



TENDER DESCRIPTION:

**SUPPLY, DELIVERY, INSTALLATION, TESTING AND
COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT
(RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG,
CARNARVON**

BID NO: NRF/SARAO SKA1/60/2025-26

Closing Date: 6 February 2026

NAME OF BIDDER: _____

CSD NUMBER: _____

GENERAL TENDER INFORMATION

TENDER DESCRIPTION	: SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT (RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON
CIDB CONTRACTOR GRADING	: Contractors must have a CIDB contractor grading designation of 4EP or higher
BID CLARIFICATION MEETING	: A <u>compulsory</u> online bid clarification meeting will take place as follows - Date: Friday, 23 January 2026 Time: 10:00 AM Zoom: https://ska.zoom.us/join/9Jm3E9Fg2Hw
COMPULSORY SITE INSPECTION	: A <u>compulsory</u> site inspection will take place as follows - <u>First Meeting - Safety Induction</u> Date: Tuesday, 27 January 2026 Time: 10:00 AM Venue: Klerefontein Support Base, 12km from Carnarvon. GPS Coordinates: -30.96922, 21.98906 <u>Second Meeting - Site Inspection</u> Date: Tuesday, 27 January 2026 Time: 11:30 AM Venue: Losberg, Carnarvon, GPS Coordinates 30°45'22.46"S21°25'59.95"E
BID CLOSING DATE	: Friday, 6 February 2026
CLOSING TIME	: 12:00 PM
SUBMISSION INSTRUCTIONS	: <u>Electronic submissions</u> must be sent to tenders@sarao.ac.za Bids must be submitted in two separate electronic folders, one with the compliance and technical response, and the second with the financial response. Technical submissions should preferably be in searchable PDF format

BIDDER'S REPRESENTATIVE CONTACT INFORMATION:

NAME OF BIDDER:

CONTACT PERSON:

TELEPHONE NUMBER: CODE.....NUMBER.....

CELL PHONE NUMBER:

E MAIL ADDRESS:

SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY**BID NO: NRF/SARAO SKA1/60/2025-26****DESCRIPTION: SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT (RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON**

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T1: Tendering Procedures

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T1.1 TENDER NOTICE AND INVITATION TO TENDER

SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY

BID NO: NRF/SARAO SKA1/60/2025-26

SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT (RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON

BID NOTICE

Bids are invited for the following Works published by the South African Radio Astronomy Observatory (SARAO), a business unit of the National Research Foundation (NRF) (hereinafter referred to as the "Employer").

Bid Number	Bid Description	CIDB Grading	Bid Closing Date and Time
NRF/SARAO SKA1/60/202 5-26	SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT (RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON	It is estimated that contractors must have a CIDB contractor grading designation of 4EP or higher	6 February 2026 at 12.00 PM

BID CLARIFICATION MEETING AND SITE INSPECTION

Meeting 1

A **compulsory** online bid clarification meeting will take place as detailed below –

Date: Friday, 23 January 2026

Time: 10.00 AM

Registration & Meeting Link: <https://ska.zoom.us/meeting/register/oObb2Gi-THylwI3EQFg2Hw>

After registering, bidders will receive a confirmation email containing information about joining the meeting.

Meeting 2

A **compulsory site inspection** will take place on **Tuesday, 27 January 2026**.

All bidders are first required to attend a safety induction session at the Klerefontein Support Base, sign an indemnity form and collect temporary access cards prior to site entry.

Bidders will be required to arrive at the Klerefontein Support Base at 10:00 am.

Following the safety induction, bidders will be required to drive in their own vehicles to the Losberg site, approximately 90km from the Klerefontein Support Base. Bidders must turn left onto the tar road (P02337) leading to the security boom gate

The site inspection will commence at 11:30 am at the Losberg Karoo Array Processing Building (KAPB), GPS Coordinates 30°45'22.46"S21°25'59.95"E

Due to Radio Frequency Interference (RFI) restrictions, bidders must park their vehicles in the designated area near the security boom gate. SARAO vehicles will transport bidders to the KAPB site for the remainder of the inspection. **No electronic devices will be permitted inside the Losberg site. Any contractor found in violation of the above will be escorted off the site.**

Note:

- All persons attending the site inspection MUST sign the attendance register in the name of the entity that will submit the bid.
- The compulsory site inspection will be open to Main Contractors only. A maximum of two (2) representatives from each Main Contractor will be permitted. Following the site inspection, it is incumbent on Main Contractors to ensure that they relay the discussion points to their subcontractors.
- Bidders are responsible for arranging their own logistics to attend the site Inspection at Klerefontein Support base and Losberg.

Note: Any bid submitted by a bidder not represented at the online clarification meeting and site inspection will be rejected.

PREFERENTIAL PROCUREMENT SYSTEM:

The 80/20 price and preference points system, as prescribed by the Preferential Procurement Regulations, 2022 issued under the Preferential Procurement Policy Framework Act, (Act No 5 of 2000) (PPPFA) will be applied to evaluate this bid.

EVALUATION CRITERIA:

Only bids achieving a minimum score of 70% for Functionality (in both Stages 2.1 & 2.2 of the Functionality Evaluation) will be evaluated further on price and preference. **Failure to achieve the minimum score will result in a bid being deemed to be non-responsive and disqualified.**

BID PUBLICATION:

The bid document will be available from Friday, 16 January 2026 and may be accessed on the following websites: www.sarao.ac.za/tenders, and www.etenders.gov.za.

BID SUBMISSION:

Electronic bid submissions must be sent to tenders@sarao.ac.za, on or before the closing date, **Friday, 6 February 2026.**

Bids must be submitted in separate electronic folders, one (or more) with the compliance and technical response, and a separate folder for the financial response. Submissions should preferably be in searchable PDF format.

BID CONDITIONS:

SARAO does not bind itself to accept the lowest or any tender and reserves the right to accept any tender or portion of a tender. SARAO reserves the right to cancel the tender without making an award.

BID ENQUIRIES:

Bid enquiries may be directed to tender-enquiries@sarao.ac.za.

T1.1.1 LOCALITY PLAN: SITE INSPECTION

The site is located in the radio-quiet SKA host site in the Karoo, 90km from Carnarvon in the Northern Cape, which hosts the Square Kilometre Array mid-frequency telescopes, MeerKAT, and KAT-7 radio telescope installations, as well as a number of guest instruments, including the HERA telescope.

A site inspection will be conducted as detailed below. Please note that bidders are responsible for arranging their own travel and accommodation logistics to attend the safety induction at Klerefontein Support base and drive to Losberg for the site inspection (address below).

Date: Tuesday, 27 January 2026

Time: 11:30 AM

Venue: Losberg KAPB, Carnarvon, 8925, 90km from Klerefontein Support Base

GPS coordinates: Latitude: 30°45'22.46"S 21°25'59.95"E



T1.2 TENDER DATA

T1.2.1 Standard Conditions of Tender

The conditions of tender are the Standard Conditions of Tender as contained in Board Notice 423 of 2019 in Government Gazette No 42622 of 8 August 2019, Construction Industry Development Board (CIDB) Standard for Uniformity in Construction Procurement. (see www.cidb.org.za).

T1.2.2 Variations to the Standard Conditions of Tender

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall take precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender shall apply to this tender.

Clause No.	Variation, Amendment or Addition
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C.1	General
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C.1.2	Tender Documents
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*Add the following to the end of **Clause C.1.2**:*

“The Tender Document for this Contract comprises the following:

Not issued to Tenderers, but available from the S.A. Federation of Civil Engineering Contractors, the S.A. Institution of Civil Engineering, the S.A. Bureau of Standards, the Government printers, the Construction Industry Development Board, and the Employer, as applicable:

1. CIDB, “The Standard for Uniformity in Construction Procurement Annex C, Standard Conditions of Tender”, Board Notice 423 of 2019 of Government Gazette No. 42622 of 8 August 2019.
2. The General Conditions of Contract for this project is the Second Edition 2017 FIDIC (International Federation of Consulting Engineers) Red Book, Conditions of Contract for Construction for Building and Engineering Works Designed by the Employer.
3. The Preferential Procurement Policy Framework Act No 5 of 2000, and the Preferential Procurement Policy Framework Act Regulations, 2022, published in Government Gazette 47452 on 4 November 2022.
4. The Occupational Health and Safety Act No 85 and Amendment Act No 181 of 1993, and the Construction Regulations (2014).

C.2	Bidder’s Obligations
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C.2.1	Eligibility
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C.2.1.1	<i>Add the following to the end of Clause C.2.1.1:</i>
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A. Construction Industry Development Board (CIDB) Registration

Only those tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, contractor grading designation equal to or higher than 4EP for an EP class of construction work, are eligible to have their tenders evaluated

B. Joint Ventures and Consortia are eligible to submit a tender offer provided that:

Joint ventures are eligible to submit tenders provided that:

1. Every member of the joint venture is registered with the CIDB;

2. The lead partner has a contractor grading designation in the **EP** or higher class of work; or not lower than one level below the required grading designation in the class of works under consideration and possesses the required recognition status;
3. The combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a **4 EP** class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations;
4. The Bidder, if a joint venture or consortium, must submit a signed JV or consortium agreement specific to the tendered contract and showing clearly the percentage contribution of each partner to the Joint Venture or Consortium. The value of work to be undertaken by each partner must be within their CIDB grading limit;
5. The following joint venture agreements are recommended for use or to serve as a basis for the development of an agreement –
 - (i) The CIDB Joint Venture Agreement, which is intended for use by all types of contractors, including professional service providers;
 - (ii) The South African Federation of Civil Engineering Contractors (SAFCEC) Joint Venture Agreement, which is intended only for joint ventures between established contractors and is not suitable for use by professional service providers;

C. National Treasury Central Supplier Database Registration

Bidders must register on the National Treasury Central Supplier (CSD) Database and provide their CSD registration number where required in this bid document. Bidders who are not registered are not precluded from submitting bids, but must be registered prior to Contract Award.

In the case of Joint Venture partnerships this requirement will apply individually to each party to the Joint Venture.

Bidders who wish to register as service providers on the CSD can register online at <https://secure.csd.gov.za/Account/Register>.

D. Attendance of Compulsory Tender briefing and Site Inspection

Only Bidders who attend both the compulsory online bid clarification meeting and site inspection, and have Schedule A2 to this bid document (Certificate of Attendance of Site Inspection), signed by the Employer's agent, will be eligible to submit a tender offer.

E. Bidder's Tax Clearance Certificate

Bidders must be registered with the South African Revenue Services (SARS) and must provide their CSD registration number and valid SARS Tax Clearance PIN Number.

At the point of contract award, the recommended bidder must be in good standing with SARS, failing which the bidder must be in good standing within such period as may be granted by the Employer, failing which the bid will be disqualified from further consideration.

Each party to a Joint Venture or Consortium must submit their individual CSD registration numbers and Tax Clearance PIN Numbers. Each member of the Joint Venture or Consortium must be in good standing with SARS at the time of contract award, failing which the bid will be disqualified from further consideration.

F. Letter of Good Standing with the Compensation Commissioner (COSA)

Bidders must submit their Letter of Good Standing with the Compensation Commissioner, in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993.

Letters of Good Standing submitted must be current and valid.

In the case of Joint Ventures or Consortia, each party must submit their respective Letters of Good Standing with the Compensation Commissioner.

G. Minimum Functionality Score to be Achieved

Any tender which scores less than the stipulated minimum threshold values for the functionality evaluation, will be held to be non-responsive and disqualified.

H. Health and Safety Plan for Construction

Tenderers must complete and sign the SHE checklist in Annexure 19 of this Bid Document.

Only the successful tenderer is required to submit a Health and Safety Plan for the implementation of this project.

I. Environmental Management Plan

Tenderers must submit a draft Environmental Management Plan together with their offer, that addresses the management of the environmental aspects of the designated site.

C.2.7 Bid Clarification Meeting and Site Inspection

*Add the following to the end of **Clause C.2.7**:*

“The arrangements for an online bid clarification meeting and site inspection are as stated in the Tender Notice and Invitation to Tender.

Bidders should be represented by a person or persons who are suitably qualified and experienced to comprehend the scope of this tender.

The site inspection may only be attended by Main Contractors. A maximum of two (2) representatives from the Main Contractor will be permitted. Following the site inspection, it is incumbent on Main Contractors to ensure that they brief their subcontractors on the discussion points relayed.

Bidders shall bear all costs for attending the online bid clarification meeting and site inspection.”

C.2.13 Submitting a Tender Offer

C.2.13.2 Add the following to the end of **Clause C.2.13.2**:

“Bid submissions must be in electronic format.

Bid submissions must comprise separate electronic folders divided as follows -

- **“Compliance and technical” submission**, and
- **“Financial” submission**

(Folders must be titled with the bidder’s company name and folder title. Attachments are limited to 25 MB per email)

Bid submissions should preferably be in searchable PDF format.

Failure to comply with these requirements may result in the tender being deemed non-responsive.”

C.2.13.3 *Delete the contents of Clause C.2.13.3 and replace with the following:*

Electronic bid submissions must be sent to tenders@sarao.ac.za.

C.2.13.4 *Add the following after the first sentence of **Clause C.2.13.4**:*

“The tender must be signed by a person duly authorised to do so.”

C.2.13.6 *Delete the contents of **Clause C.2.13.6** and replace with the following:*

“A two-envelope procedure as described in **Clause C.3.5** will be followed.

Bids must be submitted in separate electronic folders, one for the Compliance and Technical response, and another for the Financial response. Each main folder may have sub-folders, and if this is the case, each sub-folder must be clearly indicated as such.”

- C.2.13.8** *Substitute the contents of **Clause C.2.13.8** with the following:*
 “Accept that the employer will not assume responsibility for any technological or logistical difficulties which might affect its bid submission being received on time.”
- C.2.13.9** *Delete the contents of **Clause C.2.13.9** and replace with the following:*
 “Only tender offers submitted in electronic format to tenders@sarao.ac.za will be accepted by the Employer.”
- C.2.15 Closing Time**
- C.2.15.1** *Add the following to the end of **Clause C.2.15.1**:*
 “The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender”
- C.2.16 Tender Offer Validity**
- C.2.16.1** *Add the following to the end of **Clause C.2.16.1**:*
 “The tender offer validity period is 12 weeks.”
- C.2.16.2** *Add the following to the end of **Clause C.2.16.2**:*
 “The maximum extension on the tender offer validity period is 12 weeks.”
- C.2.17 Clarification of Tender Offer after Submission**
- Add the following to the end of **Clause C.2.17**:*
 “A tender may be rejected as non-responsive if the Bidder fails to provide any clarification requested by the Employer within such time as is granted by the Employer to provide such clarification. A tender may be rejected if the unit rates or lump sums for any of the items in the Bill of Quantities are, in the opinion of the Employer, unreasonable, and the Bidder fails, within such time as is granted by the Employer, to justify any specific rates or lump sums (i.e. to provide a financial breakdown of how such rates or sums were obtained) or to adjust the unit rates or lump sums for such items whilst retaining the total contract price.”
- C.3 The Employer’s Undertakings**
- C.3.1 Respond to Requests from the Bidder**
- C.3.1.1** *Substitute the contents of **Clause C.3.1.1** with the following:*
 “The Employer will respond to requests for clarification received up to five working days before the tender closing time stated in the Tender Data and circulate responses to all bidders who attended the bid clarification meeting and site inspection.”
- C.3.5 Two-envelope System**
- C.3.5.1** *Substitute the contents of **Clause C.3.5.1** with the following:*
 “Where it is stated in the Tender Data that a two-envelope (two separate electronic folders) process is to be followed, open only the technical proposal of valid bids for evaluation by the Employer’s evaluation committee. Technical proposals will not be opened in the presence of bidders’ representatives, however a list of bids received on the closing date will be published on the Employer’s website within 10 days of the tender closing date.”
- C.3.5.2** *Substitute the contents of **Clause C.3.5.2** with the following:*
 “Evaluate functionality of the technical proposals offered by bidders. Only the financial proposals of bidders who score the minimum number of functionality points or higher will be opened.
 Financial proposals will not be opened in the presence of bidders.”
- C.3.7 Grounds for rejection and disqualification**
- Add the following to the end of **Clause C.3.7**:*

"Bids will be disqualified if -

- (a) There is no evidence that the bidder was represented at the compulsory bid clarification meeting and site inspection.
- (b) Any of the bidder's directors or shareholders are listed on the National Treasury Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004, as a person prohibited from doing business in the public sector.
- (c) If, from information given in the completed Compulsory Enterprise Questionnaire or SBD forms, the Employer considers that there is a conflict of interest or other risk concerning the bidder which may potentially compromise the tender process.
- (d) The bidder has been restricted from doing business with the Employer.
- (e) In a two-envelope system, the bidder fails to submit both a technical proposal and a financial proposal."

