;
- Companies listed on the National Treasury list of restricted suppliers;

8 NATIONAL TREASURY CENTRAL SUPPLIER DATABASE REGISTRATION

Before any negotiations will start with the winning bidder it will be required from the winning bidder to:

- be registered on National Treasury's Central Supplier Database (CSD). Registrations can be completed online at: www.csd.gov.za;
- provide the CSIR of their CSD registration number; and
- Provide valid original or certified copy of the B-BBEE certificate issued by an accredited verification agency and bearing a SANAS logo, or Valid sworn affidavits made on DTIC designed templates, or DTIC issued sworn affidavits or CIPC issued B-BBEE certificate.

SECTION B – TERMS AND CONDITIONS

9 VENUE FOR PROPOSAL SUBMISSION

All proposals must be submitted at: tender@csir.co.za

10 PROGRAMME

The program, as currently envisaged, incorporates the following key dates:

- | | |
|---|---------------------------------|
| • Issue of documents: | 13 January 2023 |
| • Closing / submission Date: | 27 January 2023 |
| • Estimated contract duration (in months/years) | 24 Months with option to extend |

11 SUBMISSION OF PROPOSALS

11.1 All proposals are to be clearly marked with the EOI number and the name of the tenderer.

PART 1: Technical Proposal: EOI No. 8064.1/27/01/2023.

PART 2: B-BBEE and other Mandatory Documentation: EOI No. 8064.1/27/01/2023.

11.2 Proposals submitted by companies must be signed by a person or persons duly authorised.

11.3 The CSIR will award the contract to qualified tenderer(s)' whose proposal is determined to be the most advantageous to the CSIR, taking into consideration the technical (functional) solution and B-BBEE.

12 DEADLINE FOR SUBMISSION

Proposals shall be submitted at the address mentioned above no later than the closing date of 27 January 2023 during CSIR's business hours. The CSIR business hours are between 08h00 and 16h30.

Where a proposal is not received by the CSIR by the due date and stipulated place, it will be regarded as a late tender. Late tenders will not be considered.

13 AWARDING OF TENDERS

13.1 Awarding of tenders will be published on the National Treasury e-tender portal tender website. No regret letters will be sent out.

14 EVALUATION PROCESS

14.1 Evaluation of proposals

All proposals will be evaluated by an evaluation team for functionality and B-BBEE. Based on the results of the evaluation process and upon successful negotiations, the CSIR will approve the awarding of the contract to successful applicants.

15 VALIDITY PERIOD OF PROPOSAL

Each proposal shall be valid for a minimum period of three (3) months calculated from the closing date.

16 APPOINTMENT OF SERVICE PROVIDER

16.1 Tenderer who scores the highest total number of points during the evaluation process will be appointed.

16.2 The appointment shall be subject to the parties agreeing to mutually acceptable contractual terms and conditions. In the event of the parties failing to reach such agreement CSIR reserves the right to appoint an alternative supplier.

16.3 Appointees will be announced on the National Treasury website and no regret letters will be sent to unsuccessful bidders.

17 ENQUIRIES AND CONTACT WITH THE CSIR

Any enquiry regarding this RFP shall be submitted in writing to CSIR at tender@csir.co.za with **EOI No 8064.1/27/01/2023** Expressions of Interests are hereby invited from suitable service providers within the RF Development domain, to conduct research in partnership with the CSIR ” as the subject.

Any other contact with CSIR personnel involved in this tender is not permitted during the EOI process other than as required through existing service arrangements or as requested by the CSIR as part of the EOI process.

18 MEDIUM OF COMMUNICATION

All documentation submitted in response to this EOI must be in English.

19 COST OF EOI

Tenderers are expected to fully acquaint themselves with the conditions, requirements and specifications of this EOI before submitting proposals. Each tenderer assumes all risks for resource commitment and expenses, direct or indirect, of proposal preparation and participation throughout the EOI process. The CSIR is not responsible directly or indirectly for any costs incurred by tenderers.

20 CORRECTNESS OF RESPONSES

20.1 The tenderer must confirm satisfaction regarding the correctness and validity of their proposal and that all prices and rates quoted cover all the work/items specified in the EOI. The prices and rates quoted must cover all obligations under any resulting contract.

20.2 The tenderer accepts that any mistakes regarding prices and calculations will be at their own risk.

21 VERIFICATION OF DOCUMENTS

21.1 Tenderers should check the numbers of the pages to satisfy themselves that none are missing or duplicated. No liability will be accepted by the CSIR in regard to anything arising from the fact that pages are missing or duplicated.

