INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR THE FOLLOWING SPECIFIED SUPPLY REQUIREMENTS

BID NUMBER: NRF/SARAO SUSE 001 2018
CLOSING DATE: 22 February 2019
CLOSING TIME: 11:00 am

BID DESCRIPTION

Provision for Air-conditioning Upgrades for NRF SARAO’s Karoo Array Processing Building (KAPB) of the MeerKAT telescope at the Losberg Site.

This tender is only open to CIDB Registered South African based companies that holds a 6ME Grading. A Joint Venture may be considered between CIDB Registered companies to make up the required grading in terms of Table E of the relevant CIDB grading document. Should there be more than two Joint Venture partners, the CIDB Registered ME Graded company with the higher grading must be the lead company in the JV and must maintain a higher stake than the other Joint Venture partners combined.

Bidders are required to fill in and sign the form of offer (C1.1) in this Invitation

Preferential Procurement System Applicable (points for price: points for procurement preference): 80:20

Briefing Session / Site Visit

Date and Time: 13 February 2019 @ 12h30
Location: SARAO Losberg Complex, Northern Cape, SA – (Follow R63 from Carnarvon in direction of Williston for 13km and turn right on the tar road (P02996) towards Brandvlei. Travel along this road for 65km and turn left on the tar road (P02337) to the security boom. Follow this road for a further 13km to the Site Complex, GPS Coordinates 30°45’22.46"S21°25’59.95"E )

BID DOCUMENTS ARE TO BE DEPOSITED IN THE BID BOX SITUATED AT:

PHYSICAL ADDRESS:
2 Fir street
Old Times Media Building
Black River Park, North Entrance
Observatory

ADDRESSED AS FOLLOWS:
the Bid Number
Bidder’s Name
Postal Address
<table>
<thead>
<tr>
<th>7925</th>
<th>Contact Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tender box opening hours</td>
<td>Telephone Number</td>
</tr>
<tr>
<td>08h00-16h00 on weekdays, excluding any public holidays and tender closing.</td>
<td>Email address</td>
</tr>
<tr>
<td>GPS coordinates</td>
<td>All documents are bound in one folio for each envelope</td>
</tr>
<tr>
<td>33°55'58.8&quot;S, 18°28'15.3&quot;E</td>
<td></td>
</tr>
<tr>
<td>Dimensions of tender box opening</td>
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<tr>
<td>40X300mm</td>
<td></td>
</tr>
</tbody>
</table>

**ANY ENQUIRIES REGARDING THE BIDDING PROCEDURE DIRECTED TO:**

<table>
<thead>
<tr>
<th>Supply Chain Management:</th>
<th>Technical Queries:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rayyan Arnold</td>
<td>Dave Horn</td>
</tr>
<tr>
<td>SARAO SCM Specialist</td>
<td>SARAO Systems Engineer</td>
</tr>
<tr>
<td>+27(0)21 506 7300</td>
<td>+27(0)21 506 7300</td>
</tr>
<tr>
<td><a href="mailto:ranrold@ska.ac.za">ranrold@ska.ac.za</a></td>
<td><a href="mailto:dhorn@ska.ac.za">dhorn@ska.ac.za</a></td>
</tr>
</tbody>
</table>

Bidders are required to initial every page of this bid document when submitting to SARAO.

Bidders should timeously deliver bids to the correct address. If the bid is late at the SARAO address, it is not considered.

The bid box is open from 08h00 to 16h00 South African time, 5 days a week, Monday to Friday. (Except for public holidays and tender closing)

ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS IN THIS brief INVITATION (NOT TO BE RE-TYPED) WITH ADDITIONAL INFORMATION ON ATTACHED SUPPORTING SCHEDULES

THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT AND THE PREFERENTIAL PROCUREMENT REGULATIONS - 2011, THE FIDIC CONDITIONS OF CONTRACT FOR PLANT AND DESIGN BUILD, FIRST EDITION 1999 (YELLOW BOOK) PUBLISHED BY THE INTERNATIONAL FEDERATION OF CONSULTING ENGINEERS, WHICH IS APPLICABLE TO THIS CONTRACT AND WHICH THE BIDDER SHALL PURCHASE, THIS INVITATION AND SPECIAL/PARTICULAR CONDITIONS OF CONTRACT AS STIPULATED IN THIS INVITATION.

THE FOLLOWING PARTICULARS MUST BE FURNISHED AS LEAD PAGE OF THE BID RESPONSE

<table>
<thead>
<tr>
<th>BID NUMBER:</th>
<th>NRF/SARAO SUSE 001 2018</th>
<th>CLOSING DATE: 22 February 2019</th>
<th>CLOSING TIME</th>
<th>11:00am</th>
</tr>
</thead>
<tbody>
<tr>
<td>NAME OF BIDDER</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

REPRESENTED BY

POSTAL ADDRESS

PHYSICAL ADDRESS

TELEPHONE NUMBER CODE NUMBER
TAX COMPLIANCE REQUIREMENTS

a) BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.

b) BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VIEW THE TAXPAYER’S PROFILE AND TAX STATUS.

c) APPLICATION FOR THE TAX COMPLIANCE STATUS (TCS) CERTIFICATE OR PIN MAY ALSO BE MADE VIA E-FILING. IN ORDER TO USE THIS PROVISION, TAXPAYERS WILL NEED TO REGISTER WITH SARS AS E-FILERS THROUGH THE WEBSITE WWW.SARS.GOV.ZA.

d) THE TAX COMPLIANCE REQUIREMENTS ARE NOT APPLICABLE TO FOREIGN BIDDERS / INDIVIDUALS WITH NO SOUTH AFRICAN TAX OBLIGATION, NO HISTORY OF DOING BUSINESS IN SOUTH AFRICA. FOREIGN SUPPLIERS MUST COMPLETE A PRE-AWARD QUESTIONNAIRE FROM SARS ON THEIR TAX OBLIGATION CATEGORISATION.

e) BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.

f) IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.

g) WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.

QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS

a) IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)? ☐ YES ☐ NO

b) DOES THE ENTITY HAVE A BRANCH IN THE RSA? ☐ YES ☐ NO

c) DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA? ☐ YES ☐ NO

d) DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA? ☐ YES ☐ NO

e) IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION? ☐ YES ☐ NO

IF THE ANSWER IS “NO” TO ALL OF THE ABOVE, THEN, IT IS NOT A REQUIREMENT TO OBTAIN A TAX CLEARANCE CERTIFICATE / TAX CLEARANCE SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 ABOVE.
DESCRIBE PRINCIPAL BUSINESS ACTIVITIES:

TYPE OF COMPANY/FIRM: [Tick applicable box]
- Partnership / Joint Venture/Consortium
- Close Corporation
- (Pty) Limited
- One person business/sole proprietor
- Company
- Other

COMPANY CLASSIFICATION: [Tick applicable box]
- Manufacturer
- Professional Service Provider
- Supplier
- Other service providers e.g. transporter, etc.

PREFERENCE CLAIM FORM SUBMITTED FOR PREFERENCE POINTS? FORM C3 (SBD 6.1) YES or NO

[ A B-BBEE STATUS LEVEL VERIFICATION CERTIFICATE/SWORN AFFIDAVIT (FOR EMEs & QSEs) MUST BE SUBMITTED IN ORDER TO QUALIFY FOR PREFERENCE POINTS FOR B-BBEE ]

IF YES, WHO WAS THE B-BBEE CERTIFICATE ISSUED BY
- AN ACCOUNTING OFFICER AS CONTEMPLATED IN THE CLOSE CORPORATION ACT (CCA)
- A VERIFICATION AGENCY ACCREDITED BY THE SOUTH AFRICAN ACCREDITATION SYSTEM (SANAS); OR
- A REGISTERED AUDITOR

ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS/SERVICES/WORKS OFFERED? YES or NO

IF YES ENCLOSE PROOF

SIGNATURE OF BIDDER

NAME OF BIDDER

DATE

CAPACITY UNDER WHICH THIS BID IS SIGNED:
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<td>11. Annexure B: Applicable Documents and Drawings</td>
<td></td>
</tr>
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<td>12. Annexure C: Reference Documents and Drawings</td>
<td></td>
</tr>
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<td>13. Annexure D: SKA SA Minimum Site Safety Requirements, Rev 1 (Document No. SSA0000-0000V1-04MP)</td>
<td></td>
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<tr>
<td>14. Annexure E: SKA SA Transport Policy, Rev 2 (Document No. SSA0000-0000-001)</td>
<td></td>
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<tr>
<td>15. Annexure F: SKA SA Policy for the control of RFI on the Karoo Site Rev 1, Document number M2900-0000-019</td>
<td></td>
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<tr>
<td>16. Annexure G: CIDB Standard Conditions of Tender</td>
<td></td>
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</tbody>
</table>
## BID RESPONSE SUBMISSION FORMAT / CHECKLIST

<table>
<thead>
<tr>
<th>No of originals</th>
<th>1</th>
<th>Number of bid pack copies (hard and soft)</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pack split into “Technical” (T1) and “Financial” (F2) Envelopes</td>
<td>Yes</td>
<td>Two envelope system used</td>
<td>Yes</td>
</tr>
<tr>
<td>Proposal – Bidder’s BBBEE Transformation Program</td>
<td>Yes/ No</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SUPPLIER ACCREDITATION

Provide documentation that the Bidder is registered on the National Treasury Central Supplier Database - [https://secure.csd.gov.za/](https://secure.csd.gov.za/)  
Provide valid CIDB registration document  
Certified copies of certificate of incorporation (as per entity type)

### SUBMISSION CHECKLIST

**Stage 1: Compliance Verification** (These are all “GO” Documents that must be submitted)

<table>
<thead>
<tr>
<th>COMPULSORY RETURNABLE FORMS AND DOCUMENTS</th>
<th>RESPONSIBILITY OF:</th>
<th>PURPOSES REQUIRED FOR:</th>
<th>TO BE PLACED IN ENVELOPE</th>
<th>For Office Use Only</th>
<th>FULL COMPLETED AND INCLUDED IN ENVELOPE?</th>
<th>PAGES IN BID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Covering Letter</td>
<td>Bidder including JV Partners and subcontractors</td>
<td>Compliance Verification</td>
<td>T1</td>
<td>YES</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Confirmation of registration on National Treasury central supplier database</td>
<td>Bidder including JV Partners and subcontractors</td>
<td>SCM Compliance</td>
<td>T1</td>
<td>YES</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Original certified BBBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA</td>
<td>Bidder. For a Joint Venture, a consolidated original B-BBEE Certificate is required and for any sub-contracting, subcontractors must submit a B-BBEE certificate</td>
<td>SCM Compliance</td>
<td>T1</td>
<td>YES</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>COMPULSORY RETURNABLE FORMS AND DOCUMENTS (CD and hard copies)</td>
<td>RESPONSIBILITY OF:</td>
<td>PURPOSES REQUIRED FOR:</td>
<td>TO BE PLACED IN ENVELOPE</td>
<td>For Office Use Only FULL COMPLETED AND INCLUDED IN ENVELOPE?</td>
<td>PAGES IN BID</td>
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</tr>
<tr>
<td><strong>Schedule 1</strong>: Schedule of Key Design and Construction Personnel; All proposed Key Design and Construction personnel's information; Qualification, Experience and Professional registration) to be included. Additional Qualifying requirement - Only personnel included on this schedule will be assessed in terms of qualifying criteria.</td>
<td>Bidder and JV Partners.</td>
<td>Required for technical evaluation</td>
<td>T1</td>
<td>YES</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule 2</strong>: Certified copies of Professional Qualification. Append to Schedule 1: Key Design and Construction Personnel (All key Design and Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Bidder and JV Partners. (All key Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Required for technical evaluation</td>
<td>T1</td>
<td>YES</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule 3</strong>: Certified copies of Professional Registration. Append to Schedule 1: Key Design and Construction Personnel (All key Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Bidder and JV Partners. (All key Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Required for technical evaluation</td>
<td>T1</td>
<td>YES</td>
<td>49</td>
<td></td>
</tr>
<tr>
<td><strong>Schedule 4</strong>: The Curriculum Vitae. The CVs of each individual must be appended to the Schedule of Key Design and Construction Personnel (Template for CV provided. All CVs to be provided in this template)</td>
<td>Bidder and JV Partners. (All key Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Required for technical evaluation</td>
<td>T1</td>
<td>YES</td>
<td>50</td>
<td></td>
</tr>
<tr>
<td>Schedule 5: Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
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<tr>
<td>Bidder, sub-contractors &amp; JV Partners</td>
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<td></td>
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<tr>
<td>Required for technical evaluation</td>
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<td>T</td>
<td>YES</td>
<td>53</td>
<td></td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Schedule 6: Bidding Entity past experience in delivering similar Power and Air-Conditioning upgrade contracts and other projects of similar scale (lists of current and completed projects to be submitted). Must include all Consultants and Sub-contractors.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder &amp; JV Partners</td>
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<tr>
<td>Required for technical evaluation</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Schedule 7: References - The Bidding Entity, its sub-contractors and JV Partners must each provide at least three (3) credible, written and contactable references from Clients for whom projects have been undertaken similar to the nature of the SKA site and building requirements and have indicated their willingness to take SARAO representatives on such site visit to such Client premises if requested</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder &amp; JV Partners</td>
</tr>
<tr>
<td>Compliance Verification</td>
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<td>T</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Schedule 8: Method Statement based on the scope of work specific to this project (include any required equipment shutdowns)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bidder &amp; JV Partners</td>
</tr>
<tr>
<td>Required for technical evaluation</td>
</tr>
<tr>
<td>T</td>
</tr>
<tr>
<td>Schedule 9: Project Management Plan (PMP) specific to this project.</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Schedule 10: Health, Safety, Environmental and Quality (SHEQ) Management Plan for the execution of this Contract and a Quality Management System or Equivalent, based on Quality Management principals, Certification and Compliance Standard (This is applicable to the SQ Bidders, the Manufacture should be available for a SARAO site inspection).</td>
</tr>
<tr>
<td>Schedule 11: All Supporting Documentation (2.2.4) and all Deliverables (2.1.4)</td>
</tr>
<tr>
<td>Form</td>
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<tr>
<td>------</td>
</tr>
<tr>
<td>A1</td>
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<td>A2</td>
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<td>A3</td>
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<td>A4</td>
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<td>B1</td>
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<td>B4</td>
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<td>Form</td>
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<tr>
<td>B5</td>
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<tr>
<td>B6</td>
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</tbody>
</table>
### Stage 3: Evaluation of Price and B-BBEE status

<table>
<thead>
<tr>
<th>COMPULSORY RETURNABLE FORMS AND DOCUMENTS (CD and hardcopies)</th>
<th>RESPONSIBILITY OF:</th>
<th>PURPOSES REQUIRED FOR:</th>
<th>TO BE PLACED IN ENVELOPE</th>
<th>FULLY COMPLETED AND INCLUDED IN ENVELOPE?</th>
<th>PAGE IN BID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form C1.1 – Form of Offer &amp; Acceptance in Bid Invitation</td>
<td>Bidder</td>
<td>SCM Compliance requirement</td>
<td>F²</td>
<td>YES/NO</td>
<td>95</td>
</tr>
<tr>
<td>Form C1.2 – Contract Data provided by Bidder</td>
<td>Bidder</td>
<td>SCM Compliance requirement</td>
<td>F²</td>
<td>YES/NO</td>
<td>100</td>
</tr>
<tr>
<td>Form C2.1 – Pricing Schedule &amp; Detailed Pricing Schedule - Annexure A</td>
<td>Bidder (The completed detailed pricing schedule annexure A shall form part of this tender submission and will be completed in black ink only)</td>
<td>SCM Compliance requirement &amp; Stage 3 Assessment</td>
<td>F²</td>
<td>YES/NO</td>
<td>109</td>
</tr>
<tr>
<td>Form C3: Preference Certificate and Preference Points Claim in terms of the Preferential Procurement Regulations, 2001 (SBD 6.1)</td>
<td>Bidder, joint venture partners, subcontractors</td>
<td>SCM Compliance requirement &amp; Stage 3 Assessment</td>
<td>F²</td>
<td>YES/NO</td>
<td>116</td>
</tr>
</tbody>
</table>

T¹ – Technical Envelope (1 original, 3 copies in hard copy and soft copy format)  
F² – Financial Envelope (1 original, 3 copies in hard copy and soft copy format)  

Failure to provide all the documentation listed above at time of closure of the bid will result in your bid being disqualified.
BIDDERS TO NOTE THE FOLLOWING:

1) The Bidder must be a single legal entity which is a Mechanical Engineering Works with a level 6ME grading with all other necessary expertise secured via sub-contract or under a Joint Venture Agreement. A Joint Venture may be considered between CIDB Registered companies to make up the required grading in terms of Table E of the relevant CIDB grading document. Should there be more than two Joint Venture partners, the CIDB Registered ME Graded company with the higher grading must be the lead company in the JV and must maintain a higher stake than the other Joint Venture partners combined. The NRF will enter into a single contract for the delivery of the work set out in the Scope of Work for this bid;

2) The lead (contracting party) will be a Mechanical Engineering Works company with a level 6ME grading (or JV to equivalent status as described in item 1 above) who will secure the necessary other professional engineering and specialist resources required to execute the contract. The NRF will enter into a single contract for the delivery of the work set out in the Scope of Work for this bid; The bid is only open to South African companies

3) A person will not be awarded points for BBBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any enterprise that does not qualify for at least the points that such Bidder qualifies for, unless the intended sub-contractor is an EME that has the capability an ability to execute the sub-contract.
1 Background to the National Research Foundation and the Square Kilometre Array (SKA)

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) is a national facility of the National Research Foundation (NRF) that houses the SKA SA project which operates the MeerKAT telescope, as well as the Hartbeeshoek 26-m radio telescope and fulfilling South Africa’s commitment within the international SKA project. 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 will 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 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.

1.1 Locality

The SKA site is located in the Northern Cape Province, surrounded by the towns of Carnarvon, Williston, Brandvlei and Van Wyksvlei, as indicated in Figure 1 below.

![Figure 1: Indicative Locality Plan](image)

The SKA site is approximately 650km from Cape Town, 900km from Johannesburg city centre retrospectively and 90km from Carnarvon.

Access to the site is via a provincial road, P02996. The land makes provision for the SKA core site, KAT-7 radio telescope, MeerKAT instrument and the PAPER instrument.
2 Scope of Work

This tender scopes a subset of the SKA1-MID infrastructure design to provide for the MeerKAT telescope’s power and cooling requirements.

The scope of this project is the implementation of the SKA1-MID Data Rack Area (DRA) cooling phase 1 (addition of 3 new CRAC units) as detailed in the referenced specifications.

The design principle of this MeerKAT Cooling upgrade project has been to do the smallest upgrade required to support MeerKAT’s DRA cooling requirement of 450kW, while maximising the re-use potential of all components for SKA1-MID project.

Updated forecasts (that take into account installed equipment actual power measurements where these are available) show that MeerKAT’s power consumption will not exceed 400 kW (550kVA) which is the limit of the current power provision to the DRA DBs 1A and 1B. For this reason, no power upgrades are required for MeerKAT ahead of the SKA1-MID construction.

2.1 Overview

The SKA Site Complex, which includes the KAPB is located about 80km northwest of the town of Carnarvon. The SKA landing strip is 8km north of the SKA Site Complex and the access control points will be on the existing provincial road (P02996).

SARAO is formally collaborating with a number of international research partners in order to undertake the Large Science Proposals that have being selected for MeerKAT science. These partners are MeerKAT USERS and their installed equipment has been named USER SUPPLIED EQUIPMENT (USE). There are 6 primary USE clusters being deployed in the Karoo Array Processing Building as a result of these collaborations:

- Time-domain-radio-astronomy USE (TUSE), provided by Manchester University
- Filter Banking Beam Former USE (FBFUSE), provided by Max Planck Institute for Radio Astronomy (MPIfR)
- Accelerated Pulsar Search USE (APSUSE), also provided by MPIfR
- Breakthrough Listen USE (BLUSE), provided by Berkeley University
- Hydrogen Epoch of Reionisation Array (HERA), provided by Berkeley University
- Pulsar Timing (PTUSE), provided by Swinburne University

For the above formally approved collaborations SARAO’s scope includes infrastructure power and cooling.

The addition of the above clusters comprising a total of 317 servers has caused the forecast heating load of MeerKAT to increase to 450 kW. This exceeds the installed MeerKAT capacity which (predates the USE collaborations) of 280 kW.
cooling sensible cooling capacity.

2.1.1 Interdependencies to other Systems/Processes impacting this Contract

A design tender was awarded to Aurecon for the infrastructure upgrades to the Losberg site for the international SKA1-MID project. The SKA1-MID design contract has been completed (Critical Design Review complete). At this point in the Systems Engineering process the SKA1-MID design has taken into account a requirements baseline which includes performance, environmental and Integrated Logistic Support requirements (including parts standardisation)

This tender is interdependent with the SKA1-MID design and forthcoming tender process. SKA1-MID design drawings have been updated to show the subset of work required for this tender. As part of this tender, drawings will need to be further updated to reflect completed work. An upgrade path from the completion of this tender to the implementation of the full SKA1-MID design shall be possible without major rework.

To avoid having to revisit the SKA1-MID design process, a requirement of this tender is to avoid change to the key design elements including component selection.

Risk reduction work to test and prove a solution to a specific RFI problem has also been carried out. CRAC units within the screened Data Rack Area (DRA), provide power to plant room condenser fans located outside the screened room via Variable Speed Drive (VSDs). From an RFI point of view it is preferable to locate the VSDs close to the CRAC units within the screened DRA. In this case the VSD outputs need to be routed to the plant room condensers via 16A RFI filters provided in the DRA shielding. To provide sufficient power to the condenser fans compatibility between the selected VSDs and RFI filters is required. SARAO have done a risk reduction test to demonstrate operation of the SKA1-MID selected components. However, a final Qualification Test representative of the final VSD – RFI filter – Condenser Fans needs to be provided for by the contractor prior to procurement and site installation. SARAO will provide the RFI filter for this test.

Hence the equipment selection recommendations arising from the SKA1-MID design are mandatory for this tender. These are captured within the referenced MeerKAT KAPB Cooling Upgrade Specification (Document Number FA00-0014-001). To the extent applicable to the MeerKAT KAPB Cooling project the full SKA1-MID Data Rack Cooling SOW specification (Document Number SKA-TEL-INSA-005091) produced by Aurecon is also applicable.

MeerKAT KAPB Cooling Upgrade Specification has precedence over the SKA1-MID document.

2.1.2 Detailed Specification

Please refer to the following document (in Annex B) for the detailed specification. This document has precedence over other applicable and reference documents.

FA00-0014-001: MeerKAT KAPB Cooling Upgrade Specification

Attention is drawn to 2.1.3.4.21 SKA-TEL-INSA-0005091 SKA Tender Specification: Data Rack Cooling SKA1-MID
design specification (in Annex B). This document was produced as part of the SKA1 project and is applicable to this tender but subordinate in precedence to the above mentioned MeerKAT specification.

2.1.3 Applicable or Referenced Documents and Drawing List (Obtainable on CD excluding standards)

2.1.3.1 GCC

The General Conditions of Contract for this project is the 1999 edition of FIDIC (International Federation of Consulting Engineers) Yellow Book, Conditions of Contract for Plant and Design-Build for Electrical and Mechanical Plant, and for Building and Engineering Works, Designed by the Contractor.

2.1.3.2 CIDB (Construction Industry Development Board) Grading

The successful contractor shall have a 6ME grading in terms of the CIDB grading requirements. Where companies consider entering into a JV to achieve the combine level 6 requirement, they must satisfy the conditions set in Table E of this board’s registration document. In all cases the contractor with the highest grading shall be the lead partner in the JV.

2.1.3.3 Standards

S.A.N.S. Code of Practice 10142, as amended, for the Wiring of Premises.


Latest edition: "Low Velocity and Duct Construction Standards" by SMACNA or SANS 1238 - 2005 and 10173 - 2003

SMACNA High Velocity Duct Construction Standards

Motor Standards SABS 948, BS 2613 and/or BS 170 or other applicable standards of their country of manufacture.

Additionally, the following equipment shall comply with the relevant South African Bureau of Standards (where available) and/or the British equivalent:

<table>
<thead>
<tr>
<th>SABS</th>
<th>BSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Switchgear in general : -</td>
<td>162</td>
</tr>
<tr>
<td>Circuit Breakers : 156</td>
<td>4752</td>
</tr>
<tr>
<td>Isolators : 152</td>
<td>5419</td>
</tr>
<tr>
<td>Busbars : 784 &amp; 1195</td>
<td>158 &amp; 159</td>
</tr>
<tr>
<td>Fuses : 172</td>
<td>88</td>
</tr>
<tr>
<td>Contactors : 1092</td>
<td>5424</td>
</tr>
</tbody>
</table>
Motor Starters : - 587
Indicating Instruments : - 89
Current Transformers : - 3938

Standard Specification for low voltage equipment

2.1.3.4 APPLICABLE DOCUMENTS AND DRAWINGS (Annexure B)

2.1.3.4.1 FA000-0014-001 MeerKAT KAPB Cooling Upgrade Specification
2.1.3.4.2 SKA-TEL-INS0-0005056, CPF DATA RACK UNDER FLOOR WIRE WAY LAYOUT
2.1.3.4.3 SANS 10142-1: 2017, The wiring of premises - Part 1: Low-voltage installations
2.1.3.4.4 M0000-0000-023 Rev 1, MeerKAT Guideline for interface marking
2.1.3.4.5 SKA_TEL_SKO_0000293, SKA1 POWER QUALITY STANDARD, Rev 02, 27 September 2017
2.1.3.4.6 M2900-0000-010 Radio Frequency Interference Policy
2.1.3.4.7 SSA8010-0000-001, ADHERANCE TO THE SANS 61000-5-2 STANDARD ON EMC, Rev 1, 23 July 2013
2.1.3.4.8 SKA-TEL-INS0-0005043 - CPF data rack power layout
2.1.3.4.9 SKA-TEL-INS0-0005071.1 CPF HVAC-CHANGES TO EXISTING (PHASE 1) _1
2.1.3.4.10 SKA-TEL-INS0-0005075 HVAC-SUBFLOOR SERVICES (COMBINED AND HVAC) _1
2.1.3.4.11 SKA-TEL-INS0-0005077 HVAC-PROCESSOR ROOM TYPICAL INSTALLATION DETAILS_1
2.1.3.4.12 227-HVAC-002_1 KAPB-HVAC processor room floor and ceiling grill layout
2.1.3.4.13 SKA-TEL-INS0-0005078 HVAC-SCEHOMATIC-PROCESSOR ROOM AIR _ REFRIGERANT FLOW_1
2.1.3.4.14 SKA-TEL-INS0-0005080 HVAC-SCEHOMATIC-PROCESSOR _ PLANT ROOM ELECTRICAL_1
2.1.3.4.15 SKA-TEL-INS0-0005084 HVAC-SECTIONS AND DETAILS_1
2.1.3.4.16 SKA-TEL-INS0-0005085 HVAC-SECTIONS AND DETAILS_1
2.1.3.4.17 SKA-TEL-INS0-0005086 HVAC-3D PERSPECTIVES_1
2.1.3.5 REFERENCE DOCUMENTS AND DRAWINGS (Annexure C)

The following documents are provided for reference only.

2.1.3.5.1 M0000-0000-47 Rev 3, MeerKAT KAPB Rack Budget
2.1.3.5.2 227-HVAC-003_1 KAPB HVAC sections and details
2.1.3.5.3 SKA-TEL-INSA-0005070 SKA HVAC PHASE II- CENTRAL - Sheet - SKA-TEL-INSA-0005070 - CPF HVAC LEGEND_1

2.1.4 Deliverables

2.1.4.1 Deliverables required with Tender Submission (This documents are required in order for the tender to be classified as responsive)

2.1.4.1.1 Technical description and specification all procured items (notwithstanding these have been specified)
2.1.4.1.2 Type test certificates
2.1.4.1.3 Outline drawings giving approximate weights and overall dimensions
2.1.4.1.4 Completed schedules
2.1.4.1.5 Statement of Compliance highlighting non compliances and / or qualifications to the two referenced specifications
2.1.4.1.6 Programme of work from receipt of order to delivery to site, including all submission milestones
2.1.4.1.7 Detailing of interface points
2.1.4.1.8 Method statement for offloading and positioning on site including any special requirements
2.1.4.1.9 Acoustic information
2.1.4.1.10 Service and support resources available as well as call out rates
2.1.4.1.11 Confirmation of the Design Life of the equipment
2.1.4.2 Deliverables during Tender Execution

2.1.4.2.1 Equipment selection including manufacturer certified information

2.1.4.2.2 Shop drawings including wiring diagrams and penetration requirements

2.1.4.2.3 Submit testing, balancing and commissioning documentation. This should include test procedures for the qualification VSD -> RFI filter -> Condenser fans Qualification Test, as well as for the System Acceptance Tests

2.1.4.2.4 Operating and maintenance manuals

2.1.4.2.5 12 months' warranty (parts & labour) commences on the date that the Taking over certificate (Clause 10.1) are issued.

2.1.4.2.6 Additional Critical parts to facilitate maintenance after the 12-month warranty period – e.g. an additional compressor and evaporator / condenser fans.

2.1.4.2.7 Defects liability period

2.1.4.2.8 Inspection record cards/checklists

The contractor’s attention is drawn to section V.A Scope of the Work of the SKA1-MID Aurecon document SKA-TEL-INS A-005091 SKA Tender Specification Data Rack Cooling which provides detailed requirements for the above deliverables.

2.2 Contractual Conditions

The following requirements shall form part of the particular conditions C1.2.2 for this tender.

2.2.1 Design and Construction Process

SARAO will follow a System Engineering (SE) process to realise the design, construction, test & verification and handover the works. Based on the concept design and supporting documentation issued by SARAO (refer to Annexures) the Bidder is expected to prepared detailed designs for the stated scope of works.

The SE process will be managed internally within SARAO, with technical input from the successful Bidder as and when required. Bidders must also note that SARAO has specific configuration management for projects. All documentation, including drawings, will be compiled on specific templates which will be issued to the successful Bidder. There will also be a specific numbering system which will be provided to the successful Bidder.
Weekly design progress meetings will be held between the design team and the SARAO team at the SARAO offices in Observatory, Cape Town. The Project Manager for the design team will be responsible for keeping minutes of each meeting, including Requests for Information from the SARAO as and when required. The design reviews and approval meetings will be held at the SARAO offices in Observatory, Cape Town.

The progress meetings during construction will be held at the SARAO Site offices, at the Losberg Site Complex near Carnarvon in the Northern Cape. These meetings will be held bi-weekly on a Wednesday; exact dates will be confirmed at a later stage.

<table>
<thead>
<tr>
<th>Time For Completion – Design and Build Phase (191 Calendar Days)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Detailed Design and Procurement of Long Lead Items (98 Calendar days)</td>
</tr>
</tbody>
</table>

**Figure 5: SARAO System Engineering process**

2.2.1.1 **Detailed Design and Procurement of Long Lead Items (98 Calendar Days)**

The Construction Manager and Design team shall be responsible for the verification of the accuracy of the proposed design in terms of the deliverables supplied to them in this contract. These deliverables will include the applicable requirements as well as the allowable deviation parameters for these requirements.

At the design review, this verification shall be tabled and any deviation from the design shall be tabled for discussion and investigation. Once agreement has been reached on said deviations, the contractor will arrange for a qualification test (at a venue to be agreed by SARAO) of the selected VSD -> RFI filter (SARAO supplied) -> Condenser fan motor. Following successful conclusion of this test the final BOQ will be approved. At this point the contractor can procure long lead time items and prepare shop drawings etc. for the Construction/Execution Phase.

2.2.1.2 **Construction/Execution (93 Calendar Days)**
The Construction Manager and design team will be responsible for executing the following construction administration role:

2.2.1.2.1 Input into content of health, safety and environmental management plan review and approval prior to construction; quality assurance plan review and approval prior to construction;

2.2.1.2.2 Review and approval of the construction programme including project float, critical path items, holding points and items identified critical for integration;

2.2.1.2.3 Convening weekly face to face site coordination meetings with appointed sub-contractors to ensure proper coordination and integration;

2.2.1.2.4 Report on progress on implementing contract participation goals, socio-economic and skills transfer development requirements as defined in the contract;

2.2.1.2.5 Prepare payment valuation for SARAO assessment, approval and submission;

2.2.1.2.6 Undertaking health, safety, environmental, quality assurance audits in conjunction with SARAO team;

2.2.1.2.7 Ensuring that the required design disciplines are involved in inspections as applicable to their work during construction;

2.2.1.2.8 Compiling bi-weekly construction progress reports addressing the construction programme, Health and Safety and Quality, Sub Contractors, Materials on Site, progress photo’s, plant and equipment on site, benefits register, targeted procurement goals, socio-economic and skills transfer development;

2.2.1.2.9 Providing cash-flow and expenditure reports on a monthly basis to the SARAO

2.2.1.3 Test, Verification, Commissioning and Handover (14 + 7 Calendar days)

The Construction Manager and design team will be responsible for executing the following during this phase:

2.2.1.3.1 Participate in a SARAO lead Physical Configuration Audit (PCA). This audit will verify the installation against the following documents: Specification, As-built installation drawings, Tender BOQ, Shop Drawings including Bill of Materials for all itemised items indicted on drawings

2.2.1.3.2 Coordinate and undertake test and verification events in compliance with the test, verification and commissioning plan/ procedure defined during the detailed design phase;

2.2.1.3.3 Lead all site acceptance tests that need to be undertaken while being witnessed by a SARAO representative;

2.2.1.3.4 Lead the commissioning/integration plan in conjunction with SARAO;

2.2.1.3.5 Taking 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, etc. format both in hard copy and in soft copy. The hard copy must be signed off by the Resident Engineer/design engineer and submitted to the SARAO;

All test, verification and commissioning reports must be reviewed and signed by the relevant design engineer and submitted to the SARAO;

Coordinate and supply operations, maintenance manuals and procedures from all suppliers and subcontractors 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.).

Coordination of the training of operational staff for all equipment and required maintenance procedures as per SARAO requirements;

All finishing schedules etc.

All Certificates of Compliance which are signed off by the design engineers and the contractor;

### 2.2.2 Targeted Procurement

#### 2.2.2.1 Objective

The Employer applies and promotes the principles of Targeted Construction Procurement. It is therefore proposed that the following be actively pursued:

- The provision of opportunities for black owned Small, Medium and Micro-Business Enterprises (SMMEs).
- The provision of work opportunities for local labour.
- The maximising of job creation by adopting labour-intensive construction methods wherever physically feasible and economically justifiable.

#### 2.2.2.2 Definitions

**Local**

- Local or local area means in the first instance towns of Carnarvon, Williston, Brandvlei and Van Wyksvlei Local Municipalities (in Karoo Hoogland and Kareeberg District Municipalities, respectively), and then expanded to the area of the Northern Cape Province.

**Locals**

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

#### 2.2.2.3 Contractor and Labour Participation Goals (CLPG)

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 sub-contract a minimum of 20% of the final accepted contract amount, excluding the delivered cost of the AC units, to Local contractors.
- Targeted labour will be 2% of the final accepted contract amount, excluding the delivered cost of the AC units.

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; and
- Optimise employment and business opportunities of local black people and black women in particular;

**Employment Targets:**
The number of person-hours employed in the following designated groups expressed as a percentage of the workforce person-hours for that specific designated group (including Subcontractor’s personnel but excluding head office personnel) employed, shall be at least:

<table>
<thead>
<tr>
<th>Skills level</th>
<th>Criteria</th>
<th>Target (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unskilled labour</td>
<td>Local</td>
<td>100</td>
</tr>
<tr>
<td>Semi-skilled labour</td>
<td>HDI</td>
<td>80</td>
</tr>
<tr>
<td>Unskilled and semi-skilled labour</td>
<td>HDI (women)</td>
<td>15</td>
</tr>
<tr>
<td>Semi-skilled labour</td>
<td>Northern Cape Province</td>
<td>15</td>
</tr>
</tbody>
</table>

The Contractor and Labour Participation Goals shall be deemed to be included under the Main Contractor’s General Obligations costs.

**Measurement of performance**
The contractor’s participation performance will be measured on a monthly basis to confirm the extent to which the Contractor and Labour Participation Goals (CLPG) have been achieved and the submission of a benefits register, socio-economic and skills transfer development. The benefits register, socio-economic and skill transfer development templates will be provided at award stage. Regular returns are required from the contractor and shall be submitted with each payment certificate.

The contractor’s monthly participation performance towards the CLPG will be measured monthly as follows:

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Monthly Target (minimum)</th>
<th>Monthly Amount Achieved</th>
<th>Monthly % Variance</th>
<th>Overall Amount Achieved</th>
<th>Overall % Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Contractor Participation Goals (20%)</td>
<td>20%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Targeted Labour (2%)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.1</td>
<td>Unskilled labour (Local)</td>
<td>100%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.2</td>
<td>Semi-skilled labour (HDI)</td>
<td>80%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.3</td>
<td>Unskilled and semi-skilled labour (HDI Women)</td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.4</td>
<td>Semi-skilled labour (Northern Cape)</td>
<td>15%</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Contractors will be required to prove labour residential status. This may include but not limited to electricity and water accounts, telephone or cell phone accounts, bank statements, copies of vehicle license documents, reference from a school or church, affidavits, or other suitable evidence.

The Contractor shall submit a monthly report indicating the targets that have been met, those that have not been met and the reasons thereof. The Engineer will make a determination as to whether the reasons for the variations are valid and justifiable. The Engineer shall after making the determination inform the contractor of such determination and the implications thereof. Failure to reach the CLPG shall render the contractor liable for a penalty as specified in Clause 4.21 of the Particular Conditions of Contract.

The Contractor and Labour Participation Goals report template shall be agreed at award stage.

### 2.2.3 SARAO SKA Site Constraints, Facilities and Conditions

#### 2.2.3.1 Radio Frequency Interference

SKA has a Radio Frequency Interference Policy, which all personnel and contractors on site must comply with. The policy has been adopted to ensure that there is an environment where there is no interference with the operations of the SKA telescope. The design, construction and testing and associated infrastructure must therefore comply with the policy. The policy will be issued to the successful tenderer prior to commencement of the project.

Communication on site within the core area is only permitted when using a radio device that operates within a specified frequency band, which must be approved by the SKA RFI Manager, while the use of satellite radio is permitted in the spiral arms. No cell phones, smart watches, electronic devices are allowed on site. Only diesel operated vehicles, plant and equipment and generators are permit on site. A list of all construction equipment, vehicles and devices must be provided to the SKA RFI Manager for approval, before it is allowed onto site.

#### 2.2.3.2 Available Facilities and Restrictions

SARAO will not provide any on-site accommodation to the contractor or sub-contractor staff. The contractor should procure accommodation in the town of Carnarvon at their own cost. However, an office and small lockable storage area will be made available on site, at the Dish assembly shed, within walking distance from where the upgrades will take place.

The Bidder must provide appropriate living conditions for all contractor, sub-contractor staff and consultants as none will be provided by the SKA. Living conditions shall be similar to their home living conditions or better.

The Bidder must ensure that the construction camp is well maintain and regular housekeeping is done. Random audits will be conducted by SARAO representatives to ensure this achieved.

The Bidder 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 disciplinary action for offenders.

The Bidder is advised that all key personnel for this project will be screened by the State Security Agency of South Africa. (SSA).
2.2.4 Supporting Documentation

2.2.4.1 Required by SARAO

The following shall be submitted with the tender submission for the proposed Upgrade to cooling facility in the Data Rack Area at the KAPB to SARAO:

- Comprehensive data sheets
- Catalogue
- Performance specification
- Finishing
- Schedule of colours
- Maintenance manuals and procedures

The following shall be submitted to SARAO for the works:

- Detailed designs for the above scope of work including necessary site surveys and tests
- As-built drawings for above scope of work provided in the format stated in the Particular Conditions (2 hard copies and 1 CD copy)
- All design files in all formats (Dwg, Word, Pdf, Visio, etc.) and versions (1 CD copy)
- Electrical Certificate of Compliance
- Occupancy Certificate
- Maintenance Manuals and procedures (2 Hard copies and 1 CD copy)

2.2.4.1 Information issued to Bidder

Refer to Annexures for attached information:

Annexure A: Detailed Pricing Schedule
Annexure B: Applicable Documents and Drawings
Annexure C: Reference Documents and Drawings
Annexure D: SKA SA Minimum Site Safety Requirements, Rev 1 (Document No. SSA0000-0000V1-04MP)
Annexure E: SKA SA Transport Policy, Rev 2 (Document No. SSA0000-0000-001)
Annexure F: SKA SA Policy for the control of RFI on the Karoo Site Rev 1, Document number M2900-0000-019
Annexure G: CIDB Standard Conditions of Tender
### 3. Performance Levels

The SARAO requires the following levels of performance from the selected Bidder:

<table>
<thead>
<tr>
<th>Performance Area</th>
<th>Required Level of Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Completion – Design and Build Phase</strong></td>
<td>191 Calendar Days</td>
</tr>
<tr>
<td><strong>Detailed Design and Procurement of Long Lead Items</strong></td>
<td>98 Calendar Days</td>
</tr>
<tr>
<td>Design Review</td>
<td>14 Days</td>
</tr>
<tr>
<td>Detailed Design Review</td>
<td>84 Days</td>
</tr>
<tr>
<td><strong>Construction/Execution</strong></td>
<td>93 Calendar Days</td>
</tr>
<tr>
<td>Construction</td>
<td>72 Days</td>
</tr>
<tr>
<td>Test and Verification</td>
<td>14 Days</td>
</tr>
<tr>
<td>Commissioning</td>
<td>7 Days</td>
</tr>
<tr>
<td><strong>Completion of Defects Liability Period</strong></td>
<td>12 Months</td>
</tr>
</tbody>
</table>

**NOTES:**

- Detailed design penalties of R4,000 per day will be applied should the design team not meet the Required Levels of Performance defined in the Table above.
- Execution penalties of 0.05% of the Final Contract Price per day, to a maximum amount of 10% of the Final Contract Price will be applied should the construction contractor not meet the Required Levels of Performance defined in the Table above.
Part T1: Bidding Procedure

T1.1: Bid Notice and Invitation to Bid

South African Radio Astronomy Observatory (SARAO) invites tenders for the Provision for Air-conditioning Upgrades for NRF SARAO’s Karoo Array Processing Building (KAPB) of the MeerKAT telescope at the Losberg Site.

The core of the site is located about 80km North West of the town of Carnarvon in the Northern Cape.

Bid documents will be available from 25 January 2019 during working hours (08h00 to 16h00 Monday to Friday). The physical address for collection of bid documents is:

SARAO
17 Baker Street, 1st floor Reception
Rosebank
Johannesburg
2196

SARAO
Old Times Media Building
2 Fir Street
Observatory
Cape Town
South Africa
7925

Queries relating to the issuing of these documents may be addressed to:

Supply Chain Management:  Technical Queries:
Rayyan Arnold  Dave Horn
SARAO SCM MeerKAT User Supply Equipment
Specialist System Engineer
rayyan@ska.ac.za  dhorn@ska.ac.za
+27(0)21 506 7300  +27(0)21 514 1200

All bidders must attend a compulsory briefing meeting at the SARAO Losberg Complex, Northern Cape, SA – (Follow R63 from Carnarvon in direction of Williston for 13km and turn right on the tar road (P02996) towards Brandvlei. Travel along this road for 65km and turn left on the tar road (P02337) to the security boom. Follow this road for a further 13km to the Site Complex, GPS Coordinates 30°45'22.46"S21°25'59.95"E ) South Africa on Wednesday, 13th of February 2019 at 12h30. **No more than one (1) representative per bidder shall attend the meeting** Failure to attend the briefing meeting will deem the proposal unresponsive. An opportunity will be provided to the prospective Bidders to visit the site after the briefing session in order to acquaint themselves with the site and its conditions.

This tender is only open to CIBD Registered South African based companies that holds a 6ME Grading. A Joint Venture may be considered between CIBD Registered companies to make up the required grading in terms of Table E of the relevant CIBD grading document. Should there be more than two Joint Venture partners, the CIBD Registered ME Graded company with the higher grading must be the lead company in the JV and must maintain a higher stake than the other Joint Venture partners combined.

The bid will close at 11h00 on Friday, 22th of February 2019. Bids must be placed in the Tender Box located at Reception on the 1st floor at the SARAO Office, 2 Fir Street, Old Times Media Building, Black River Park, North Entrance, Observatory, Cape Town, South Africa, 7925.
Telegraphic, telephonic, facsimile, email and late bids will not be accepted. Requirements for sealing, addressing, delivery, opening and assessment of bids are stated in the Tender Data.

4.1.2 T1.2: Tender Data

The Standard Conditions of Tender makes several references to the Tender Data for details that apply specifically to this bid. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the Standard Conditions of Tender.

The Conditions of Tender are the CIDB Standard Conditions of Tender (January 2009 edition) available from the CIDB website [www.cidb.org.za](http://www.cidb.org.za) following the Documents and Publications link and navigating through the Procurement Documents Templates and Guidelines section1 (CIDB Tel. +27 12 482 7200 or +27 86 100 2432) or refer to Annexure Q.

Each item of data given below is cross-referenced to the clause in the Standards Conditions of Tender to which it mainly applies.

F1.1 The Employer is:

Name:
NRF
NRF Building
South Gate
CSIR Complex
Meiring Naudé
Brummeria
Pretoria
South Africa

Contact person: Dave Horn
Tel: +27(0)21 514 1200
Email: dhorn@sk.ac.za

F1.2 The bid documents issued by the Employer comprise of the following:

**THE BID**

<table>
<thead>
<tr>
<th>Part T1</th>
<th>Bidding procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>T1.1</td>
<td>Bid notice and invitation to tender</td>
</tr>
<tr>
<td>T1.2</td>
<td>Bid data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part T2</th>
<th>Returnable documents</th>
</tr>
</thead>
<tbody>
<tr>
<td>T2.1</td>
<td>List of Returnable documents</td>
</tr>
<tr>
<td>T2.2</td>
<td>Returnable Schedules</td>
</tr>
</tbody>
</table>

**THE CONTRACT**

<table>
<thead>
<tr>
<th>Part C1</th>
<th>Agreements and contract data</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1.1</td>
<td>Form of offer and acceptance</td>
</tr>
<tr>
<td>C1.2</td>
<td>Contract data</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Part C2</th>
<th>Pricing Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2.1</td>
<td>Pricing Instructions</td>
</tr>
<tr>
<td>C2.2</td>
<td>Pricing Schedule</td>
</tr>
</tbody>
</table>
F.2.3 The arrangements for a compulsory clarification meeting are:
Location: SARAO Losberg Complex, Northern Cape, SA – (Follow R63 from Carnarvon in direction of Williston for 13km and turn right on the tar road (P02996) towards Brandvlei. Travel along this road for 65km and turn left on the tar road (P02337) to the security boom. Follow this road for a further 13km to the Site Complex, GPS Coordinates 30°45'22.46"S21°25'59.95"E ) South Africa on Wednesday, 13th of February 2019 at 12h30.

Confirmation of attendance to be notified at least one (1) full working day in advance to:
Name: Dave Horn
Tel: +27(0)21 514 1200
Email: dhorn@ska.ac.za

Bidders must sign the attendance list in the name of the bidding entity. Addenda will be issued and bids will be received only from those tendering entities appearing on the attendance list.

F2.13.1 Not applicable

F2.13.3 Part of each bid offer communicated on paper shall be submitted as an original, plus three (3) additional copies, **four (4) documents in total** (i.e. four (4) hard copies of the Technical Envelope and four (4) hard copies of the Financial Envelope), plus a CD containing all technical information and another CD containing the financial information.

F2.13.9 Telephonic, telegraphic, telex, facsimile or emailed bid offers will **not** be accepted.

F2.15 The closing time for submission of bid offers is:
**11h00 on Friday, 22th of February 2019**

F2.15.1 The Employer’s address for delivery of bid offers and identification details to be shown on each bid offer package are:

Location of tender box: Reception on the 1st floor at the SARAO Office, 2 Fir Street, Old Times Media Building, Black River Park, North Entrance, Observatory, Cape Town, South Africa, 7925.
**GPS coordinates:** 33°55’58.8”S, 18°28’15.3”E

Identification Details:

Bidders shall note the specific requirements for packaging for the two envelopes as detailed on Page 5 of this bid document and in clauses F2.13.6 and F2.13.7 of the Conditions of Tender.

Any proposal that does not adhere to this format, any which does not address each specification and requirement within the Request for Proposal may be deemed non-responsive and rejected on that basis.

F2.16 The bid offer validity period is 150 calendar days from close of tender.

F2.19 No access for tests and inspection is required during the bidding period.

F2.23 The Bidder is required to submit with his bid:

(1) BBBEE Scorecard verified by a SANAS accredited verification agency, including all of the sub-contractors;
(2) Proof of registration with the National Treasury Central Supplier Database.

F.3.2 Issue Addenda
If necessary, issue addenda that may amend or amplify the bid documents to each Bidder during the period
from the date that the bid documents are available until five (5) working days before the bid closing time stated in the Tender Data. If, as a result a bidder applies for an extension to the closing time stated in the Tender Data, the Employer may grant such an extension and, shall then notify all Bidders who drew documents.

F.3.4 The time and location for opening of the bid offers are:
Technical proposal envelopes will be opened immediately after the submission of Bids at the SKA Project Office at the address indicated in F.2.15.1 above.

F3.5 A two-envelope procedure will be followed.
The procedure for the evaluations of responsive tenders is Method 2, following a functional/quality evaluation for Stage 2: Technical Evaluation where a minimum score of 75 points out of 100 points must be attained by the Bidder and then the Stage 3 evaluation: financial and preference. The preference procedure for evaluation of responsive tender offers shall be the 90/10-point preference system, in full compliance with the requirements of SARAO, included in Form C3: Preference Schedules.

Envelope “T”: Compliance & Functionality

Envelope “T” must be clearly marked “Compliance and Functionality” and include the following:
- The original tender invitation document completed, signed and bound;
- The response to the Terms of Reference. One (1) original and three (3) hard copies with one electronic PDF version saved on CD, each separated in terms of Compliance and Functionality;
- Envelope “T” should not include any price proposal, any indication of professional rates or fees or B-BBEE status.

Envelope “F” must be clearly marked “Price and B-BBEE” and include the following documents:
- The price of the project and B-BBEE status of the bidder (For a Joint Venture, a consolidated original B-BBEE Certificate is required and for any sub-contracting, sub-contractors must submit a B-BBEE certificate).

Both these envelopes must be clearly marked with the bid reference number and the contact details of the bidder.

This tender is only open to CIDB Registered South African based companies that holds a 6ME Grading. A Joint Venture may be considered between CIDB Registered companies to make up the required grading in terms of Table E of the relevant CIDB grading document. Should there be more than two Joint Venture partners, the CIDB Registered ME Graded company with the higher grading must be the lead company in the JV and must maintain a higher stake than the other Joint Venture partners combined.

A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any enterprise that does not qualify for at least the points that such Bidder qualifies for, unless the intended sub-contractor is an EME that has the capability an ability to execute the sub-contract.
F3.11.3 The quality criteria and maximum score in respect of each of the criteria are as follows:

Selection of Qualified Bidders (Competency)

Bid responses / submissions will be evaluated against the bid invitation specifications. Evaluation of bids will be done in accordance to published evaluation criteria and the scoring set for each criterion. Bidders will be qualified (short-listed) progressively on competency in response to site and design proposals through and including presentation of proposal stage. The selection process is a Three stage process (Stage 1): Compliance Verification is conducted to verify that Bidders submitted all compulsory returnable forms and documents, only compliant Bidders will proceed to (Stage 2) Bidders proposals will be reviewed against GO/NO GO documentation and evaluated by the SARAO Bid Evaluation Committee. Bidders meeting 75% or 75 points out of 100-point threshold will be invited to the financial opening, (Stage 3): Financial/B-BBEE Evaluation phase.

Qualifying Thresholds for Selection (Stage 1) Evaluation

Where Bidders do not score “GO” on all “GO/NO” requirements in Stage 1; and score less than the minimum threshold of 75% or 75 points out of 100 points for Stage 2 will not be considered for Stage 3 evaluation. Evaluation scoring for all criteria is scored on the following basis unless specified otherwise:

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor</td>
<td>Average</td>
<td>Meets requirements</td>
<td>Exceeds requirements with value-add proposition</td>
<td></td>
</tr>
</tbody>
</table>

Total score per evaluation criteria is the points awarded per Bid Evaluation Committee member divided by maximum points allowable for each criterion multiplied by weighting for each criterion. Individual scores for Bid Evaluation Committee members are added up for each criterion and divided by the number of committee members to calculate a total score for each criterion.

### SELECTION CRITERIA/ CHECKLIST

<table>
<thead>
<tr>
<th>Stage</th>
<th>Element</th>
<th>✓ Tick Appropriate Box</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Covering Letter</td>
<td>GO NO GO</td>
</tr>
<tr>
<td></td>
<td>Confirmation of registration on National Treasury central supplier database</td>
<td>GO NO GO</td>
</tr>
<tr>
<td></td>
<td>Original certified B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or an Accounting Officer as contemplated in the CCA</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>Schedule</td>
<td>Description</td>
<td>GO/NO GO</td>
</tr>
<tr>
<td>----------</td>
<td>-------------</td>
<td>----------</td>
</tr>
<tr>
<td>1</td>
<td>Schedule confirming compliance to list of Key Design and Construction Personnel</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>2</td>
<td>Certified copies of Professional Qualification for Key Design and Construction Personnel (attached to Schedule 1)</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>3</td>
<td>Certified copies of Professional Registration with the relevant South African Professional Council for each discipline (attached to Schedule 1)</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>4</td>
<td>The Curriculum Vitae. The CVs of each individual must be appended to the Schedule of Key Design and Construction Personnel (Template for CV provided. All CVs to be provided in this template)</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>5</td>
<td>Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>6</td>
<td>Bidding Entity past experience in delivering similar Power and Air-Conditioning upgrade contracts and other projects of similar scale (lists of current and completed projects to be submitted). Must include all Consultants and Sub-contractors.</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>7</td>
<td>References - The Bidding Entity, its sub-contractors and JV Partners must each provide at least three (3) credible, written and contactable references from Clients for whom projects have been undertaken similar to the nature of the SKA site and building requirements and have indicated their willingness to take SARAO representatives on such site visit to such Client premises if requested</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>8</td>
<td>Method Statement based on the scope of work specific to this project.</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>9</td>
<td>Project Management Plan (PMP) specific to this project.</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>10</td>
<td>Health, Safety, Environmental and Quality (SHEQ) Management Plan for the execution of this Contract and a Quality Management System or Equivalent, based on Quality Management principals, Certification and Compliance Standard (This is applicable to the SQ Bidders, the Manufacturer should be available for a SARAO site inspection).</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>11</td>
<td>All Supporting Documentation (2.2.4) and all Deliverables (2.1.4)</td>
<td>GO NO GO</td>
</tr>
<tr>
<td>Stage</td>
<td>Element</td>
<td>GO</td>
</tr>
<tr>
<td>-------</td>
<td>--------------------------------------------------------------------------</td>
<td>----</td>
</tr>
<tr>
<td>1</td>
<td>Form A1: Authority for signatory</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form A2: Tenderer’s bank account details and financial references</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form A3: Certificate of Insurance Cover</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form A4: Certificate of Authority for Joint Venture (if applicable)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form A5: Form concerning the fulfilment of the Construction Regulations, 2014</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form A6: Amendments and Qualification by Bidder</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form B1: Certificate of Bidder’s Attendance at the Compulsory Meeting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form B2: Record of Addenda to Bid Documents</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form B3: Compulsory Enterprise Questionnaire</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form B4: Declaration of Interest (SBD 4)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form B5: Declaration of Bidder’s Past Supply Chain Management Practices (SBD 8)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Form B6: Certificate of Independent Bid Determination (SBD 9)</td>
<td></td>
</tr>
</tbody>
</table>