C.3.8 Test for Responsiveness

C.3.8.2 *Add the following to the end of **Clause C.3.8.2**:*

"Bids will also be considered non-responsive if:

- (a) The bid offer does not satisfy the minimum thresholds for eligibility stipulated in the evaluation criteria summarised in clause C.3.11 below.
- (b) The Bidder has not fully and correctly completed the Offer portion of D2.1 (Form of Offer and Acceptance), specifically, the bid price has not been completed in words and numbers, or the Bidder has failed to sign the Offer portion of D2.1.
- (c) The Bidder fails to respond, within such time frame granted by the Employer, to any written request for clarification, and such failure renders it impossible for the Employer to clarify any ambiguities in the bid submission, and therefore renders it impossible to evaluate the bid submission any further.
- (d) There are any other material deficiencies in the bid submission which cannot be cured by clarification, or without affecting the competitive position of other tenderers presenting responsive tenders.

C.3.11 Evaluation of Tender Offers

C.3.11.1 General

*Add the following clauses after **Clause C.3.11.1**:*

C.3.11.2 The Evaluation Method

Bids will be evaluated in three stages, as follows –

Stage 1:

Compliance with administrative requirements in Part T2 (submission of returnable documents).

Note - In this stage, discretion may be applied by the Employer to allow bidders to complete and/or sign returnable schedules not completed and/or signed in the first instance or to submit returnable documents not submitted in the first instance, provided that such returnable schedules or documents are of a purely administrative nature and do not pertain to the substance of the bid such as to affect the competitive position of bidders, by giving one or more bidders a second and unfair opportunity to augment the quality (substantive) aspects of their bid. Only bids that satisfy the requirements of Stage 1 will proceed to Stage 2.

Stage 2:

Bids will be evaluated on the functionality criteria summarised in Clause C.3.11.2.1 below. This Stage will consist of two sub-stages, namely Stage 2.1 and Stage 2.2. Only bids which –

- (i) achieve a minimum score of 63 points (70%) out of a possible 90 points in stage 2.1 - Capability & Capacity; and
- (ii) achieve a minimum score of 49 points (70%) out of a possible 70 points in Stage 2.2 - Experience & Planning

will be evaluated further in Stage 3.

Stage 3:

Price offers will be scored on the 80/20 price and preference points system.

The lowest priced bid will not necessarily be accepted and the Employer reserves the right to accept the whole or part of any tender, or not to consider any tender at all.

The Employer reserves the right to reject overpriced or under-priced bids, which are outside the identified price range for the bid.

C.3.11.2.1 Score Functionality

Bids will be evaluated on the Functionality Criteria summarised below -

Stage 2.1 – Capability & Capacity

Functionality Criteria	Maximum Points	Schedule
Capability – Qualifications and Experience of Design and Construction personnel	90	Schedules B6 and B7
Total	90	

Note: Bidders must score a minimum of 63 points (70%) out of a possible 90 points, in Stage 2.1 to proceed to Stage 2.2

Stage 2.2 – Experience & Planning

Functionality Criteria	Maximum Points	Schedule
Previous Experience and Track Record	20	Schedule B9
Method Statement based on Scope of Work specific to this project	20	Schedule B10
Project Execution Plan (Programme)	10	Schedule B11
Health, Safety, Environmental And Quality Management Plan	15	Schedule B12
Evidence of the existing Socio-Economic Development Activities	5	Schedule B13
Total	70	

Note: Bidders must score a minimum of 49 points (70%) out of a possible 70 points in Stage 2.2 to proceed to Stage 3

C.3.17 Provide Copies of the Contract

*Add the following to the end of **Clause C.3.17**:*

“The number of paper copies of the signed contract to be provided by the Employer is ONE.”

T1.2.3 Additional Conditions of Tender

The additional conditions of tender are:

C.4.1 Compliance with Occupational Health and Safety Act 1993 and Construction Regulations (as amended 2014)

Bidders are to note the requirements of the Occupational Health and Safety Act No. 85 of 1993 and the latest amended Construction Regulations (2014) issued in terms of Section 43 of the Act. The Bidder shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard the Bidder shall submit with the tender, appended to Schedule B13: Health, Safety, Environmental and Quality (SHEQ) Management Plan in T2.2 Returnable Documents, a detailed SHEQ Plan prepared in accordance with the Health and Safety Specification (given in respect of the Works in order to demonstrate the necessary competencies and resources to perform the construction work all in accordance with the Act and Regulations).

C.4.2 Claims Arising after Submission of Tender

No claim whatsoever as to the true intent and meaning of anything contained in the Conditions of Contract, Scope of Work and Pricing Data, will be accepted by the Employer after the submission of any tender and the Bidder shall be deemed to have:

- (1) Read and fully understand the Conditions of Contract.
- (2) Read and fully understood the whole text of the Scope of Work and Pricing Data and thoroughly acquainted himself with the nature of the works proposed and generally of all matters which may influence the Contract.
- (3) Visited the site of the proposed works, carefully examined existing conditions, the means of access to the site, the conditions under which the work is to be done, and acquainted himself with any limitations or restrictions that may be imposed by the Municipal or other Authorities in regard to access and transport of materials and plant to and from the site and made the necessary provisions for any additional costs involved thereby.
- (4) Requested the Employer to make clear the actual requirements of anything contained in this bid document, the exact meaning or interpretation of which is not clearly intelligible to the Bidder.

C.4.3 Imbalance in Tendered Rates

In the event of tendered rates or lump sums being declared by the Employer to be unacceptable to it because they are either excessively low or high (in comparison to the Employer market price range determination), or not in proper balance with other rates or lump sums, the Bidder may be required to produce evidence and advance arguments in support of the tendered rates or lump sums objected to. If, after submission of such evidence and any further evidence requested, the Employer is still not satisfied with the tendered rates or lump sums objected to, it may request the Bidder to amend these rates and lump sums along the lines indicated by it.

The Bidder will then have the option to alter and/or amend the rates and lump sums objected to and such other related amounts as are agreed on by the Employer, but this shall be done without altering the Contract Price.

Should the Bidder fail to amend the Tender in a manner acceptable to the Employer, the Employer may reject the Tender.

T2: Returnable Documents

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T2.1 SCHEDULE OF RETURNABLE DOCUMENTS

T2.1.1. General

The tender document must be submitted as a whole. All schedules and forms must be properly completed as instructed and the tender document should not be taken apart or altered in any way whatsoever.

Bidders are required to complete, and/or submit each returnable document listed in section T2.1.2 below, to the best of their ability, as the evaluation of tenders will be based on the information provided.

T2.1.2. List of Returnable Documents

Schedule	Description	Page No.
Company Specific Schedules		
A1	Authority to Sign Bid Documents	22
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A3	Certificate of Authority for Joint Ventures and Consortia	24
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T2.2 RETURNABLE DOCUMENTS

NB: BIDDERS MUST COMPLETE THESE DOCUMENTS / FORMS TYPED IN BLACK, OR IN BLACK INK

A1. AUTHORITY TO SIGN BID DOCUMENTS

I/We*, the undersigned, am/are* duly authorised to sign the form of tender on behalf of

by virtue of the Articles of Association/Resolution of the Board of Directors*, of which a copy is attached, or

*Delete whichever is inapplicable

1.					
	NAME		SIGNATURE		DATE

2.					
	NAME		SIGNATURE		DATE

WITNESSES:

1.					
	NAME		SIGNATURE		DATE

2.					
	NAME		SIGNATURE		DATE

A3. CERTIFICATE OF AUTHORITY FOR JOINT VENTURES AND CONSORTIA

This Returnable Schedule is to be completed only if the bidder is a joint venture or consortium.

We, the undersigned, are submitting this tender offer as a joint venture / consortium, and hereby authorise

Mr/Ms _____, authorised signatory of _____ company,
close corporation or partnership, acting in the capacity of lead partner, to sign all documents in connection with the tender
offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		Signature : Name : Designation :
		Signature : Name : Designation :
		Signature : Name : Designation :
		Signature : Name : Designation :

Note:

A copy of the Joint Venture or Consortium Agreement showing clearly the percentage contribution of each partner to the Joint Venture or Consortium must be included in the bid submission.

A4. COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture / consortium, **separate** enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise

Section 2: VAT registration number, if any

Section 3: CIDB registration number, if any

Section 4: Particulars of sole proprietors and partners in partnerships

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners

Section 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: The attached SBD 4 must be completed for each attender and be attached as a tender requirement

Section 7: The attached SBD 6.1 must be completed for each attender and be attached as a tender requirement

The undersigned, who warrants that he/she is duly authorised to do so on behalf of the enterprise:

- i) authorises the Employer to obtain a tax Clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- ii) confirms that neither the name of the enterprise nor the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I/we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the bidders or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

SIGNED:

[illegible]

	NAME	POSITION	SIGNATURE

A5. BIDDER'S BANK ACCOUNT DETAILS

Notes to Bidder:

1. The Bidder shall attach to this form a letter from the bank at which he declares he conducts his account.
2. The Bidder's banking details as they appear below must be completed.
3. In the event that the bidder is a joint venture or consortium, each party must complete this form.

The bidder must provide the following information:

(i)	Name of Account Holder:	
(ii)	Account Number:	
(iii)	Bank Name:	
(iv)	Branch Number:	
(v)	Bank and Branch Contact Details:	

SIGNED BY/ON BEHALF OF BIDDER:

[illegible]

Note to Bidder:

Insurance must be as indicated in the Contract Data.

Bidders shall provide the following details of this insurance cover:

(ii) Period of Validity:

(iii) Value of Insurance:

- Insurance for Works and Bidder's Equipment:

Company:

Value:

- Insurance for Bidder's Personnel:

Company:

Value:

- Motor Vehicles liability:

Company:

Value:

- Third Party liability:

Company:

Value:

[illegible]

A7. FORM CONCERNING THE FULFILLMENT OF THE CONSTRUCTION REGULATIONS, 2014

In terms of regulation 4(3) of the Construction Regulations, 2014, as amended (hereinafter referred to as the Regulations), promulgated on 18 July 2003 in terms of Section 43 of the Occupational Health and Safety Act, 1993 (Act No 85 of 1993) and the Construction Regulations (2014) the Employer shall not appoint a contractor to perform construction work unless the Contractor can satisfy the Employer that his/her firm has the necessary competencies and resources to carry out the work safely and has allowed adequately in his/her tender for the due fulfilment of all the applicable requirements of the Act and the Regulations.

1. I confirm that I am fully conversant with the Regulations and that my company has (or will acquire/procure) the necessary competencies and resources to timeously, safely and successfully comply with all of the requirements of the Regulations.

YES	
NO	

2. Proposed approach to achieve compliance with the Regulations (Tick)

Own resources, competent in terms of the Regulations (refer to 3 below)	
Own resources, still to be hired and/or trained (until competency is achieved)	
Specialist subcontract resources (competent) – specify:	

3. Provide details of proposed key persons, competent in terms of the Regulations, who will form part of the team as specified in the Regulations (CVs to be attached):
4. Provide details of proposed training (if any) that will be undergone:
5. Potential key risks identified and measures for addressing risks:

I have fully included in my tendered rates and prices (in the appropriate payment items provided in the Schedule of Quantities) for all resources, actions, training and any other costs required for the due fulfilment of the Regulations for the duration of the construction and defects repair period.

YES	
NO	

SIGNED BY/ON BEHALF OF BIDDER:

	NAME		SIGNATURE	

SBD 4 BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

- 1.1 Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.
Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. BIDDER'S DECLARATION

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES / NO**
- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in the table below –

Full Name	Identity Number	Name of State Institution

- 2.2 Do you, or any person connected with the bidder, have a relationship with any person employed by the procuring entity? **YES / NO**

- 2.2.1 If so, furnish particulars

.....
.....

- 2.3 Does the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES / NO**

- 2.3.1 If so, furnish particulars

.....
.....

¹ The power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.

3. DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect –

- 3.1 I have read and understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding;
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates;
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid;
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

CERTIFICATION

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 AND 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT MY BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....
Date

.....
Signature

.....
Position

.....
Name of bidder

² Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.

SBD 6.1 PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 **To be completed by the organ of state:**

a) The applicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price; and
- (b) Specific Goals (namely, BBBEE status level of contributor)

1.4 **To be completed by the organ of state:**

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
Total points for Price and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_S = 80 \left(1 - \frac{P_t - P}{P} \right) & \mathbf{or} & P_S = 90 \left(1 - \frac{P_t - P}{P} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{min} = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc} \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\ P_S = 80 \left(1 + \frac{P_t - P}{P} \right) & \mathbf{or} & P_S = 90 \left(1 + \frac{P_t - P}{P_{max}} \right) \end{array}$$

Where

P_s = Points scored for price of tender under consideration

P_t = Price of tender under consideration

P_{max} = Price of highest acceptable tender

4. POINTS AWARDED FOR SPECIFIC GOALS

4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—

- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
- (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system, then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.

Note to tenderers: The tenderer must indicate how they claim points for each preference point system).

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
BBBEE status level of contributor (Note: Bidders are required to submit their B-BBEE certificates or sworn affidavits (in the case of EMEs/QSEs) in order to be eligible to claim points)		
1	20	
2	18	
3	14	
4	12	
5	8	
6	6	
7	4	
8	2	
Non-compliant	0	

DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

- Partnership/Joint Venture / Consortium
- One-person business/sole proprietor
- Close corporation
- Public Company
- Personal Liability Company
- (Pty) Limited
- Non-Profit Company
- State Owned Company

[TICK APPLICABLE BOX]

4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;
- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 1.4 and 4.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;

- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
- (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

<p>.....</p> <p style="text-align: center;">SIGNATURE(S) OF TENDERER</p> <p>NAME AND SURNAME:</p> <p>.....</p> <p>DATE:</p> <p>ADDRESS:</p> <p>.....</p> <p>.....</p>

B1. CIDB REGISTRATION

Bidders must be registered with the Construction Industry Development Board (CIDB) register of contractors.

Where a Bidder satisfies CIDB Contractor grading designation requirements through a joint venture or consortium, such Bidder must submit the joint CIDB grading, and certificates of contractor registration in respect of each partner.

--

NAME OF BIDDER

--

COMPANY REGISTRATION NUMBER

--

CRS NUMBER

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B2. TAX CLEARANCE

Bidders must be registered and in good standing with the South African Revenue Services (SARS), and must provide their CSD registration number and valid SARS Tax Clearance PIN Number in this Schedule.

Bidders who are not registered with, or in good standing with SARS are not precluded from submitting bids, but must be registered and in good standing prior to Contract Award.

Each party to a Joint Venture or Consortium must submit their individual Tax Clearance PIN Number and CSD Supplier Number. (These are to be attached to the bidder's submission).

A diagram showing a rectangular input field for a PIN number. The field is divided into four equal segments by vertical lines. Below the field, the text "PIN NUMBER" is centered.

	CSD SUPPLIER NUMBER	
--	----------------------------	--

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B3. NATIONAL TREASURY CENTRAL SUPPLIER DATABASE (CSD) REGISTRATION

Bidders must be registered with the National Treasury Central Supplier Database (CSD) and must provide their CSD Registration Number issued by National Treasury.

Bidders who are not so registered are not precluded from submitting bids, but must be registered prior to Contract Award.

Each party to a Consortium or Joint Venture must submit their individual CSD Registration Number.

	CSD REGISTRATION NUMBER	

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B4. B-BBEE CERTIFICATE OR SWORN AFFIDAVIT

In order to claim preference points in terms of Preferential Procurement Regulations (2022), bidders must submit a valid BBBEE certificate issued by a Verification Agency accredited by SANAS; or in the case of Exempted Micro Enterprises (EMEs), a sworn affidavit confirming annual total revenue and level of black ownership or a BBBEE certificate issued by the Companies and Intellectual Property Commission; or in the case of Qualifying Small Enterprises (QSEs), a sworn affidavit confirming annual total revenue and level of black ownership.

Unincorporated joint ventures and consortia must submit a consolidated B-BBEE certificate.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B5. SCHEDULE OF PROPOSED SUBCONTRACTORS

To be linked with Local Participation Guidelines. Refer to D1.2 Scope of Works under **Contractor and Labour Participation Goals (CLPG)**

We notify you that it is our intention to employ the following Subcontractors for work in this contract.

SUBCONTRACTORS				
Category/type	Subcontractor Name/Address/Contact Person/Phone/e-mail/Details of Organisation/Firm/ Experience	Items of work (pay items) to be undertaken by the Subcontractor	Value of work sub-contracted	Local EME's or Local QSE's

NB: If there is insufficient space above, the Tenderer may include the additional sheets in the Supporting Documentation file.

Number of additional sheets submitted by the Bidder to this Schedule

(If nil, enter NIL)

Acceptance of this tender shall not be construed as approval of all or any of the listed subcontractors. Should any of the subcontractors not be approved subsequent to acceptance of the tender, this shall in no way invalidate this tender, and the tendered unit rates for the various items of work shall remain final and binding, even in the event of a subcontractor not listed above being approved by the Engineer.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B6. SCHEDULE OF KEY PERSONNEL

The tender offer shall include an organogram clearly showing the team of key personnel the Bidder proposes to assign to the Contract and how responsibilities for the various disciplines or work and components of the Works will be assigned. The appointed contractor may not replace the key personnel provided in this schedule without the prior written approval of the Employer.

Where specifically indicated in the table below, it will be acceptable for one team member to fulfil more than one role on the project, provided that such team member satisfies the requirements of each role which he/she intends to fulfil.

The Personnel identified in Schedule B6 2.1 item 1 'Project Manager' will be incorporated into the Contract as the **"Contractor's Representative"** (Clause 1.1.18) and the balance of the resources i.e. Site Foreman etc as **"Key Personnel"** (Clause 1.1.48) as defined in the FIDIC RED 2017 Contract.

In the case of a Joint Venture or where major sub-contractors are made use of, the organogram must show how respective responsibilities are to be allocated.

Stage 2.1 Functionality Assessment

Note: Bidders that fail to achieve a minimum of 63 points (70%) out of 90 points for each functionality sub-criteria/requirement will not be considered for further evaluation. The successful Bidder must ensure that all key personnel have active registrations with relevant professional bodies and must remain active for the entire duration of the contract.

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY PERSONNEL) (All Key Personnel will be required during the Construction Phases of the Project)			
No.	Criteria	Minimum Score	Maximum Score
1.	Qualification and Experience		
1.1	Lead Electrical Engineer		30
1.1.1	Qualifications		10
1.1.2	MSc Degree/M-Tech/MEng in Electrical Engineer Heavy Current	10	
1.1.3	BSc / BTech/ B Eng in Electrical Engineer Heavy Current	7	
1.1.4	No BSc / BEng/ BTech in Electrical Engineering Heavy Current	0	
1.2	Demonstrable Experience		20
1.2.1	15 years or more (combined) experience and knowledge of working on MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following areas: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in all 5 areas to score the maximum points	20	
1.2.2	15 years or more (combined) experience and knowledge of working on MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following areas: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints	17	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY PERSONNEL) (All Key Personnel will be required during the Construction Phases of the Project)			
No.	Criteria	Minimum Score	Maximum Score
	(iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in 3-4 areas to score 17.		
1.2.3	10 years or more (combined) experience and knowledge of working on MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in all 5 MV areas to score 16	16	
1.2.4	10 years or more (combined) experience and knowledge of working on MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in 3-4 MV areas to score 14.	14	
1.2.5	Resource demonstrating experience in only 1–2 MV areas, irrespective of years of experience, will score zero (0)	0	
2	Construction Project Manager		30
2.1	Qualifications		10
2.1.1	BSc / BTech/ B Eng in Electrical Engineering Heavy Current	10	
2.1.2	BSc / BTech/ B Eng in Construction Management, Civil, or Mechanical Engineering	7	
2.1.3	National Diploma /National N Diploma (Electrical Heavy Current)	5	
2.1.4	None of the above qualifications	0	
2.2	Registration with Professional Bodies (<i>Active registration</i>)		5
2.2.1	Registration with either Project Management South Africa (PMSA) or SACPCMP or PMI - PMP or Prince2	5	
2.2.2	Not registered with (PMSA) or SACPCMP or PMI - PMP or Prince2	0	
2.3	Experience		15
2.3.1	10 years or more (combined) experience in project managing MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears	15	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY PERSONNEL) (All Key Personnel will be required during the Construction Phases of the Project)			
No.	Criteria	Minimum Score	Maximum Score
	(v) MV circuit breakers; and The resource must have experience in all 5 areas to score 15		
2.3.2	10 years or more (combined) experience in project managing MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in 3-4 areas to score 14	14	
2.3.3	6-9 years (combined) experience in project managing MV Electrical e Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in all 5 areas to score 12	12	
2.3.4	6-9 years (combined) experience in project managing MV Electrical e Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in 3-4 areas to score 13	13	
2.3.5	Resource demonstrating experience in only 1–2 MV areas, irrespective of years of experience, will score zero (0)	0	
3	Construction Site Supervisor		20
3.1	Qualifications		10
3.1.1	BSc / BTech/ B Eng in in Electrical Engineering	10	
3.1.2	National N Diploma in Electrical with a valid trade test certificate and Operating Regulations High Voltage Systems (ORHVS)	7	
3.2.3	None of the above qualifications	0	
3.2	Experience		10
3.2.1	10 years or more (combined) experience in supervising and managing MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and	10	

STAGE 2.1 - CAPABILITY AND CAPACITY CRITERIA (KEY PERSONNEL) (All Key Personnel will be required during the Construction Phases of the Project)			
No.	Criteria	Minimum Score	Maximum Score
	The resource must have experience in all areas to score 10		
3.2.2	10 years or more (combined) experience in supervising and managing MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in 3-4 areas to store 9	9	
3.2.3	6-9 years (combined) experience in supervising and managing MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in all areas to score 8	8	
3.2.4	6-9 years (combined) experience in supervising and managing MV Electrical Infrastructure /Bulk services and submit a list of projects containing detailed evidence containing installation, testing and commissioning the following: (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers; and The resource must have experience in 3-4 areas to store score 7	7	
3.2.5	Resource demonstrating experience in only 1–2 MV areas, irrespective of years of experience, will score zero (0)	0	
4.	Organogram		10
4.1	The organogram shows the hierarchy of all the key construction roles on the project team including support staff, with clear reporting lines	10	
4.2	The organogram shows key construction roles proposed for the project with clear reporting lines	8	
4.3	The organogram does not show the key construction roles for the project team and shows no clear reporting lines	5	
4.4	No organogram submitted	0	
	Sub-total		90

Note: Bidders must score a minimum of 63 points (70%) out of a possible 90 points, in the above Functionality Assessment (Schedule B6) in order to be considered for further evaluation in Stage 2.2.

Additional Key Construction Personnel

The appointed contractor to provide the below listed additional resources with required levels of experience and or qualification, registration or certification before commencement of construction. The cost for these additional resources during the construction stage must form part of the overall offer price. SARAO shall require that CV's and proof of qualification / registration / certification be submitted for approval.

<u>Additional construction resources</u>		
<u>Resource</u>	<u>Experience</u>	<u>Qualification /Registration / Certification</u>
Environmental Officer (Part- time on site)	3-5 years' experience drafting environmental management plans, method statements, implementation of environmental management plans and method statements, including undertaking environmental inspections/audits.	<p>Registration: Registered with EAPASA or SACNASP. If not EAPASA/ SACNASP-registered, the candidate must demonstrate:</p> <ul style="list-style-type: none"> ● Registration with another recognised professional body OR ● Sufficient environmental compliance experience in lieu of registration (to be supported by references and CV) <p>Qualification:</p> <p>National Diploma / BTech / BSc in Environmental Management, Environmental Science, Natural Sciences, Construction Management, or a related built-environment field,</p> <p>Alternatively, an NQF Level 6 qualification with environmental experience specifically in construction-related environmental management</p>
Health & Safety Officer (full-Time)	5 years' or more combined experience in (i) drafting health and safety specifications, (ii) implementation plans and (iii) undertaking health, safety audits	<p>National Diploma in Safety Management or Matric with SAMTRAC</p> <p>Registration as a Construction Health and Safety Officer with SACPCMP or NEBOSH or SAIOSH</p>

Table 1: Schedule of Key Project Personnel

Note: In addition to Table 1, Bidders must submit a Project Organisational Chart identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with SARAO

Key Construction Team Personnel	Name and Surname	Educational Qualifications	Any Professional Membership Registration Date	No of years' experience in (i) MV Reactors (ii) MV Ring Main Unit (RMU), (iii) MV Cable, terminations and joints (iv) MV Switch gears (v) MV circuit breakers in terms of required skills	Company Name & Physical address and contact details of local office
Lead Electrical Engineer (Full-Time)					
Construction Project Manager (Part-Time)					
Construction Site Supervisor (Full-Time)					
Health & Safety Officer (Full-Time)					
Environmental Officer (Part-Time)					

B7. CURRICULUM VITAE OF KEY TEAM PERSONNEL

CVs must be submitted in the required format as outlined in the CV Template below.

Only include CVs for the required personnel as listed in the above table and in the format of the CV template provided in this schedule. Attach CVs in the order that the Key Personnel are listed in Schedule B6.

CVs must include the following information -

- (i) Surname (and maiden name in brackets where applicable);
- (ii) First name/s;
- (iii) Date of birth;
- (iv) Nationality;
- (v) Education and Specialist training highlighting Key Qualifications relevant to this project;
- (vi) Certified copies of both Educational Qualifications;
- (vii) Detailed outline of professional experience directly related to the role of the team member in this project;
- (viii) Experience to include the following;
 - Total number of years of experience directly related to the role of the team member in the following areas:
 - MV Reactors
 - MV Ring Main Unit (RMU),
 - MV Cable, terminations and joints
 - MV Switch gears
 - MV circuit breakers
 - Project details (including Budget, Client/Employer, Year of completion,) of projects directly related to the role of the team member in this project that the project team member has participated in
 - Team member's Key skills and expertise relevant to this project

If any changes are made to any personnel from the initial approved lists at the time of the tender award, written communication of all changes should be submitted to SARAO for approval to minimise any unforeseen risks.

Do NOT include CVs for support staff.

Please Note:

The Bidder should respond to the requirements listed in Table 1 and insert the details of the required personnel in the Schedule of Key Construction Personnel and attach the supporting documentation and subcontracting agreements (where applicable);

The Bidder must clearly indicate in the Table where one person can fulfil various roles.

Do not include support staff in the Schedule of Key Construction Personnel. Only key personnel will be assessed. Support staff will therefore not be assessed. However, it is the responsibility of the Bidder to ensure that the project is provided with adequate support capacity;

Where there are no names next to the suggested Key Construction Personnel, it will be assumed that the Bidder does not have the personnel included in the team;

In order to qualify, the team must include all the Key Construction Personnel (or indicate where one person fulfils other roles) and each Team Member must meet the minimum requirements in relation to qualification, registration and number of years' experience as stated in Table 1.

Curriculum Vitae Template of Key Project Personnel Listed in Schedule B6

NAME OF COMPANY

1. Surname (and maiden name in brackets where applicable):
2. First name/s:
3. Date of birth:
4. Nationality:
5. Education and Specialist Training:

Key Qualifications (Relevant to this Project)	Institution	Date Obtained

6. Certified Copies of Key Educational Qualifications relevant to this project:

9. Detailed Professional Experience relevant to the team member's role in this project:

Date (From – To):	
Client/Employer's Name:	
Location:	
Position in firm or project role:	
High-level description of duties or responsibilities, key skills and expertise in position or project team:	
<u>Reference</u> Name : Position: Contact Number: Email Address:	
Date (From – To):	
Client/Employer's Name:	
Location:	
Position in firm or project role:	
High-level description of duties or responsibilities, key skills and expertise in position or project team:	

<u>Reference</u> Name : Position: Contact Number: Email Address:	

B8. PROJECT ORGANISATIONAL CHART FOR KEY CONSTRUCTION PERSONNEL

Bidders must attach to this Schedule, an organisational chart for the key construction personnel, detailing their respective roles and responsibilities on the project.

B9. BIDDER'S PREVIOUS EXPERIENCE AND TRACK RECORD

Bidders will be evaluated on the criteria for previous experience and track record detailed below.

Note:

- (i) Table 2 below (next page), must be completed with a list of bidders' previous, completed projects that were completed during the last 10 years. Projects listed must be relevant to the scope of work of this tender.
- (ii) Supporting documentation evidencing the bidder's experience must be attached to this Schedule.

Criteria	Sub criteria	Indicators	Sub-criteria	Score Allocation
Previous Experience and Track Record	Past experience in delivering similar MV Installation contracts/ projects	<p>The bidding entity has experience in the following:</p> <ul style="list-style-type: none"> Delivering similar MV contracts / projects. Bidder's previous experience include executing a project /contract valued at R5 million or higher in the preceding ten (10) years per project 	The Bidding entity has <u>extensive</u> experience in delivering similar projects (i.e. 5 or more contracts with a minimum value of R5 million each in the last 10 years)	20
			The Bidding entity has sufficient experience in delivering similar projects (i.e. 3 or 4 contracts with a minimum value of R5 million each in the last 10 years)	14
			The Bidding entity has limited experience in delivering similar projects (i.e.2 or less projects with a minimum value of R5 million each in the last 10 years)	8
			The Bidding entity has no experience in delivering similar projects	0
			Sub-total	20

Table 2: List of Previously Completed Similar Projects

PROJECT/EMPLOYER (Name, Tel. No and Fax No.)	NATURE OF WORK	VALUE OF WORK	YEAR OF COMPLETION	ANY DISPUTES

B10. METHOD STATEMENT

Bidders must submit a detailed method statement relevant to the scope of work of this tender, including any requirement for system or equipment shutdowns.

Method statements submitted will be evaluated on the criteria detailed below.

Criteria	Key Indicators	Sub-criteria	Score Allocation
Method Statement	<p>The method statement must, as a <u>minimum</u>, address the following aspects:</p> <ul style="list-style-type: none">● Overview and project strategy● Preliminary program● Procurement of Materials Schedule● Cost and financial management● Risk Management● Planning for installation, shutdowns● Lead time for manufactured products & transportation to site;● Safety, Health, Environmental & Quality considerations during the Construction process;● Testing and Verification;● Completion and handover.	The method statement is detailed and discusses and all of the ten (10) aspects under the heading key indicators have been addressed.	20
		The method statement discusses 6-9 aspects under the heading indicators	14
		The method statement discusses 3-5 aspects under the heading indicators	12
		The method statement discusses 1-2 aspects under the heading indicators	8
		No Method statement is provided	0
		Sub-total	

B11. PROJECT EXECUTION PLAN (PROGRAMME) IN PRIMAVERA P6 OR MICROSOFT PROJECT (MSP)

Tenderers must detail the proposed programme below (refer to section D1.2), or refer to their proposed programme and attach it to this schedule. Tenderer's attention is drawn to Clause 8.3 of the Second edition FIDIC Contract (Red Book) regarding the items to be shown on a programme, as well as the Specific Requirements attached hereto.

Tenderers are also advised that the activities identified in its programme must relate to the Bill of Quantities (Part C3)

Tenderers must provide a level 3 programme in soft copy and pdf complying with, but not limited to, the minimum format requirements, as follows:

- Activity ID
- Activity Description
- Activity Duration
- Start and Finish dates (assuming C0)
- Total Float

The Programme should clearly demonstrate alignment with the project including, but not limited to resources, time risk allowances, et cetera.

The following criteria will be used to assess this criterion -

Criteria		Measurement Criteria	Score Allocation
Project Execution Plan (Programme) in Primavera P6 or Microsoft Project (MSP)	Provide a detailed programme for the duration of this contract. The programme must as a minimum address the following aspects:	The applicable section of the programme addresses all the aspects required within the indicator's column in an innovative and efficient way, giving confidence to SARAO.	10
	<ul style="list-style-type: none">• Project Schedule• Key Milestones as stipulated in the SOW (section D1.2)• Sequence and durations of works/activities• Programme calendar• The events that influence the carrying out of the Works, including float and the Contractor's time risk allowances• Detailed cash flow and invoicing	The applicable section of the programme addresses the specific project objectives. The programme/ scope elements in question are complete, sufficiently decomposed and sequenced in a logical manner. The tenderer has included key milestones and SARAO is satisfied that the Tenderer is capable of managing the execution of the contract.	7
	List of all equipment and resources to be used for each activity	The applicable section of the programme is generic, not practical and unrealistic, therefore is unlikely to satisfy project objectives or Employer's requirements. The tenderer has misunderstood certain aspects of the scope of the works and does not deal with the critical aspects of the project/Scope element in question as a subset of the overall project. The programme is not acceptable as it will not satisfy project objectives or requirements.	5
		The Tenderer has submitted no information	0
Sub-Total			10

B12. HEALTH, SAFETY, ENVIRONMENTAL AND QUALITY (SHEQ) MANAGEMENT PLAN

Tenderers must familiarise themselves with the evaluation criteria listed below and submit a Health, Safety, Environmental and Quality Plan for the execution of this project.

The following criteria will be used to assess this criterion -

<u>Criteria</u>	<u>Indicators</u>	<u>Sub-criteria</u>	<u>Score Allocation</u>
Health & Safety Management Plan for the execution of this Contract	Provide a detailed Health & Safety plan for the duration of this contract. The Health & Safety plan must as a minimum address the following aspects: <ul style="list-style-type: none"> • Applicable Health & Safety standards • Health & Safety measures during the contract • Health & Safety meetings • Communication and reporting • Completed & Signed Checklist of health and safety file as per Annexure 19 • Competencies declaration – As per Regulations 2014 	The Health & Safety Plan addresses all six (6) aspects as described in the indicators and is specific to the project.	5
		The Health & Safety Plan addresses 3-5 aspects as described in the indicators and is specific to the project.	4
		The Health & Safety Plan addresses 1- 3 aspects as described in the indicators and are specific to the project.	2
		The Health & Safety Plan not submitted.	0
<u>Criteria</u>	<u>Indicators</u>	<u>Sub-criteria</u>	<u>Scoring Allocation</u>

Environmental Management Plan for the execution of this Contract	Provide a draft Environmental Management Plan for the duration of the contract. The Environmental Management Plan must as a minimum address the following:	The Environmental plan addresses all five (5) aspects under the heading indicators.	5
	<ul style="list-style-type: none"> • All applicable environmental legislation 	The Environmental plan details four (4) aspects are discussed under the heading indicators addressed	4
	<ul style="list-style-type: none"> • Roles and responsibilities of personnel implementing the EMP 	The Environmental Plan details 1-3 aspects are discussed under the heading indicators addressed	2
	<ul style="list-style-type: none"> • Environmental Awareness Plan Environmental Impacts and Mitigation measures and how will they be monitored • How environmental incidents will be reported • Rehabilitation measures/plan of disturbed areas 	The Environmental plan was not submitted.	0
<u>Criteria</u>	<u>Indicators</u>	<u>Sub-criteria</u>	<u>Score Allocation</u>
Quality Management Plan for the	<p>Bidder must provide a Quality Management Plan based on the following aspects -</p> <ol style="list-style-type: none"> 1. Project Quality Plan Requirements by detailing the quality processes that will be followed to successfully achieve project quality objectives. 2. All testing & Inspection methods 3. Detail the procedures for assuring that the project is constructed in conformance to the 	The Quality Management System discusses all six (6) aspects under the heading indicators.	5

execution of this Contract	Technical Specifications& drawings, applicable regulatory requirements 4.Nonconformity Management 5.Corrective Action procedure 6. Sub-contractor Management including roles and responsibilities, communication	The Quality Management System details only 3-5 aspects are discussed under the heading indicators addressed	4
		The Quality Management System details only 1-2 aspects are discussed under the heading indicators addressed	2
		Quality Management System not submitted.	0
		Sub-total	15

B13. EVIDENCE OF EXISTING SOCIO-ECONOMIC DEVELOPMENT ACTIVITIES

Tenderers must familiarise themselves with the evaluation criteria listed below and submit evidence of its existing socio-economic development activities to support the allocation of points.

The following criteria will be used to assess this criterion -

Criteria	Indicators	Sub-criteria	Score Allocation	
Evidence of the Tenderer's, its sub-contractors, and JV or consortium partners <u>existing Socio-Economic development activities and proposed Skills Transfer development plan specific for this contract</u>	Existing Socio-Economic development activities or plans	Socio-Economic development activities or plans/activities exist and evidence provided.	2	
		Socio-Economic development activities or plans not provided.	0	
	Skills Transfer development plan (Training, Local Labour, community approved CSI*, Subcontracting, Suppliers) specific for this contract.	The Skills Transfer development plan is <u>specifically tailored and details ways</u> on how to transfer skills through this project and other skills not associated through this contract.	3	
		The Skills Transfer development plan is <u>tailored and details ways</u> on how to transfer skills through this project.	2	
		[*any of the local towns may be selected for a CSI project]	The Skills Transfer development plan is <u>generic</u> on how to transfer skills through this project.	1
			The Skills Transfer development plan is not provided.	0
Total			5	

B14. AMENDMENTS/ ALTERNATIVES AND QUALIFICATIONS BY BIDDER

The schedules below are not an invitation for amendments, deviations or alternatives but should the Bidder desire to make any departures from the provisions of this contract he shall set out his proposals clearly hereunder.

I / We herewith propose the amendments, alternatives and discounts as set out in the tables below:

(1) AMENDMENTS

PAGE, CLAUSE OR ITEM NO	PROPOSED AMENDMENT

- (a) Amendments to the General and Special Conditions of Contract are not acceptable;
(b) The Bidder must give full details of all the financial implications of the amendments and qualifications in a covering letter attached to his tender.

(2) ALTERNATIVES

PROPOSED ALTERNATIVE	DESCRIPTION OF ALTERNATIVE

- (a) Individual alternative items that do not justify an alternative tender and an alternative offer for time for completion should be listed here.
(b) In the case of a major alternative to any part of the work, a separate Pricing Schedule, programme, etc, and a detailed statement setting out the salient features of the proposed alternatives must accompany the tender.
(c) Alternative tenders involving technical modifications to the design of the works and methods of construction shall be treated separately from the main tender offer.

(3) QUALIFICATIONS

ITEM ON WHICH QUALIFICATION IS MADE	DESCRIPTION OF QUALIFICATION

- (a) The Bidder must give full details of any conditional discounts offered or qualifications in a covering letter attached to his tender, failing which, the offer will be prejudiced.

If there is insufficient space above, the Bidder may append additional sheets.

Number of additional sheets appended by the Bidder to this Schedule

(If nil, enter NIL)

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B15. RECORD OF ADDENDA TO TENDER DOCUMENTS

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been considered in this tender offer:

No.	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

If there is insufficient space above, the Bidder may include the additional sheets in the Supporting Documentation file, to be submitted in accordance with Clause C.2.13.3 of T1.2.2 Variations to the Standard Conditions of Tender.

Number of additional sheets submitted by the Bidder in respect of this Schedule (If nil, enter NIL)

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B16. JOINT VENTURE OR CONSORTIUM AGREEMENT

In the event that the bidder is a Joint Venture or Consortium, attach a signed Joint Venture or Consortium Agreement to this Schedule.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

B17. LETTER OF GOOD STANDING WITH THE COMPENSATION COMMISSIONER (COIDA)

Attached to this Schedule, a valid Letter of Good Standing with the Compensation Commissioner in terms of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 (as amended).

Each party to a Joint Venture or Consortium, must submit its COIDA letter of good standing.

SIGNED BY/ON BEHALF OF BIDDER:

NAME		SIGNATURE	DATE

D1: Scope of Works

Number	Heading	Page No.
D1.1	Background to the National Research Foundation and the South African Radio Astronomy Observatory (SARAO)	63
D1.2	Summary of Scope of Works	64

D1.1 BACKGROUND TO THE NATIONAL RESEARCH FOUNDATION AND THE SOUTH AFRICAN RADIO ASTRONOMY OBSERVATORY

The National Research Foundation (“NRF”) is a juristic person established in terms of section 2 of the National Research Foundation Act, Act 23 of 1998. The NRF supports and promotes research and human capital development through funding, the provision of National Research Facilities and science outreach platforms and programmes to the broader community in all fields of science and technology, including natural science, engineering, social science and humanities. The NRF is a Schedule 3A entity in terms of the Public Finance Management Act of 1999 (Act 1 of 1999 as amended by Act 29 of 2000).

The South African Radio Astronomy Observatory (SARAO), a facility of the National Research Foundation, is responsible for managing all radio astronomy initiatives and facilities in South Africa, including the MeerKAT Radio Telescope in the Karoo, and the Geodesy and VLBI activities at the HartRAO facility. SARAO also coordinates the African Very Long Baseline Interferometry Network (AVN) for the eight SKA partner countries in Africa, as well as South Africa’s contribution to the infrastructure and engineering planning for the Square Kilometre Array (SKA) Radio Telescope. To maximise the return on South Africa’s investment in radio astronomy, SARAO is managing programmes to create capacity in radio astronomy science and engineering research, and the technical capacity required to support site operations. In the reference documentation, SKA SA is understood to mean SARAO.

South Africa and its 8 African partner countries were jointly awarded the SKA together with Australia. The SKA will be Africa’s largest science project which will be a hub for both local and international collaboration. The SKA Organisation has been established with its headquarters at Jodrell Bank in Manchester, United Kingdom. The five key science projects that will be undertaken by the SKA include:

- Probing the Dark Ages
- Galaxy Evolution
- The Origin and Evolution of Cosmic Magnetism
- Strong Field Tests of Gravity using Pulsars and Black Holes
- The Cradle of Life.

The first phase of the SKA1-MID project includes the addition of 133 antennas to the 64-dish MeerKAT radio telescope and the second phase of the project and will include up to 2000 antennas distributed across South Africa and its eight African partner countries.

SARAO has offices based in Johannesburg and Cape Town, as well as the HartRAO facility at Hartebeesthoek and radio-quiet SKA host site in the Karoo, 90km from Carnarvon in the Northern Cape, which hosts the Square Kilometre Array mid-frequency telescopes, MeerKAT, and KAT-7 radio telescope installations, as well as a number of guest instruments, including the HERA telescope.

Further information about SARAO can be found on www.ska.ac.za and the international SKA on www.skatelescope.org.za

D1.2 SUMMARY SCOPE OF WORKS (EMPLOYER'S REQUIREMENTS)

Any reference to 'Scope of Works, Employers Requirements' in any of the documents forming part of this agreement shall mean the "Specifications and Drawings" per Clause 1.1.30 & Clause 1.1.76 of the General Conditions of Contract as identified in Part C2.2

SYSTEM OVERVIEW

High level summary of the power supply and distribution network at the SARAO site in the Northern Cape:

- The site receives its power supply from the Karoo Substation via an existing 33kV overhead line, which spans approximately 90km to Losberg.
- This overhead line has three T-OFF points: Klerefontein Support Base, MID Construction Camp, and Swartfontein Farm.
- Another T-OFF with 33kV underground cables that is connected to power plant in KAPB
- Two 33/22kV transformers, connected in parallel, feed into the DRUPS Feeder busbar (Rotary UPS).
- Three 1250kAV DRUPS are connected in parallel from the 22kV Busbar.
- The output of these DRUPS is connected to the 22kV Busbar, which supplies MK Ring 1, MK Ring 2, and three Spirals namely Brandvlei, Carnarvon and Williston.
- All incoming and outgoing feeders are monitored by dedicated protection relays.
- The Rings and Spirals have a number of 22000/400V Ring Main Units (RMUs)
- The network utilizes three 22kV reactors (2 x 570kVAR and 1 x 300kVAR) for the long underground cables to achieve the desired power factor, ensuring optimal DRUPS performance within their capability curve

SCOPE OF WORKS

The purpose of this tender is to obtain the service of a competent and qualified Electrical Engineering contractor to procure, deliver, install, commission and test electrical work on the Carnarvon 22kV Spiral on the SARAO site. The contractor **shall** be responsible for the following activities:

1. Before Commencement	
Item No	Description
1.1	Review approved drawings, specifications, performance criteria, request clarifications, and build according to design (The Commencement Date is when the fully signed copy of this contract is handed to the tenderer, as per the provisions of the Form of Offer and Acceptance)
2. Procurement & Installation (All Equipment)	
2.1	Supply, installation and testing of 570kVAr MV Reactor on the Carnarvon spiral with surge arrestors
2.2	Supply, installation and testing of LV cable between existing LV kiosk to the new installed reactor (Annexure 3)
2.3	Supply, installation and testing of Ring Main Unit
2.4	Supply, installation and testing of MV cable between RMU and Reactor
2.5	Supply, installation and testing of LV termination at the LV Kiosk and at new installed reactor
2.6	Supply, installation and testing of MV cable as per Annexure 3.
2.7	Cut the existing MV cable, supply the joints, install and testing of two MV joints
2.8	Supply, installation and testing of two MV termination joints
2.9	Supply, installation and testing of four MV termination
2.10	Supply, installation and testing of earthing system

2.11	Supply and installation of cable support between RMU and Reactor
2.13	Supply, installation and testing of pre-cast RMU plinth, reactor plinth and Reactor
2.14	Supply and installation of signage and route markers.
2.15	Supply and installation of palisade fence.
2.16	Supply and laying aggregate stones
2.17	Supply and install MV cable support with a plinth between the RMU and a reactor
2.18	Provide data sheets, electrical and mechanical drawings to Engineer prior to commencing with procurement activities for approval.
3. Site Access	
3.1	The Contractor shall take full responsibility for managing and maintaining site access once possession of the site has been granted by the Employer
3.2	The Contractor shall control entry to the designated work areas and regulate the movement of personnel, materials, and equipment within the site
3.3	Shall provide appropriate security, signage, and traffic management measures shall be implemented to ensure safety and prevent unauthorized access
3.4	The Contractor shall protect existing infrastructure, utilities, from damage arising from site access activities
3.5	Access routes and working areas shall be kept clear, safe, and serviceable at all times for construction vehicles, staff, and emergency access
3.6	Where site access is shared with other contractors, stakeholders, or the Employer's personnel, the Contractor shall coordinate movements to prevent interference and disruption
3.7	The Contractor shall comply with all site-specific access control procedures, working hour restrictions, and permit-to-work and RFI requirements as issued by the Employer
3.8	Upon completion of the Works, the Contractor shall reinstate all temporary access routes, roads, and working areas to their original or approved condition
3.9	To provide drinking water for their staff
4. On-Site Assessment of Existing Infrastructure	
4.1	Prior to commencing any works, conduct a comprehensive on-site assessment of all existing infrastructure within and adjacent to the designated work area
4.2	Verification of existing electrical systems, cables, foundations, ducting, access roads, and drainage facilities that may be affected by the new works
4.3	Shall identify, record, and report any discrepancies, defects, or risks in the existing infrastructure to the Employer and Engineer before proceeding
4.4	Shall ensure that existing services and installations are properly protected during construction to prevent damage, interruption, or unsafe conditions
4.5	Any modifications, diversions, or strengthening works required to accommodate the new installation shall be carried out only after receiving written approval from the Engineer

4.6	Shall document all findings through inspection reports, photographs, and as-built records for submission to the Engineer prior to mobilization.
4.7	All assessment and verification activities shall be conducted in compliance with the Contract, site safety regulations, and relevant engineering standards
5. Delivery & Storage	
5.1	Ensure safe delivery, off-loading, handling, and storage of all materials and equipment
5.2	Coordinate deliveries with the Employer and Engineer to avoid site congestion
5.3	Store materials in a secure, lockable, and weather-proof facility on site. With all associated costs to be borne by the Contractor
5.4	Protect sensitive or high-value items from damage, moisture, or contamination. The reactor and RMU shall be transported with a shock or impact meter.
5.5	Maintain an inventory of materials and ensure accountability for any loss or damage
5.6	Remove temporary storage facilities and restore the area upon completion of works
5.7	Off-loading and lifting operations shall be carried out only by qualified personnel using certified lifting equipment in accordance with approved method statements and safety procedures
5.8	Any loss, theft, or damage to materials after delivery to site shall be the sole responsibility of the Contractor until completion and handover of the Works
6. RFI Approvals & Permits	
6.1	Provide an Electromagnetic Compliance Control Plan (EMCCP) to be reviewed and approved by SARAO
6.2	Transportation of equipment and tools for RFI testing
6.3	The Contractor will ensure compliance of new and modified installations as described in the EMC standards SKA-TEL-SKO-0000202 SKA EMI/EMC Standards, Related Procedures and Guidelines for emission and immunity limits.
6.4	Fuel driven equipment (generators, compressors and/or vehicles) must be diesel powered.
6.5	All plant and equipment will be tested and issued with SARAO issued RFI permits, with specific conditions where applicable, and will be valid for the duration that the plant or equipment is operational on site.
6.6	Valid test certificates (type, routine or special tests) proving compliance with the EMC control plan emission and immunity requirements will be

	provided for all equipment where applicable.
6.7	RFI notices, permits, audits and monitoring data will be made available to SARAO.
6.7	Continuous infringements relating to RFI may result in permits being revoked. Contractor will need to reapply for permits (all associated costs for the contractor)
7. Safety & Environmental Compliance	
7.1	Implement and maintain a Health, Safety, and Environmental (HSE) Plan approved by the Engineer and SARAO SHE team before work begins.
8. Documentation	
8.1	Develop LV & MV cable pulling, handling and installation method statement to client to approval prior to commence with work
8.2	Develop RMU FAT, transportation, installation and site method to client for approval prior to commencement of work
8.3	Develop MV termination installation and testing method statement to client for approval prior to the commencement of work
8.4	Develop earthing system installation method statement to the client for approval prior to the commencement of work
8.5	Develop earthing system installation method statement to the client for approval prior to the commencement of work
8.6	Develop excavation and back filling method statements for client approval prior to commencement of work
8.7	Develop Reactor FAT, transportation, installation and site method to client for approval prior to commencement of work
9. Testing, Commissioning & Handover	
9.1	Factory Acceptance Test for Ring Main Unit and Reactor with client representative before been shipped to site
9.2	The Contractor shall be responsible for the testing, pre-commissioning, commissioning, and final handover of the Works in full compliance with the Contract, manufacturer's requirements, and approved method statements
9.3	The Contractor shall prepare and submit detailed Testing and Commissioning Procedures for the Engineer's review and approval before commencing any test activities
9.4	All tests shall be carried out in the presence of the Engineer or Employer's Representative, with proper notice given in advance
9.5	The Contractor shall record and document all test results, ensuring they meet the performance and quality standards stipulated in the Contract
9.6	In the event of unsatisfactory results, the Contractor shall identify causes, carry

	out corrective actions, and repeat the tests at no additional cost to the Employer
9.7	Submit complete as-built drawings, test reports, warranties, and O&M manuals as part of the handover documentation
9.8	Provide training to the Employer's personnel on operation, maintenance, and safety procedures for the installed system
9.9	Upon successful completion of testing and commissioning, the Contractor shall assist the Engineer in conducting final inspections and performance verification for issuance of the Taking-Over Certificate
9.10	Contractor to provide all warranties for equipment
9.11	Lead Electrical Engineer will be responsible for quality control and assurance

CLIENT (EMPLOYER) RESPONSILITIES

The Client, hereinafter referred to as the Employer, shall be responsible for providing all necessary support, information, and site conditions required to enable the Contractor to execute the Works efficiently and within the agreed timeframes. The Employer's obligations shall include, but not be limited to,

ITEM	RESPONSIBILITY
No.1	Provide site possession by agreed date
No.2	Provide approved drawings, specifications, and performance criteria
No.3	Provide design intent, safety clearance for existing systems
No.4	Issue (upon approval) RFI permit approvals for tools
No.5	Shall provide a temporary designated area within the site boundaries for the Contractor's use, to accommodate a lockable storage facility, ablution facilities, and access to water (portable water for works) as required for the execution of the works.
No.6	Provide clear site and any pre-existing civil works information required Cables and Connections - Approve cable routes and entry points.
No.7	Witness tests (SAT and FAT)
No.8	Workmanship to be certified by employer
No.9	Issue Taking-Over and Performance Certificates
No.10	SARAO will provide power point of connection for contractor to connect their cables to their site offices

The detailed scope for the project comprises of the following Annexures:

- Annexure 1 – SKA-TEL-INSA-0002112 Specification for 22kV 3.3kV and 400V Cable Network Extension rev2
- Annexure 2 – 402-000003-EE-501-DDR Array Power for Dishes Detail Design Report

- Annexure 3 – Carnarvon-REC-003 Carnarvon Spiral Reactor Plan Layout
- Annexure 4 - Carnarvon-REC-002 Carnarvon Spiral Reactor Overall MV Single Line Diagram
- Annexure 5 - Carnarvon-REC-001 Carnarvon Spiral KAPB Switchgear Single Line Diagram
- Annexure 6 – 402-00003-EE-573-0-DRG Thermometer Trip Wiring Schematic
- Annexure 7 – 340-020000-EF-508-Typical Trench Layout
- Annexure 8 – 402-000003-DRG-EE-557-R Earthing Block Diagram
- Annexure 9 – 402-000003-DRG-EE-567-R RMU and Minisub Earthing Arrangement
- Annexure 10 – SKA-TEL-SKO-000202-04 SKA RFI EMC
- Annexure 11 - Equipment Technical Schedule
- Annexure 12 - MV Cable Support between RMU and Reactor
- Annexure 13 - Signs on the reactor fence and RMU
- Annexure 14 - Carnarvon Spiral Reactor Fence
- Annexure 15 - Site Acceptance Test (SATs)
- Annexure 16 -Factory Acceptance Test (FAT)
- Annexure 17 - Bill of Quantities
- Annexure 18 - Environmental Specification Reactor RMU Losberg
- Annexure 19 - Health & Safety 570kVAR Reactor Project Losberg
- Annexure 20 - Site Information & Instruction Part A
- Annexure 21 - Site Information & Instruction Part B

Reference Documents and Applicable Standards

The following documents are “normative references” which circumscribe the proposed works. In the event of conflict between the contents of the referenced documents and this document, this document shall take precedence.

National Rationalised Specifications (South African ESI agreed standards)	
NRS 012 / SANS 876	CABLE TERMINATIONS AND LIVE CONDUCTORS WITHIN AIR- INSULATED ENCLOSURES (INSULATION COORDINATION) FOR RATED A.C. VOLTAGES OF 7.2kV AND UP TO AND INCLUDING 36kV.
NRS 053	ACCESSORIES FOR MEDIUM VOLTAGE POWER CABLES (3.8/6.6kV TO 19/33kV)
NRS 079-1	MINERAL INSULATING OILS (UNININHIBITED) – PART 1: PURCHASE, MANAGEMENT, MAINTENANCE AND TESTING
NRS 079-2	MINERAL INSULATING OILS (UNININHIBITED) – PART 2 GUIDELINES FOR THE MANAGEMENT OF INSULATING OILS
NRS 091	HEALTH AND SAFETY GUIDELINES
South African National Standards (IEC Equivalent)	
SANS 121	Hot dip galvanized coatings on fabricated iron and steel articles - Specifications and test method
SANS 1186	Symbolic safety signs
SANS 1339	Electric cables –Cross-linked polyethylene (XLPE) insulated cables for rated voltages 3.8/6.6 kV to 19/33 kV.
SANS 10142-1	The wiring of premises Part 1: Low voltage installations
SANS 1411	Materials of insulated electric cables and flexible cords
SANS 10198	Selection, handling and installation of electric power cables of rating not exceeding 33 kV
SANS 1507-3:	Electric cables with extruded solid dielectric insulation for fixed installations (300/500V to 1900/3 300V) Part 3: PVC Distribution Cables;
SANS 10142-2	The wiring of premises Part 2: Medium voltage installations above 1kV a.c. not exceeding 22kV and up to and including 3 000kW installed capacity.

Eskom Distribution Guidelines, Standards, Specifications and Drawings	
240-56030406	Free Standing Metal-Enclosed Ring Main Units for Systems with Nominal Voltages from 11kV to 33 kV
240-56030635	General Information and requirements for Medium Voltage Cable Systems
240-56030619	Accessories for medium voltage power cables for systems with nominal voltages of 11kV to 33kV standard
20-56062752	Specification for Medium Voltage Miniature Substations for Systems with Nominal Voltages of 3.3 kV, 6.6kV, 11kV and 22kV Standard
D-DT-0855	Miniature Substation Earthing for MV Systems
D-DT-0859	Precast concrete Plinth for Type B Mini substation (sheet7)
D-DT-0863	Precast concrete Plinth for 3 way ring main units
D-DT-0895	MV / HV cable under-river crossing details of channel type river crossing for use under small / shallow rivers.
D-DT-0896	MV under-stream crossing details of cable stream crossing where base of stream is bedrock
D-DT-8012	Cable Route Marker
240-130615754	Earthing – MV and LV Distribution System Earthing
240-75655504	Corrosion Protection Standard for New Indoor and Outdoor Eskom Equipment, components, materials and Structures Manufactured from Steel Standard

HIGH LEVEL PROGRAMME FOR COMPLETION

Time for Completion (Overall) 162 Calendar Days					Defects Liability Period
Procurement incl Long lead items (56 Calendar Days)	RFI Testing & Approvals - Pre-construction (24 Calendar Days)	Construction (60 Calendar Days)	Testing & Verification (14 Calendar Days) + Commissioning (7 Calendar Days)	Taking Over Inspection & Issuing of Taking Over Certificate (1 Calendar Day)	(12 months) (365 Calendar days)

D1.2.1.1 CONSTRUCTION/EXECUTION (60 CALENDAR DAYS)

The Construction Project Manager (Contractors representative) will be responsible for executing the following construction administration role:

- Provide health, safety and environmental management plan for review and approval by SARAO prior to construction;
- Provide quality assurance plan review and for approval by SARAO prior to construction;
- Review and approval of the construction programme including project float, critical path items, holding points and items identified critical for integration;
- Convene weekly face to face site coordination meetings with appointed sub-contractors to ensure proper coordination and integration;
- Report on progress on implementing contract participation goals, socio-economic and skills transfer development requirements as defined in the contract;
- Prepare payment valuation for SARAO assessment, submission and approval;
- Undertake health, safety, environmental, quality assurance audits in conjunction with SARAO team;
- Ensure that the required construction disciplines are involved in inspections as applicable to their work during construction;
- Compile bi-weekly construction progress reports addressing the construction programme, Health and Safety and Quality, Sub Contractors, Materials on Site, progress photos, plant and equipment on site, benefits register, targeted procurement goals, socio-economic and skills transfer development;
- Provide cash-flow and expenditure reports on a monthly basis to SARAO;

D1.2.1.2 TESTING, VERIFICATION AND COMMISSIONING (14+7 CALENDAR DAYS)

The Contractor Representative team will be responsible for executing the following during this phase:

- Participate in Physical Configuration Audit (PCA). This audit will verify the installation against the following documents: Specification, As-built installation drawings, Shop Drawings including Bill of Materials for all itemised items indicated on drawings
- Coordinate and undertake verification events in compliance with the verification and commissioning plan/procedure;
- Lead all site acceptance verifications that need to be undertaken while being witnessed by a SARAO representative; Liaise with local authorities to coordinate the required inspections;
- Take overall responsibility for coordinating the compilation of the as-built documentation in preparation for

achieving an as-built baseline (ABBL):

- As-built drawings (workshop, construction, other) in PDF, dwg, dxf, Visio, GIS supported kmz file etc. format both in hard copy and in soft copy. The hard copy must be signed off by the Architect/ Engineer and submitted to the SARAO;
- All verification reports must be reviewed and signed by the relevant engineer and submitted to the SARAO;
- Coordinate and supply maintenance manuals and procedures from all suppliers and sub-contractors as per SARAO defined requirements. This shall include the coordination and compilation of the final hand-over package. The final hand-over package must be submitted in hard and soft copy (PDF, word, dwg, dxf, excel, etc.).
- All finishing schedules, samples, attic stock, etc.
- All Certificates of Compliance which are signed off by the engineers and the contractor;
- Lessons learnt report, Contractor to provide SARAO with a lessons learnt report including but not limited to Technical, Installation, Management, Resource, Supplier, Supply, Site and facility issues.
- Contractor to manage the defect-liability period by conducting an inspection on a quarterly basis for the period and prior to final handover certificates are signed to identify defects which must be addressed by the contractor.

Factory Acceptance Tests & Site Acceptance Tests Requirements:

The below list comprises routine inspection sheets, test and commissioning sheets and all close out documentation associated with the scope of works. All other requirements as noted in the SKA-TEL-NSA-0002112 specification will be applicable.

Reference	Description
Factory Acceptance Test Schedule (FAT)	
Document F1	Reactor Factory Acceptance Test Report
Document F1	Ring Main Unit Factory Acceptance Test Report
Site Acceptance Tests Commissioning Documentation (SAT)	
Document S1	Ring Main Unit Test / Commissioning Report
Document S2	Reactor Test / Commissioning Report
Document S3	Low Voltage Cable Reticulation Test / Commissioning Report
Document S4	Low Voltages Distribution Kiosk / DB Testing and Commissioning Report
Document S5	Earthing Points Testing and Commissioning Report
Document S6	Inspection of Distribution Box for a Cable Distribution Installation
Document S7	Inspection of Excavation and Backfilling of Cable Trenches
Document S8	Inspection of Jointing and Terminations of Cables
Document S9	Intermediate Voltage Cables Test / Commissioning Report
Document S10	Medium Voltage Cables Test / Commissioning Report
Close Out Documentation	
As-Built Drawings and Documentation	As-Built Documentation, redline construction drawings of all Single Line Diagrams and General Arrangement drawings showing all cable routes and joints (where applicable)
Certification of Compliance	Final CoC once all related tests have been done after hot commissioning
Material Specifications	All specifications as well as part numbers of installed materials are to be submitted for reference purposes. Names and contact details of suppliers are also to be submitted.
Final Acceptance Certificate	Final certificate made out of Contractor once all components are accepted and signed off

D1.2.1.3 SARAO SITE CONSTRAINTS, FACILITIES AND CONDITIONS

Available Facilities and Restrictions

SARAO will not provide any on-site accommodation to the Contractor or subcontractor staff. The Contractor should procure accommodation in the town of Carnarvon at their own cost. However, an area will be made available on the site for the contractor to put a small lockable storage and or office. The contractor is responsible for providing ablution facilities and water.

The Tenderer is advised that SARAO has adopted a strict **No alcohol and illegal narcotic or other drugs policy** on site and shall be enforced by both the Contractor and SARAO, resulting in serious disciplinary action for offenders.

The Tenderer is advised that all key personnel for this project will be screened by the Security and alcohol screening will be undertaken on all site entries.

The Tenderer must note that other contractors will be working within the area.

Refer to annexure 20 and 21 (Site Information & Instructions Part A and B)

D1.2.1.4 SUPPORTING DOCUMENTS

The successful bidder must submit the following documents for Take Over to be certified on the construction phase.

The following shall be submitted to SARAO for the works (2 hard copies and 1 USB flash drive):

- All design files in all formats (Dwg, Word, Pdf, Visio, etc.) and versions,
- Electrical Certificate of Compliance,
- Operating and Maintenance Manuals and procedures,
- Equipment selection including manufacturer certified information,
- Shop drawings including wiring diagrams
- Inspection record cards/checklists,

D1.2.1.5 PERFORMANCE LEVELS

SARAO requires the following levels of performance from the selected Bidder for Section 1:

Performance Area	Required Level of Performance
Procurement including delivery to site	56 Calendar Days
RFI Testing (Including Permit Approvals)	24 Calendar Days
Construction	60 Calendar Days
Testing & Verification	14 Calendar Days
Commissioning	7 Calendar Days
Defects Liability Period	365 Calendar Days

NOTE:

Should the quality results of the Tenderer/Contractor QAO not meet/deviate from the quality standards as tested by the SARAO QAO, then all remedial work will be for the Tenderer's expense.

CONTRACTOR AND LABOUR PARTICIPATION GOALS (CLPG)

Local Participation

The bidder is solely responsible to contact the community to assess their requirements

Local: Local or local area in the context of this project means, the Northern Cape and more specifically the area in a around the CSE Site namely Carnarvon, Williston, Brandvlei, Vanwyksvlei, Loxton, Vosburg and Fraserburg;

Locals: Locals has a corresponding meaning to Local, in that it refers to the inhabitants of the area designated under local.

Local EMEs, QSEs, labour or suppliers are considered local if they are resident in the surrounding towns within a radius of a 200km radius of the project. If suitable EME and QSE contractors, Labourers or suppliers cannot be found within this area, they may be procured from the wider Northern Cape area in consultation with the Client.

Contractor's Participation Plan - Infrastructure

6 Focus Areas:

1. *EME: Local Exempted Micro Enterprises*
2. *QSE: Qualifying Small Enterprises*
3. *Local Labour and/or*
4. *Local Suppliers*
5. *Mentoring/Training & Development initiatives*
6. *Corporate Social Investment (Any CSI related costs are for the Bidders responsibility not Client)*

Local Contractor - Tier 1: A South African supplier, contractor, or sub-contractor, of which the business and owner/owners are South African citizens, based and registered within one of the towns/areas outlined in the localised area/primary zone of influence for a period longer than 3 years.

Local Contractor - Tier 2: A South African supplier, contractor, or sub-contractor, of which the business and owner/owners are South African citizens, based and registered within one of the towns/areas outlined in the localised area/secondary zone of influence for a period longer than 3 years.

Local Contractor - Tier 3: A South African supplier, contractor, sub-contractor, registered and based within the Northern Cape Province.

Local Contractor - Tier 4: A South African supplier, contractor, or sub-contractor, registered and based within the Republic of South Africa

It is a requirement of this contract that the Main Contractor, be it a joint venture or a consortium or a single organization must comply with the following:

- The Main Contractor must subcontract a minimum of 10% of the final accepted contract amount. (Local Exempted Micro Enterprises (EME), Local Qualifying Small Enterprises (QSE) & Local Suppliers)
- Targeted labour will be 5% of the final accepted contract amount.
- Mentoring / Training and development initiatives

The objectives of the Employer are to:

- Preferentially employ Locals through appropriate channels to minimise the chances of an influx of other than Local work seekers, to the extent of using 100% unskilled Labour from the local community; and
- Optimise employment and business opportunities for local black people and black women in particular

It is an express requirement that the Contractor submit a Contractor Participation Plan which complies with the above referenced Employer requirements;

The *Contractor's* Participation Plan describes how the *Contractor* plans to use local

- Exempted Micro Enterprises,
- Qualifying Small Enterprises and

(1) Exempted Micro Enterprises, Qualifying Small Enterprises and black people has the meaning defined by the law of the Republic of South Africa.

- Exempted Micro Enterprises, Qualifying Small Enterprises and black people are treated as local if they are based within a 200km radius of the Site.

If a local Exempted Micro Enterprise, Qualifying Small Enterprise is not available or suitable to provide part of the *works*, they are treated as local if they are based within the Northern Cape province.

The Engineer may instruct the Contractor to correct a failure to comply with its Participation Plan. This instruction is not a change to the Employer Requirements or otherwise, with the Contractor' attention specifically drawn to the Special Conditions Sub-Clause 4.20 Progress Reports.

D2: Agreements and Contract Data

Number	Heading	Page No.
D2.1	Form of Offer and Acceptance	70
D2.2	Contract Data	75

D2.1 Form of Offer and Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

BID NO: NRF/SARAO SHAO/23/2025-26 – PROCUREMENT, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVar REACTOR AND RING MAIN UNIT (RMU) ON THE 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON

The bidder, identified in the offer signature block below, has examined all the documents listed and included by reference in the tender data and addenda thereto as listed in the Schedule of Returnable, Contract Documents and all documents defining the Employer' Requirements, and by submitting this offer has accepted the conditions of tender and the Contract.

By the representative of the bidder, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance, the tenderer offers to perform all of the obligations and liabilities of the Contractor under the Contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the Conditions of Contract identified in the Contract Data, within the Contract Period stated below.

A) THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

RAND (in words);

R(in figures)

This offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the Tender Data, whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

SIGNED ON BEHALF OF/BY THE BIDDER:

	NAME	SIGNATURE	
	CAPACITY	DATE	

Name and Address of Organisation:

SIGNED BY WITNESS:

NAME		SIGNATURE	DATE

Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the Tenderer's offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the Conditions of Contract identified in the Contract Data and for the contract period offered. Acceptance of the tenderer's offer shall form an Agreement between the Employer and the Tenderer upon the terms and conditions contained in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

Part D2.1 & Part D2.2: Agreements and Contract Data (which includes this Agreement)

Part D2.3: Pricing Data

Part D1: Scope of Work (Employer Requirements)

and drawings and documents or parts thereof, which may be incorporated by reference into Parts D1 to D3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto as listed in the Returnable Documents as well as any changes to the terms of the Offer agreed by the Tenderer and the Employer during this process of offer and Acceptance, are contained in the Schedule of Deviations attached to and forming part of this Agreement. No amendments to or deviations from said documents are valid unless contained in this schedule which must be duly signed by the authorised representative(s) of both parties.

The tenderer shall within two weeks of signing this Agreement, including the Schedule of Deviations (if any), or when or just after this Agreement comes into effect, contact the employer's implementing agent (whose details are given in the Contract Data) to arrange the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the Conditions of Contract identified in the Contract Data. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this Agreement comes into effect on the date of last signature of this document, including the Schedule of Deviations (if any).

SIGNED ON BEHALF OF/BY THE EMPLOYER:

	NAME		SIGNATURE
	CAPACITY		DATE

Name and Address of Organisation

SIGNED BY WITNESS:

SIGNED BY WITNESS:		
NAME	SIGNATURE	DATE

Schedule of Deviations

Notes:

1. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
2. A tenderer's covering letter shall not be included in the final contract document. Should any matter in such a letter, which constitutes a deviation as aforesaid, become the subject of agreements reached during the process of Offer and Acceptance, the outcome of such Agreement shall be recorded here.
3. Any other matter arising from the process of Offer and Acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the Contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above Agreements and recorded here shall also be incorporated into the final draft of the Contract.

1. Subject

Details

2. Subject

Details

3. Subject

Details

4. Subject

Details

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Returnable Documents, as well as any confirmation, clarification or changes to the terms of the offer agreed by the Tenderer and the Employer during this process of offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the Tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

Schedule of Deviations (continued)

SIGNED ON BEHALF OF/BY THE TENDERER *(only on award of Contract):*

	NAME		SIGNATURE
	CAPACITY		DATE

SIGNED BY WITNESS *(only on award of Contract):*

	NAME		SIGNATURE	DATE

SIGNED ON BEHALF OF/BY THE EMPLOYER:

	NAME		SIGNATURE
	CAPACITY		DATE

SIGNED BY WITNESS:

	NAME		SIGNATURE
			DATE

CONFIRMATION OF RECEIPT

The Bidder, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the (day) of(month)(year)

at (place)

SIGNED ON BEHALF OF/BY THE CONTRACTOR (*only on award of Contract*):

[illegible]

SIGNED BY WITNESS (only on award of Contract):

[illegible]

D2.2 Contract Data

Part 1: Contract Data Provided by the Employer

CONDITIONS OF CONTRACT

The following FIDIC Conditions of Contract are applicable for this Contract:

Conditions which form part of the Conditions of Contract for Building and Engineering Works, designed by the Employer, Second Edition 2017 (Red Book) published by the International Federation of Consulting Engineers.

Copies of these FIDIC General Conditions (Red Book) second edition 2017, may be obtained from the South African Institution of Civil Engineering (SAICE) (tel. 011 805 5947) or Consulting Engineers South Africa (CESA) (tel. 011 463 2022).

The Contractor must obtain his own copy of these Conditions of Contract (FIDIC "Red Book")

The Contract Data (Particular Conditions and Special Conditions) shall have precedence in interpreting any ambiguity or inconsistency between it and the general conditions of contract.

The General Conditions shall be read in conjunction with the variations, amendments and additions in the Particular Conditions and Special Conditions below. Each data item given below is cross-referenced to the Clause or Sub-Clause in the General Conditions to which it mainly applies

C2.2.2 PARTICULAR CONDITIONS

Part A: References from Clauses in the General Conditions:

Sub-Clause

1.1	Definitions	
1.1.31 & 1.3(d)	Employer's Name and Address	The Employer (interchangeably, "the Client") is the National Research Foundation, represented by Project Manager of the business unit South African Radio Astronomy Observatory (SARAO)
	Email	Tender@sarao.ac.za
	Telephone number	+27(21) 506 7300
1.1.33	Employer's Personnel	SARAO
1.3(a)(ii)	Agreed methods of electronic transmission:	Email
1.3(d)	Contractor's name and address	
	Email	
	Telephone number	
	Contractor's Representative's name	

1.1.27	Defects Notification Period	365 Calendar Days after take over certificate
1.1.35	Engineer's Name	TBC
1.1.36	Engineer' Representative Name and address	The Employer (interchangeably, "the Client") is the National Research Foundation, represented by Project Manager of the business unit South African Radio Astronomy Observatory (SARAO)
1.1.84	Time for Completion for the whole works	162 Calendar days after the 'Commencement Date' for the whole of the works. The Commencement Date is when the fully signed copy of this contract is handed to the tenderer, as per the provisions of the Form of Offer and Acceptance. Note: SARAO shall provide formal acceptance and approval of the Works
1.1.84	The Works	Supply, Delivery, Installation, Testing And Commissioning Of 570kvar Reactor And Ring Main Unit (Rmu) On The existing 22kv Carnarvon Spiral, Losberg, Carnarvon
1.4	Contract shall be governed by the law of:	Republic of South Africa
1.4	Ruling Language	English
1.4	Language for communications:	English
2.1	Time for access to the site	14 Calendar days from the Commencement Date subject to the Contractor providing the Engineer & Employer with below and subject to it being accepted: <ul style="list-style-type: none"> • SHEQ File compliant with the Scope of work and the Construction Regulations • Detailed Construction Programme • EMCCP • Contractor And Labour Participation Goals (CLPG) Plan
4.2	Amount of Performance Security	Ten (10)% of the Accepted Contract Amount, in the currencies and proportions in which the Contract Price is payable
4.7.2	Period for notification of errors in the items of reference	14 days
6.5	Normal working Hours	08:00 to 17:00 Monday to Friday, excluding weekends and Public Holidays (unless otherwise agreed in writing by SARAO)
8.2	Time for Completion	162 Calendar days from Commencement Date

		SARAO shall provide formal acceptance and approval of Completion
8.8	Delay Damages payable for each day of delay	<ul style="list-style-type: none"> • 0.1% per day of the total of the Contract Amount at the Take Over Date, for the first 10 days of delay. • 0.2% per day of the total of the Contract Amount at the Take Over Date, for the 11th to the 20th day of delay, • 0.4% per day of the total of the Contract Amount at the Take Over Date, for the 21st to the 25th day of delay, • 1% per day of the total of the Contract Amount at the Take Over Date, for the 26th to the 30th day of delay.
8.8	Maximum amount of Delay Damages	Delay Damages is limited to 10 % of the total of the Contract Amount in the currencies and proportions in which the Contract Amount is payable.
13.7	Adjustments for changes in Cost	The rates will be fixed and firm for the duration of this contract, with the provisions of Clause 13.7 not applicable to this Contract.
14.1	The Contract Price	Remeasurable Bill of Quantities. Rates fixed and firm; Contract Price subject to adjustment based on remeasurement of actual quantities executed
14.1	The Contract Price Measurement and Valuation	The work will be paid in accordance with work done, which shall be the sum of completed activities in the Bill of Quantities as valued by the Engineer.
14.3	Application for Payment	Each Application for payment shall be made on the 23rd day of each Calendar Month
14.3 (iii)	Percentage of retention	10%
14.3 (iii)	Limit of Retention Money	10 % of the Accepted Contract Amount.
14.6.2	Minimum amount of Interim Payment Certificates	R 50,000.00
14.7(b)	Period of payment	The longer of 30 days after the issue of the Interim Payment Certificate, or 30 days after the receipt of a valid Tax Invoice with the amounts reflected in the issued IPC.
14.15	Currency/Currencies of Payment	South African Rands
19.2.3	Permitted deductible limits: <ul style="list-style-type: none"> • Insurance required for the Works • Insurance required for Goods • Insurance required against liability for fitness for purpose (if any is required) • Insurance required against liability for breach of professional duty • Insurance required for injury to persons and damage to property • Insurance required for injury to employees • Other insurances required by Laws and by local practice: • Force Majeure 	Is applicable with insurance required to the value of R 10,000,000.00 per occurrence.