21.2 Electronic copy of each proposal must be submitted .

22 SUB-CONTRACTING

No subcontracting is allowed in this EOI.

23 ENGAGEMENT OF CONSULTANTS

The consultants will only be remunerated at the rates:

- 23.1 Determined in the "Guideline for fees", issued by the South African Institute of Chartered Accountants (SAICA); or
- 23.2 Set out in the "Guide on Hourly Fee Rates for Consultants", by the Department of Public Service and Administration (DPSA); or
- 23.3 Prescribed by the body - regulating the profession of the consultant.

24 TRAVEL EXPENSES

- 24.1 All travel expenses for the CSIR's account, be it directly via the CSIR's travel agent or indirectly via re-imbursements, must be in line with the CSIR's travel policy. The following will apply:
 - 24.1.1 Only economy class tickets will be used.
 - 24.1.2 A maximum of R1400 per night for accommodation, dinner, breakfast and parking will be allowed.
 - 24.1.3 No car rentals of more than a Group B will be accommodated.

25 ADDITIONAL TERMS AND CONDITIONS

- 25.1 A tenderer shall not assume that information and/or documents supplied to CSIR, at any time prior to this request, are still available to CSIR, and shall consequently not make any reference to such information document in its response to this request.
- 25.2 Copies of any affiliations, memberships and/or accreditations that support your submission must be included in the tender.
- 25.3 In case of proposal from a joint venture, the following must be submitted together with the proposal:
 - Joint venture Agreement including split of work signed by both parties;

- The original or certified copy of the B-BBEE certificate of the joint venture;
- The Tax Clearance Certificate of each joint venture member;
- Proof of ownership/shareholder certificates/copies; and
- Company registration certificates.

25.4 An omission to disclose material information, a factual inaccuracy, and/or a misrepresentation of fact may result in the disqualification of a tender, or cancellation of any subsequent contract.

25.5 Failure to comply with any of the terms and conditions as set out in this document will invalidate the Proposal.

26 CSIR RESERVES THE RIGHT TO

- 26.1 Extend the closing date;
- 26.2 Verify any information contained in a proposal;
- 26.3 Request documentary proof regarding any tendering issue;
- 26.4 Give preference to locally manufactured goods;
- 26.5 Appoint one or more service providers, separately or jointly (whether or not they submitted a joint proposal);
- 26.6 Award this EOI as a whole or in part;
- 26.7 Cancel or withdraw this EOI as a whole or in part.

27 DISCLAIMER

This EOI is an expression of interest only and not an offer document. Answers to this EOI must not be construed as acceptance of an offer or imply the existence of a contract between the parties. By submission of its proposal, tenderers shall be deemed to have satisfied themselves with and to have accepted all Terms & Conditions of this EOI. The CSIR makes no representation, warranty, assurance, guarantee or endorsements to tenderer concerning the EOI, whether with regard to its accuracy, completeness or otherwise and the CSIR shall have no liability towards the tenderer or any other party in connection therewith.

DECLARATION BY TENDERER

Only tenderers who completed the declaration below will be considered for evaluation.

EOI No: 8064.1/27/01/2023

I hereby undertake to render services described in the attached tendering documents to CSIR in accordance with the requirements and task directives / proposal specifications stipulated in the EOI No 8064.1/27/01/2023 at the price/s quoted. My offer/s remains binding upon me and open for acceptance by the CSIR during the validity period indicated and calculated from the closing date of the proposal.

I confirm that I am satisfied with regards to the correctness and validity of my proposal; that the price(s) and rate(s) quoted cover all the services specified in the proposal documents; that the price(s) and rate(s) cover all my obligations and I accept that any mistakes regarding price(s) and rate(s) and calculations will be at my own risk.

I accept full responsibility for the proper execution and fulfilment of all obligations and conditions devolving on me under this proposal as the principal liable for the due fulfilment of this proposal.

I declare that I have no participation in any collusive practices with any tenderer or any other person regarding this or any other proposal.

I accept that the CSIR may take appropriate actions, deemed necessary, should there be a conflict of interest or if this declaration proves to be false.

I confirm that I am duly authorised to sign this proposal.

NAME (PRINT)
CAPACITY
SIGNATURE
NAME OF FIRM
DATE

WITNESSES

1

2

DATE: