

Request for Proposals (RFP)

The provision of a Radar Short Course to the CSIR

RFP No. 908/15/11/2019

Date of Issue	30 October 2019	
Closing Date	15 November 2019 at 16h30	
Place	Tender box, CSIR Main Reception, Gate 3 (North Gate)	
Enquiries	Strategic Procurement Unit	E-mail: 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

Due to a shortage of manpower, the CSIR is looking for a Radar expert with multi- decadal operational radar experience to present a 5 day short course to the radar user community in Malaysia. The audience is mostly uniformed, ranging from security to defence force personnel.

3 INVITATION FOR PROPOSAL

Proposals are hereby invited for the supply of a Radar Short Course to the CSIR.

4 PROPOSAL SPECIFICATION

Tenderers to submit tenders in a format they deem fit.

The CSIR could provide most course material (if required), but additional operational examples, configurations, videos etc. should be included in the tender price. The format of the short course is formal lectures in the morning, with the option to do demonstrations or simulations in the afternoon. It would be preferred if CSIR tools are demonstrated or used in simulations where possible. The CSIR will provide limited support (5 working days) to transfer the material and relevant tools.

The course must be presented during the remainder of the 2019 calendar year and a date for the short course will be negotiated with the Malaysian university. Presentations (and other material that can be provided to the students as take home material) must be provided in soft copy to the CSIR and the Malaysian university 1 week before commencement of the short course. The CSIR will have the right to use the presentations and material for similar applications.

4.1 Suggested course structure

Aim

- To provide a foundation in the principals involved in the design and operation of radar systems.
- To introduce radar systems missions and objectives.
- This knowledge will be required to develop an understanding of EW in later short courses (not to be included in this tender).

Audience

- Radar operators
- EW operators
- Requirements and acquisition managers
- Engineering and Science qualifications not required

Learning outcomes after course completion

- An understanding of the most important basic radar principles.
- A basic understanding of how several factors affect the radar performance.
- Ability to evaluate different radar system detection range performance.

Concepts covered

- Introduction to radar:
 - Basic principles and concepts.
 - Basic measurements.
- Radar terminology and metrics:
 - Key parameters.
 - Decibels
- Radar concepts:
 - Radar functions.
 - Missions.
 - Performance objectives.
 - Processing techniques.
- Radar system block diagram:

Antenna, transmitter, receiver, signal processor and displays.

- Radar cross section (RCS) (Basics).
- Clutter (Basics).
- Radar range equation (for a non-science/engineering audience)
- EM waves: (Basics)
 - Basic physics.
 - Propagation.
 - Losses and effects.
- Detection theory:
 - Target detection.
 - Detection in noise and clutter.
 - CFAR (Basics)
 - Neyman-Pearson detection.
- Pulsed radar parameters and operation.
- Processing:
 - Coherent and non-coherent integration.
 - Doppler processing.
 - MTI (Basics).
 - Pulse compression.
- Radar measurements:
 - Range.
 - Angle.
 - Radial velocity.
- Radar antenna.
- Radar applications:
 - Surveillance radars.
 - Tracking radars.
 - Imaging radars.
 - Pulsed-Doppler radar systems.

Exercises

- Worked examples and problems in class: questions and solutions presented.

Prerequisite knowledge:

- Basic math and physics: Trigonometry, range/distance/time equation, decibels, properties of a sine wave (frequency, wavelength, amplitude and phase).

Practicals and/or Demonstrations**Suggested reference textbooks**

- M. A. Richards et al, "Principles of Modern radar: Basic principles", Scitech, 2010.
- Merrill Skolnik, "Introduction to Radar Systems 3/E", McGraw-Hill Education, 2003.

5 FUNCTIONAL EVALUATION CRITERIA

- 5.1 The evaluation of the functional / technical detail of the proposal will be based on the following criteria:
- CV of the presenter, clearly indicating years' experience, qualifications, etc that is applicable to training in the field of Radar
 - Proposed Course structure
 - Use of CSIR tools
- 5.2 Proposals with functionality / technical points of less than the pre-determined minimum overall percentage of 70% and less than 50% on any of the individual criteria will be eliminated from further evaluation.
- 5.3 Refer to Annexure A for the scoring sheet that will be used to evaluate functionality.

6 ELIMINATION CRITERIA

Proposals will be eliminated under the following conditions:

- Submission after the deadline;
- Proposals submitted at incorrect location; and
- Insufficient operational experience and qualifications

7 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 the CSIR with a certified copy of their B-BBEE certificate. If no certificate can be provided, no points will be scored during the evaluation process. (RSA suppliers only)

SECTION B – TERMS AND CONDITIONS

8 VENUE FOR PROPOSAL SUBMISSION

All proposals must be submitted at:

- **CSIR GATE 03 - Main Reception Area** (in the **Tender box**) at the following address
Council for Scientific and Industrial Research (CSIR)
Meiring Naudé Road
Brummeria
Pretoria

9 TENDER PROGRAMME

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

- Issue of tender documents: 30/10/2019
- Closing / submission Date: 15/11/2019

10 SUBMISSION OF PROPOSALS

10.1 All proposals are to be sealed. No open proposals will be accepted.

10.2 All proposals are to be clearly marked with the RFP number and the name of the tenderer on the outside of the main package. Proposals must consist of two parts, each of which is placed in a separate sealed package clearly marked:

PART 1: Technical Proposal: RFP No.: 908/15/11/2019

PART 2: Pricing Proposal, B-BBEE and other Mandatory Documentation:
RFP No.: 908/15/11/2019

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

10.4 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, price and B-BBEE.