21.1	Time for appointment of DAAB (1 member)	On an ad hoc basis and within 30 days after the notification of a Dispute for a dispute.
21.1	List of proposed members of the DAAB	The Association of Arbitrators of South Africa shall nominate and appoint the DAAB member after a dispute has been notified, following the failure by the Parties to agree on a DAAB member within 30 days after a dispute has been notified in connection with this contract

Part B: Additional Clauses:

1 General Provisions

1.1 Definitions

Deleted and replace 1.1.10 with:

“Contract” means the Form of Offer and Acceptance, Contract Data, additional clauses, the Employer’s Requirements, the Specifications (Statement of Work), the Annexures, the Drawings, the Schedules, and the further documents (if any) which are listed in the Form of Offer and Acceptance, and further includes drawings and documents or parts thereof which any of the aforesaid documents incorporate by reference.

Deleted and replace 1.1.10 with:

“Contract Agreement” means the Form of Offer and Acceptance.

Deleted and replace 1.1.50 with:

“Letter of Acceptance” means the Form of Acceptance as contained in part D2.1 of the contract documents.”

Deleted and replace 1.1.51 with:

“Letter of Tender” means the Form of Offer as contained in part D2.1 of the contract document.”

Deleted and replace 1.1.71 with:

“Schedules” means the document(s) completed by the Contractor and submitted with his tender offer, as included in the Contract. Such document(s) may include Price Schedule, data lists and schedules of rates and/or prices”, and will include Tender Returnable B6 :Key Personnel.

Deleted and replace 1.1.81 with:

“Tender” means that section of the Form of Offer and all other documents which the Contractor submitted as the proposal and Returnable Documents, as included in the Contract. The word ‘Tender’ is synonymous with ‘Bid’, and the words ‘Letter of Tender’ with ‘Letter of Bid’, and the words ‘Appendix to Tender’ with ‘Appendix to Bid’, and the words ‘Tender Documents’ with ‘Bidding Documents’.”

Add Clause 1.1.89” **Defect**”

‘Defect’ means • a part of the works which is not in accordance with the contract

Add Clause 1.1.92” **Priced Schedule**”

‘Priced Schedule’ means • The Priced Schedule at Part D3.2 of the Pricing Data.

Add Clause 1.1.93 **“Priced Schedule Information”**

“Priced Schedule Information” Deleted and replace 1.1.71 with:

“Schedules” means the document(s) completed by the Contractor and submitted with the tender offer, as included in the Contract. Such document(s) may include Price Schedule, data lists and schedules of rates and/or prices”, and will include Tender Returnable B6: Key Personnel

Sub-Clause 1.5 Priority of Documents

Deleted and replace with:

The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence:

- a) The Form of Offer and Acceptance including the Schedule of Deviations
- b) The Particular Conditions Part A - Contract Data;
- c) The Particular Conditions Part B – Special Conditions
- d) These General Conditions;

- e) The Employer's requirements;
- f) Standard and Project Specifications; and
- g) The Annexures
- h) The Schedules.
- i) Any other documents forming part of the Contract

If any ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction, with the express undertaking by the Parties that the more onerous requirement is deemed to have been allowed for by the Contractor in the specific context of the ambiguity.

Sub-Clause 1.6 Contract Agreement

Delete the last paragraph:

"The cost of stamp duties and similar charges imposed by law in connection with entry into the Contract Agreement shall be borne by the Employer."

Sub-Clause 1.10 Employers Use of Contractor Documents

Delete the entire clause 1.10 and replace it with ;

As between the Parties, the Contractor shall retain the intellectual property rights in the Contractor's Documents and other design documents made by (or on behalf of) the Contractor.

The Contractor shall be deemed (by signing the Contract Agreement) to give to the Employer a non-terminable transferable non-exclusive royalty-free license to use, copy and communicate the Contractor's Documents and such other design documents, including making and using modifications of them.

(d) in the event of termination of the Contract:

(i) under Sub-Clause 15.2 [Termination for Contractor's Default], entitle the Employer to copy, use and communicate the Contractor's Documents and the other design documents made by or for the Contractor; or

(ii) under Sub-Clause 15.5 [Termination for Employer's Convenience], Sub-Clause 16.2 [Termination by Contractor] or Sub-Clause 18.5 [Optional Termination], entitle the Employer to copy, use and communicate the Contractor's Documents which has been completed for which the Contractor received payment.

for the purpose of completing the Works and/or arranging for any other entities to do so.

The Contractor's Documents and other design documents made by (or on behalf of) the Contractor may, without the Contractor's prior consent, be used, copied or communicated to a third party by (or on behalf of) the Employer for purposes other than those permitted under this Sub-Clause, however limited to the compiling and completion of SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT (RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON

Sub-Clause 1.12 Confidentiality

Add the following after the first paragraph:

"Any disclosure of information that forms part of the Contract shall not be disclosed without prior consent of the other Party."

CLAUSE 2 THE EMPLOYER

Sub-Clause 2.4 Employer's Financial Arrangements

Delete this sub-clause as it is not applicable. It is also not applicable anywhere where it is referenced in the conditions of contract.

CLAUSE 3 THE ENGINEER

Sub-Clause 3.6 Replacement of the Engineer

Delete the reference to "42 days" in the first paragraph of this sub-clause and replace with "21 days"

CLAUSE 4 THE CONTRACTOR

Sub-Clause 4.2 Performance Security

Delete the first sentence of the second paragraph and replace with:

"The Contractor shall deliver the Performance Security to the Employer within 14 days from the Contract Date."

Add the following at the end of the second paragraph:

"The form of Performance Security shall contain the precise wording of the document included in Part C1.7 of the Contract Data: Form of Performance Guarantee, and it shall be issued by a financial institution which shall be one of the major banks in South Africa approved by the Employer at the date when the guarantee is to be issued."

Replace the '42 days' under Sub- Clause 4.2.2 (b) and (c) with 21 days.

Sub-Clause 4.17 Contractor's Equipment

Add the following at the end of this Sub-Clause:

"The Contractor shall provide all necessary storage facilities on Site."

Sub-Clause 4.20 Progress Reports

Add the following at the end of this Sub-Clause:

- i) An indication of the targets that have been met in relation to the "Contractor and Labour Participation Goals ('CLPG'), including those targets in relation to sub-contractors and suppliers, together with an indication of targets not met and the reasons therefor

Failure to reach the CLPG shall render the Contractor liable for the withholding under Clause 14.6.2 of an amount equal to 5% of the IPC in the applicable month of the failure.

Sub-Clause 4.21 Security of the Site

Add the following to the Sub-Clause:

©The Contractor shall in connection with the Works provide and maintain at his own cost all lights, guards, fencing, watching and other appropriate security measures when and where necessary or required by the Employer or by a competent statutory or other authority for the protection and security of the Works and the Contractor's Equipment, or for the safety and convenience of the public and for the protection of life and property.

Clause 4.5 SUBCONTRACTORS

Add the following at the end of this Clause:

"The Contractor shall ensure that the requirements imposed on the Contractor in terms of this sub-clause shall apply equally to each Subcontractor."

Add the following clause:

"c) The Contractor shall supply the Employer with proof of all orders placed with subcontractors upon request by the Engineer. Information is to be provided on each sub-order, sufficient to identify the material or equipment to which the sub-order relates."

CLAUSE 6 STAFF AND LABOUR

Sub-Clause 6.5 Working Hours

Add the following after the last paragraph:

The days of rest are, Saturdays, Sundays and all gazetted South African public holidays.

Sub-Clause 6.13 Contract Participation Goal: EME / QSE Obligations

Add the following new Clause 6.13:

"The Contractor shall comply with the undertaking at Tender Schedule B17 CONTRACT PARTICIPATION GOAL: EME / QSE Target Form, and it is agreed that 5% of the Certified value per month will be retained until proof of compliance for the said month is provided."

Sub-Clause 6.14 Local Labour Requirements

Add the following new Clause 6.14:

"The Contractor shall comply with the Local Labour provision to the extent of employing 100% of its Unskilled Labour as defined in the Scope D1, and it is agreed that 5% of the Certified value per month will be retained until proof of compliance for the said month is provided

Sub-Clause 6.7 Health and Safety of Personnel

Add the following after the second paragraph:

The Employer and the Contractor shall enter into an agreement to complete the work required for the construction of the Works in terms of the provisions of Section 37(2) of the South African Occupational Health and Safety Act (Act No. 85 of 1993) and the Construction Regulations (2014) as amended and the Construction Regulations.

The Contractor shall provide proof to the Employer, within 14 days from the Commencement Date, that he has paid all contributions required in terms of the Compensation for Occupational Injuries and Diseases Act (No 130 of 1993) and the Construction Regulations (2014).

CLAUSE 8 COMMENCEMENT, DELAYS AND SUSPENSION

Sub-Clause 8.3 Programme

Add the following:

('l') "The Contractor' Planned completion.

('m') Provision for Time Risk Allowances

('n') Each programme activity showing full resource loading (Contractor People and Contractor Equipment)

Failure by the Contractor to submit an updated programme complying in full with the provisions of Sub-Clause 8.3 may result in 5% of the applicable month's Interim Payment Certificate being deducted and re-certified in a subsequent Interim Payment Certificate after full compliance with the provisions of Sub-Clause 8.3.

CLAUSE 10.2 EMPLOYER TAKING OVER

Sub-Clause 10.2 Taking Over Parts

Delete this Sub-Clause and Replace with:

"The Employer will not take over any parts of the work.

CLAUSE 11. DEFECTS AFTER TAKING OVER

Sub-Clause 11.1 Taking Over Parts of the Works

Add the following before the first paragraph: "A Defects Notification Period shall commence on the date stated in the Taking-Over Certificate for the Works or the date that Taking-Over is deemed to have occurred under Sub-Clause 10.1 in the Particular Conditions (as the case may be).

Sub-Clause 11.3 Extension of Defects Notification Period

Delete the first paragraph and replace with:

"The Employer shall be entitled subject to Sub-Clause 20.2 [Claims for Payment and/or EOT] to an extension of the relevant Defects Notification Period for the Works or a Section if and to the extent that the Works or Section (as the case may be, and after taking-over) cannot be used for the purposes for which they are intended by reason of a defect or damage. However, a Defects Notification Period shall not be extended by more than five years.

CLAUSE 13 VARIATIONS AND ADJUSTMENTS

Sub-Clause 13.4 Variations

Add the following to the last paragraph: "It shall also include a fully detailed tender Adjudication Report, which shall include and be based on three (3) quotations. Quotations shall include full technical descriptions as well as a breakdown of prices."

CLAUSE 15 TERMINATION BY EMPLOYER

Sub-Clause 15.2 Termination for Contractor' Default

15.2.1 Insert the following clause (i);

'The Contractor having reached the limit of Delay Damages per clause 8.8 for the whole of the Works or any Section

CLAUSE 19 INSURANCE

Sub-Clause 19.2 Insurance to be provided by the Contractor

19.2 Insert the following clause (i);

"In addition to and in terms of the same conditions as the rest of this clause, the Contractor shall further provide special risks / supplementary insurance issued by the South African Special Risks Insurance Association (SASRIA) in respect of civil commotion, riot and strike in the same value as the works insurance."

Add the following at the end of the first paragraph 19.2.5:

"This insurance shall be in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act, 130 of 1993."

CLAUSE 21.6 ARBITRATION

Delete sub-clause 21.6(a) and replace with the following sentence:

"the Dispute shall be finally settled under the Rules of the Association of Arbitrations (Southern Africa) NPC, current at the time of the Dispute;"

C1.2.2 Part 2: Data Provided by the Contractor

Clause 1.2.1: Delivery of Notices

The name of the Contractor is

The address of the Contractor is

Physical Address	Postal Address
Telephone:	
Email:	

SIGNED ON BEHALF OF/BY THE BIDDER:

	NAME		SIGNATURE
	CAPACITY		DATE

D3: Pricing Data

Number	Heading	Page No.
D3.1	Pricing Instructions	83
D3.2	Priced Schedule Summary	84

D3.1 Pricing Instructions

1. This Tender is based on a remeasurable Bill of Quantities (BoQ). Only fixed and firm rates will be accepted. Rates subject to escalation, exchange rate variation, or other forms of adjustment shall not be considered, except where expressly provided for in the Conditions of Contract.
2. The tendered rates shall be fixed and firm for the duration of the Contract. The total Contract Price is not fixed, and shall be adjusted based on remeasurement of actual quantities executed, including adjustments to provisional sums and provisional quantities, in accordance with the Contract
3. Rates and prices quoted shall be fully inclusive of all costs, including but not limited to:
 - Supply, delivery, installation, testing and commissioning to the specified SARAO Losberg site:
 - All disbursements, travel and related expenses
 - Compliance costs
 - Value Added Tax (VAT) and any other applicable taxes
 - Consumer Price Adjustment (CPA), which shall be deemed to be included in the tendered rates
4. A full cost breakdown shall be provided in the format prescribed, including the Detailed Bill of Quantities (Annexure 17), contingencies, travel and disbursements, supported by schedules where applicable 4.
5. The completed Bill of Quantities (Annexure 17) shall form part of this tender submission and will be completed in black ink or black type only.
6. The Conditions of Contract, the Contract Data, Pricing Schedule and the Scope of Work shall be read in conjunction with the Pricing Schedule.
7. Bid price in South African currency, foreign exchange risk is for the account of the bidder.
8. It will be assumed that prices included in the Pricing Schedules are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date of bids (refer to www.sabs.co.za or www.iso.org for information on standards).
9. All costs associated with compliance to the Occupational Health and Safety Act, the National Environmental Management Act and the Water Act must be included in the bidding price where applicable.

D3.2 Bill of Quantities (Remeasurable and Provisional Items)

SUMMARY FOR BID OPENING PURPOSES

Section 1: Supply, Installation, Testing and Commissioning (Refer to the detailed attached BOQ Annexure 17)

This Summary is provided for bid opening and evaluation purposes only.

The Bill of Quantities includes remeasurable items, provisional quantities, and provisional sums. No lump-sum interpretation shall apply, and the Contract Price shall be determined by remeasurement of completed works at the tendered rates in accordance with the Contract.

No.	Description	Qty	Sub-Total (Excl. VAT)
Part A	Electrical	1	
Part B	Civil works	1	
Part C	P and G	1	
Total Excluding VAT			
15% VAT			
Total Incl VAT			

NAME OF BIDDER:

OFFERED TOTAL: R.....

(Amount brought forward from
The Form of Offer)*

* Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall apply.

SIGNED BY/ON BEHALF OF BIDDER

NAME	SIGNATURE	DATE	
COMPANY STAMP			

ITEM NO	PAYMENT	DESCRIPTION	UNIT	QTY	RATE	AMOUNT
A	SANS 1200 A	SECTION A : PRELIMINARY AND GENERAL				
A	SANS 1200 A	PRELIMINARY AND GENERAL				
A.1	8.3	FIXED RELATED ITEMS				
A.1.1	8.3.1	Contractual Requirements	Sum	1.00		
	8.3.2	Establish facilities on the site:				
	8.3.2.1 PS AB 8.2.2	a) Facilities for the Engineer (SABS 1200 AB)				
		ii) Office	Sum	1.00		
		iii) Shaded Parking	Sum	1.00		
	8.3.2.2	b) Facilities for Contractor				
A.1.3		Offices and storage sheds	Sum	1.00		
A.1.4		Workshops	Sum	1.00		
A.1.5		Living accommodation	Sum	1.00		
A.1.6		Ablution and latrine facilities	Sum	1.00		
A.1.7		Tools and equipment	Sum	1.00		
A.1.8		Water supplies, electric power and communications	Sum	1.00		
A.1.9		Dealing with water	Sum	1.00		
A.1.10		Access	Sum	1.00		
A.1.11		Plant	Sum	1.00		

A.1.12	8.3.3	Other fixed-charge obligations (specify)	Sum	1.00		
A.1.13	8.3.4	Remove Engineer's and Contractor's site establishment on completion	Sum	1.00		
A.2	8.4	TIME-RELATED ITEMS				
A.2.1	8.4.1	Contractual Requirements	Sum	1.00		
	8.4.2	Operate and maintain facilities on the Site:				
	8.4.2.1 & PS AB 8.2.2	a) Facilities for Engineer for duration of construction (SABS 1200 AB)				
A.2.2		i) Office	Sum	1.00		
		ii) Shaded parking	Sum	1.00		
	8.4.2.2	b) Facilities for Contractor for duration of construction, except where otherwise stated				
A.2.4		Offices and storage sheds	Sum	1.00		
A.2.5		Living accommodation	Sum	1.00		
A.2.6		Ablution and latrine facilities	Sum	1.00		
A.2.7		Tools and equipment	Sum	1.00		
A.2.8		Water supplies, electric power and communications	Sum	1.00		
A.2.9		Dealing with water	Sum	1.00		
A.2.10		Access	Sum	1.00		
A.2.11		Plant	Sum	1.00		
A.2.12		Supervision	Sum	1.00		
A.2.13		Company and head office overhead costs	sets	1.00		

A.2.14		Other time-related obligations (Specify)	Sum	1.00		
A.3	8.8	TEMPORARY WORKS				
A.3.1	PS A 8.8.2	Accommodation of traffic	Sum	1.00		
A.4	PS A 8.9	OCCUPATIONAL HEALTH AND SAFETY MEASURES (PROVISIONAL)				
A.4.1	PS A 8.9.1	Cost of health and safety measures required in terms of the Construction Regulations (2014) of the Occupational Health and Safety Act	Sum	1.00		
A.4.2	PS A 8.9.2	Compilation and maintenance of a Health and Safety Plan, including risk assessments, safe work procedures and method statements	Sum	1.00		
A.4.3	PS A 8.9.3	Compilation of the Health and Safety File	Sum	1.00		
A.5	PS A 8.11	ENVIRONMENTAL MANAGEMENT				
A.5.1		Provisions in terms of the Environmental Management Requirements as specified in the Particular Specifications (Client Specific)	Sum	1.00		
A.6		RFI REQUIREMENTS				
A.6.1		Provision for compliance with SARAO Radio Frequency Interference (RFI) policy requirements. (RFI Manager may be consulted for more information)	Sum	1.00		
Total Carried Forward To Summary						R -
		SECTION B: Civil Works				
	1.0	1. Plinth				
1.1		Supply of Reactor Plinth as per D-DT-0863	No	1.00		
1.2		Installation of Reactor Plinth as per-D-DT-0863	No	1.00		
1.3		Supply of RMU Plinth as per D-DT-0863	No	1.00		

1.4		Installation of RMU Plinth as per-D-DT-0863	No	1.00		
1.5		Supply of cable support Plinth as per D-DT-0863	No	1.00		
1.6		Installation of cable support plinth as per-D-DT-0863	No	1.00		
	2.0	Excavation between LV Kiosk and RMU				
2.1		Excavation and trenching by hands (width 0.3 m, Depth is 1m and length is 70m).	m ³	21.00		
2.2		Supply of Sieve sand for bedding with no stones greater 6mm as 402-000003-DDR-E-501 Section 8.6	m ³	6.3		
2.3		Bedding and back filling of Sieve	m ³	6.3		
3.4		Backfill with excavated material or soil with no stones greater than 19mm as per 402-000003-DDR-E-501 Section 8.6	m ³	8.4		
2.5		<p>Supply of danger tape</p> <p>Material: High-grade virgin Low-Density Polyethylene (LDPE), durable, waterproof, resistant to soil chemicals (alkaline/acidic), UV safe, non-toxic</p> <p>Text/Legend: Bold, clear, repeating warning (e.g., "CAUTION ELECTRIC CABLE," "Buried Services") in a contrasting color (usually black)</p> <p>Color: Red</p> <p>Dimensions: 300mm</p> <p>Thickness: 50-100 microns or 0.05mm-0.1mm</p>	m	70.00		
2.6		Installation of danger tape	m	70.00		
	3.0	Excavation between Reactor and RMU				
3.1		Excavation and trenching by hands (width 0.3 m, Depth is 1m and length is 10m).	m ³	21.00		
3.2		Supply of Sieve sand for bedding with no stones greater 6mm as 402-000003-DDR-E-501 Section 8.6	m ³	1.00		
3.3		Bedding and back filling of Sieve	m ³	1.00		
3.4		Backfill with excavated material or soil with no stones greater than 19mm as per 402-000003-DDR-E-501 Section 8.6	m ³	1.2		
3.5		<p>Supply of danger tape</p> <p>Material: High-grade virgin Low-Density Polyethylene (LDPE), durable, waterproof, resistant to soil chemicals (alkaline/acidic), UV safe, non-toxic</p> <p>Text/Legend: Bold, clear, repeating warning (e.g., "CAUTION ELECTRIC CABLE," "Buried Services") in a contrasting colour (usually black)</p> <p>Colour: Red</p> <p>Dimensions: 300mm</p>	m	10.00		

		Thickness: 50-100 microns or 0.05mm-0.1mm				
3.6		Installation of danger tape	m	10.00		
	4.0	Earthmat System Excavation				
4.1		Excavation and trenching by hands (width 0.3 m, Depth is 1m and length is 4m).	m	1.2		
4.2		Supply of Sieve sand for bedding with no stones greater 6mm as 402-000003-DDR-E-501 Section 8.6	m ³	0.36		
4.3		Bedding and back filling of Sieve	m ³	0.36		
4.4		Backfill with excavated material or soil with no stones greater than 19mm as per 402-000003-DDR-E-501 Section 8.6	m ³	0.48		
4.5		Excavation and trenching by hands (width 0.3 m, Depth is 1m and length is 4.4m).	m ³	1.32		
4.6		Supply of Sieve sand for bedding with no stones greater 6mm as 402-000003-DDR-E-501 Section 8.6	m ³	0.5		
4.7		Bedding and back filling of Sieve	m ³	0.5		
4.8		Backfill with excavated material or soil with no stones greater than 19mm as per 402-000003-DDR-E-501 Section 8.6	m ³	0.48		
	5.0	Fence				
5.1		Supply of fence as per Annexure 14	Sum	1.00		
5.2		Installation of fence around the reactor and connection of earth tails	Sum	1.00		
	6.0	Crushed stones				
6.1		Supply of crushed stones as per Annexure 14	m ³	6.00		
6.2		Laying of crushed stones as per Annexure 14	m ³	6.00		
	7.0	Signage				
7.1		Supply of crushed signage as per Annexure 13	m ³	1.00		
7.2		Installation of signage as per Annexure 13	m ³	1.00		
Total Carried Forward						R -

To Summary						
		SECTION C: Electrical Work				
	1.0	400kVAR Reactor				
1.1		Supply 400kAVR as per 402-000003-DDR-E-501 Section 8.7.5 ad SKA-TEL-INSA-0002112 Section 10	No	1.00		
1.2		Installation as per CARNARVON-REC-003	No	1.00		
1.3		Supply reactor earthing material as per D-DT-0855 and 402-000003-DRG-EE567	Sum	1.00		
1.4		Installation of reactor earthing material as per D-DT-0855 and 402-000003-DRG-EE567	Sum	1.00		
1.5		Supply of reactor surge arrestors as per 402-000003-DDR-E-501 Section 8.7.3 ad SKA-TEL-INSA-0002112 Section 12	No	3.00		
1.6		Surge arrestor mounting on the tank of the reactor and connection to RMU earthing system	No	3.00		
	2.0	Way 22kV Free Standing Ring Main Unit				
2.1		Supply as per 402-000003-DDR-E-501 Section 8.7.2 and SKA-TEL-INSA-0002112 Section 7	No	1.00		
2.2		Installation as per CARNARVON-REC-003	No	1.00		
2.3		Supply RMU earthing material as per D-DT-0855 and 402-000003-DRG-EE567	Sum	1.00		
2.4		Installation of RMU earthing material as per D-DT-0855 and 402-000003-DRG-EE567	Sum	1.00		
	3.0	MV Cable, Termination Joint and Accessories				
3.1		Point of Connection KAPB Carnarvon Spiral (Next LV Kiosk) to RMU				
3.2		Supply of 50mm2 XPLC 402-000003-DDR-E-501 Section 8.7.6 from point of connection to RMU	m	40.00		
3.3		Installation of MV cable with clamps and lugs from point of connection to RMU	m	40.00		
3.4		Supply of 95mm2 BECW from point of connection to RMU	m	40.00		
3.5		Installation of 95mm2 BECW with glands and lugs in parallel with MV cable from point of connection to RMU	m	40.00		
3.6		Supply of MV termination as per SKA-TEL-INSA-0002112 Section 5.2.1	Each	1.00		
3.7		Installation of MV cable termination as per SKA-TEL-INSA-0002112 Section 5.2.1 and 5.2.2	Sum	1.00		
	4.0	RMU to Point of Connection Carnarvon Spiral				
4.1		Pull existing cable from next to LV Kiosk and re-route it to new RMU	m	40.00		

4.2		Termination of existing cable with glands and lugs to RMU	m	40.00		
4.3		Supply of 95mm ² BECW from RMU to connection point to Carnarvon spiral	m	40.00		
4.4		Installation of 95mm ² BECW with glands and lugs in parallel with MV cable from RMU to connection point to Carnarvon spiral	m	40.00		
4.5		Supply of Sieve sand for bedding with no stones greater 6mm as 402-000003-DDR-E-501 Section 8.6	m ³	4.80		
4.6		Supply of danger tape Material: High-grade virgin Low-Density Polyethylene (LDPE), durable, waterproof, resistant to soil chemicals (alkaline/acidic), UV safe, non-toxic Text/Legend: Bold, clear, repeating warning (e.g., "CAUTION ELECTRIC CABLE," "Buried Services") in a contrasting colour (usually black) Colour: Red Dimensions: 300mm Thickness: 50-100 microns or 0.05mm-0.1mm	m	40.00		
4.7		Installation of danger tape	m	40.00		
4.8		Supply of MV termination as per SKA-TEL-INSA-0002112 Section 5.2.1	No	1.00		
4.7		Installation of MV cable termination as per SKA-TEL-INSA-0002112 Section 5.2.1 and 5.2.2	Sum	1.00		
	5.0	Reactor to RMU				
5.1		Supply of 50mm ² XPLC 402-000003-DDR-E-501 Section 8.7.6 from RMU to point of connection	m	10.00		
5.2		Installation of MV cable with glands and lugs from RMU to connection point to Carnarvon spiral	m	10.00		
5.3		Supply of 95mm ² BECW from RMU to connection point to Carnarvon spiral	m	10.00		
5.4		Installation of 95mm ² BECW with clamps and lugs in parallel with MV cable from RMU to connection point to Carnarvon spiral	m	10.00		
5.5		Excavation and trenching by hands (width 0.3 m, Depth is 1m and length is 10m).	m ³	3.00		
5.6		Supply of Sieve sand for bedding with no stones greater 6mm as 402-000003-DDR-E-501 Section 8.6	m ³	3.00		
5.7		Bedding and back filling of Sieve	m ³	3.00		
5.8		Backfill with excavated material or soil with no stones greater than 19mm as per 402-000003-DDR-E-501 Section 8.6	m ³	2.40		
5.9		Supply of danger tape Material: High-grade virgin Low-Density Polyethylene (LDPE), durable, waterproof, resistant to soil chemicals (alkaline/acidic), UV safe, non-toxic Text/Legend: Bold, clear, repeating warning (e.g., "CAUTION ELECTRIC CABLE," "Buried Services") in a contrasting colour (usually black) Colour: Red Dimensions: 300mm Thickness: 50-100 microns or 0.05mm-0.1mm	m	40.00		

5.10		Installation of danger tape	m	40.00		
	6.0	Tripping Circuits				
6.1		Installation of 2.5mm2 with glands and lugs between LV Kiosk and RMU	m	40.00		
6.2		Installation of 2.5mm2 with glands and lugs between RMU and Reactor	m	10.00		
6.3		Supply of MCB, 1P, 5KA, 2A	No	1.00		
6.4		Supply of MCB, 2P, 5KA, 0.5A	No	1.00		
6.5		Supply of MCB, 2P, 5KA, 10 A	No	1.00		
6.6		Supply Power Supply 200W RATED 230V TO 24 VDC	No	1.00		
6.7		Install MCB, 1P, 5KA, 2A	No	1.00		
6.8		Install MCB, 2P, 5KA, 0.5A	No	1.00		
6.9		Install MCB, 2P, 5KA, 10 A	No	1.00		
6.10		Install 200W RATED 230V TO 24 VDC	Each	1.00		
6.11		Wiring of trip circuit as per 402-00003-DRG-EE-573-0	Sum	1.00		
Total Carried Forward To Summary						R -
		SUMMARY				
		DESCRIPTION				AMOUNT
		SECTION A: PRELIMINARY AND GENERAL			R -	
		SECTION B: CIVIL WORKS			R -	
		SECTION C: ELECTRICAL WORKS			R -	
		SUB -TOTAL			R -	
		VAT @15%			R -	
		TOTAL OFFER			R -	

Declaration

(In respect of completeness of Tender)

I/we, the undersigned, do hereby declare that these are the properly priced Schedule forming Part D2 of this Contract Document in consecutive order upon which my/our tender for the **BID NO: NRF/SARAO SHAO/23/2025-26 – SUPPLY, DELIVERY, INSTALLATION, TESTING AND COMMISSIONING OF 570kVAr REACTOR AND RING MAIN UNIT (RMU) ON THE EXISTING 22kV CARNARVON SPIRAL, LOSBERG, CARNARVON**

SIGNED BY/ON BEHALF OF BIDDER

	NAME		SIGNATURE	DATE

D4: Annexures

Annexure No.	Annexure Title
Annexure 1	SKA-TEL-INSA-0002112 Specification for 22kV 3.3kV and 400V Cable Network Extension
Annexure 2	402-000003-EE-501-DDR Array Power for Dishes Detail Design Report
Annexure 3	Carnarvon-REC-003 Carnarvon Spiral Reactor Plan Layout
Annexure 4	Carnarvon-REC-002 Carnarvon Spiral Reactor Overall MV Single Line Diagram
Annexure 5	Carnarvon-REC-001 Carnarvon Spiral KAPB Switchgear Single Line Diagram
Annexure 6	402-00003-EE-573-0-DRG Thermometer Trip Wiring Schematic
Annexure 7	340-020000-EF-508- R Typical Trench Layout
Annexure 8	402-000003-DRG-EE-557-R Earthing Block Diagram
Annexure 9	402-000003-DRG-EE-567-R RMU and Minisub Earthing Arrangement
Annexure 10	SKA-TEL-SKO-000202-04 SKA RFI EMC
Annexure 11	Equipment Technical Schedule
Annexure 12	MV Cable Support between RMU and Reactor
Annexure 13	Signs on the reactor fence and RMU
Annexure 14	Carnarvon Spiral Reactor Fence
Annexure 15	Site Acceptance Test (SATs)
Annexure 16	Factory Acceptance Test (FAT)
Annexure 17	Bill of Quantities
Annexure 18	Environmental Specification Reactor RMU Losberg
Annexure 19	Health & Safety 570kVAR Reactor Project Losberg
Annexure 20	Site Information & Instruction Part A
Annexure 21	Site Information & Instruction Part B