11 DEADLINE FOR SUBMISSION

Proposals shall be submitted at the address mentioned above no later than the closing date of **15 November 2019** 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.

12 AWARDING OF TENDERS

12.1 Awarding of tenders will be published on the National Treasury e-tender portal or the CSIR's tender website. No regret letters will be sent out.

13 EVALUATION PROCESS

13.1 Evaluation of proposals

All proposals will be evaluated by an evaluation team for functionality, price 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 tenderers.

A two-phase evaluation process will be followed.

- The first phase includes evaluation of **elimination** and **functionality criteria**,
- The second phase includes the evaluation of **price** and **B-BBEE** status.

Pricing Proposals will only be considered after functionality phase has been adjudicated and accepted. Only proposals that achieved the specified minimum qualification scores for functionality will be evaluated further using the preference points system.

13.2 Preference points system

The 80/20 preference point system will be used where 80 points will be dedicated to price and 20 points to B-BBEE status.

14 PRICING PROPOSAL

14.1 Pricing proposal must be cross-referenced to the sections in the Technical Proposal. Any options offered must be clearly labelled. Separate pricing must be provided for each option offered to ensure that pricing comparisons are clear and unambiguous.

14.2 Price needs to be provided in South African Rand (excl. VAT), with details on price elements that are subject to escalation and exchange rate fluctuations clearly indicated.

14.3 Price should include additional cost elements such as freight, insurance until acceptance, duty where applicable.

14.4 Only firm prices* will be accepted during the tender validity period. Non-firm prices** (including prices subject to rates of exchange variations) will not be considered.

**Firm price is the price that is only subject to adjustments in accordance with the actual increase or decrease resulting from the change, imposition, or abolition of customs or excise duty and any other duty, levy, or tax which, in terms of a law or regulation is binding on the contractor and demonstrably has an influence on the price of any supplies, or the rendering costs of any service, for the execution of the contract;*

***Non-firm price is all prices other than "firm" prices.*

14.5 Payment will be according to the CSIR Payment Terms and Conditions.

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 The contract will be awarded to the tenderer who scores the highest total number of points during the evaluation process, except where the law permits otherwise.

16.2 Appointment as a successful service provider 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 Awarding of contracts 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 **"RFP No 908/15/11/2019 - The provision of Radar Short Course to the CSIR"** as the subject.

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

18 MEDIUM OF COMMUNICATION

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

19 COST OF PROPOSAL

Tenderers are expected to fully acquaint themselves with the conditions, requirements and specifications of this RFP before submitting proposals. Each tenderer assumes all risks for resource commitment and expenses, direct or indirect, of proposal preparation and participation throughout the RFP 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 RFP. 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 *One hard copy and one electronic copy (CD or USB memory key)* of each proposal must be submitted. In the event of a contradiction between the submitted copies, the hard copy shall take precedence.

- 21.3 Pricing schedule and B-BBEE credentials should be submitted with the proposal, but as a separate document and no such information should be available in the technical proposal.
- 21.4 If a courier service company is being used for delivery of the proposal document, the RFP description must be endorsed on the delivery note/courier packaging to ensure that documents are delivered to the tender box, by the stipulated due date.

22 SUB-CONTRACTING

- 22.1 A tenderer will not be awarded points for B-BBEE status level if it is indicated in the tender documents that such a tenderer intends sub-contracting more than **25%** of the value of the contract to any other enterprise that does not qualify for at least the points that such a tenderer qualifies for, unless the intended sub-contractor is an exempted micro enterprise that has the capability and ability to execute the sub-contract.
- 22.2 A tenderer awarded a contract may not sub-contract more than **25%** of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an exempted micro enterprise that has the capability and ability to execute the sub-contract.

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 R1300 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 RFP as a whole or in part;

26.7 Cancel or withdraw this RFP as a whole or in part.

27 DISCLAIMER

This RFP is a request for proposals only and not an offer document. Answers to this RFP 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 RFP. The CSIR makes no representation, warranty, assurance, guarantee or endorsements to tenderer concerning the RFP, 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.

RFP No: 908/15/11/2019

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 RFP No.908/15/11/2019 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:

28 ANNEXURE A- Functional scoring sheet

Criteria	Weighting	Score	Comments
<p>CV of the presenter, clearly indicating years' experience that is applicable to training in the field of Radar</p> <p>Experience – 15 years or more of radar experience - 50 Experience - 7 years or more of radar experience - 25 Experience – less than 7 years of radar experience - 0</p>	50%	Out of 100	
<p>CV of the presenter, clearly indicating qualifications that are applicable to training in the field of Radar</p> <ul style="list-style-type: none"> • Engineering Degree - 50 • No engineering degree - 0 			
<p>Proposed Course structure</p> <ul style="list-style-type: none"> • Proposed course structure acceptable – 100 • Proposed course structure not acceptable – 0 	25%	Out of 100	
<p>Use of CSIR tools</p> <ul style="list-style-type: none"> • CSIR tools used - 100 • Other tools suggested - 50 • No tools suggested - 0 	25%	Out of 100	
Total	100%	Out of 100	