Bidders are required to comply with all of the Stage 1 documents / forms / schedules requested in the Table above. A “GO” means that the Bidder has submitted each document/schedule and a “NO GO” means a document / schedule has not been submitted which will declare the Bidder non-responsive.

Bidders must ensure that ALL the above Forms and Schedules are submitted to ensure that the bid is declared responsive and can proceed to the Stage 2 Evaluation.
### Stage 2 Technical Evaluation

#### 1. Capability which addresses the following aspects:

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Design Team:</th>
<th>Construction Team:</th>
<th>Total Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Schedule of Key Design and Construction Personnel; All proposed Key Design and Construction personnel’s information; Qualification, Experience and Professional registration</td>
<td>Project Manager (Min. 7 Years’ experience)</td>
<td>Project Manager (Min. 7 Years’ Mechanical Installation – Cooling experience)</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>Cooling Design Specialist (Min. 7 Years’ experience)</td>
<td>Site Agent/Foreman (Min. 7 Years’ Mechanical Installation experience)</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Mechanical Engineer (Min. 7 Years’ experience)</td>
<td>Master Installation Electrician (LV) (Min. 7 Years’ experience)</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>Building Electrical Engineer (Min. 7 Years’ experience)</td>
<td>SHE Representative (Min. 5 Years’ experience)</td>
<td>2</td>
</tr>
<tr>
<td>2.2 Certified copies of Professional Qualification. Append to Schedule 1: Key Design and Construction Personnel (All key Design and Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Design Team:</td>
<td>Construction Team:</td>
<td></td>
</tr>
<tr>
<td>2.3 Certified copies of Professional Registration. Append to Schedule 1: Key Design and Construction Personnel (All key engineering personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td>Construction Team:</td>
<td>Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
<td>2</td>
</tr>
<tr>
<td>2.4 The Curriculum Vitae. The CVs of each individual must be appended to the Schedule of Key Design and Construction Personnel (Template for CV provided. All CVs to be provided in this template)</td>
<td>Construction Team:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.5 Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>3. Previous Experience and Track Record:</td>
<td></td>
<td></td>
<td>35 (Total)</td>
</tr>
<tr>
<td>3.6 Bidding Entity past experience in delivering similar Design and Build Cooling contracts and other projects of similar scale (lists of current and completed projects to be submitted). Must include all Consultants and Sub-contractors.</td>
<td></td>
<td></td>
<td>25</td>
</tr>
<tr>
<td>3.7 References - The Bidding Entity, its sub-contractors and JV Partners must each provide at least three (3) credible, written and contactable references from Clients for whom projects have been undertaken similar to the nature of the SKA site and building requirements and have indicated their willingness to take SARAO representatives on such site visit to such Client premises if requested</td>
<td></td>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>
4. Method Statement, Project Management and SHEQ Management Plans specific to this project which addresses the following:

35 (Total)

4.8 Method Statement based on the scope of work specific to this project.

The method statement must as a minimum address the following aspects:
- Planning;
- Detailed Design process and approvals;
- Lead time for manufactured products & transportation to site;
- Safety, Health, Environmental & Quality considerations during the design phase;
- Construction process (including all testing);
- Safety, Health, Environmental & Quality compliance during the construction phase;
- Testing and Verification;
- Completion and handover
- Skills development;
- Corporate Social Investment;

10

4.9 Project Management Plan (PMP) specific to this project.

Provide a detailed PMP for the duration of this contract. The PMP must as a minimum address the following aspects:
- Overview and project strategy
- Project standards and setup
- Project Scope
- Cost and financial management
- Project Schedule (Including Appointment and Commencement of contract, Design Activities, Reviews and Approvals, Construction, Testing and Verification and Handover to Client)
- Risk Management
- Sub-contractor management
- System Engineering
- Information & document management
- Communication and reporting

10

4.10 Health, Safety, Environmental and Quality (SHEQ) Management Plan for the execution of this Contract and a Quality Management System or Equivalent, based on Quality Management principals, Certification and Compliance Standard (This is applicable to the SQ Bidders, the Manufacture should be available for a SARAO site inspection).

Provide a detailed SHEQ plan for the duration of this contract. The SHEQ plan must as a minimum address the following aspects:
- Applicable SHEQ standards
- SHEQ measures during the contract
- SHEQ Compliance management
- SHEQ meetings
- Communication and reporting

Quality Management System or Equivalent, based on the following principals, Customer focus; Leadership; Involvement of people; Process approach; System approach; Continual improvement; Fact-based decision making, and Mutually beneficial supplier relationships (This is applicable to SQ Bidders).

10

5

All Bidders with bids that have been successful at the Stage Two level by meeting the minimum of 75% or a total of 68 points out of 90 points threshold will be invited to the financial opening, for further consideration.
Bidders must achieve a minimum of 75% or 68 points out of 90 points during this stage (Stage 2) to proceed to the Stage 3 Financial/B-BBEE evaluation.

2. Financial/BBBEE evaluation/Awarding of the Contract (Stage 3)

<table>
<thead>
<tr>
<th>Price and Preference Evaluation</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price</td>
<td>80</td>
</tr>
<tr>
<td>Preference</td>
<td>20</td>
</tr>
</tbody>
</table>

Bids will be compared on a fair and equal basis taking into account all financial aspects of the proposals including professional fees percentage/ratio and any discounts thereon.

The contract award criterions are:

1. **Price** – with the lowest comparatively priced bid on an equal and fair comparison basis receiving the highest price score as set out in the 2011 Preference Regulations

2. **Preference** – preference points as claimed in the preference claim form are added to the price scores and the highest combined score is nominated for the contract award

3. **Administration** - Contracts are awarded where bidders have supplied the relevant administration documentation.

**Preference System Applicable**

In terms of the PPPFA Regulations 2011, the preference system used is the 80 (price): 20 point system, utilizing the BBBEE Transformation Levels as award base. Preference points will be awarded in accordance with the bidders signed claim for SBD 6.1.

**Price and Preference Scoring:**

Price and Preference scores shall be calculated and determined as per Table below. The Bidder, and all the proposed sub-consultants are required to submit a copy of its Broad-Based Black Economic Empowerment Certificate, issued by a South African National Accreditation System (SANAS) accredited verification agency (as per form SBD 6.1.).
### Evaluation Criteria

<table>
<thead>
<tr>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>80 points</td>
</tr>
</tbody>
</table>

#### Price

100% of 80 points will count towards price. The Lowest Acceptable Bid will earn full marks and any higher Bids will proportionately earn fewer points.

The formula used in determining points for price will be:

\[
Ps = 80 \left( 1 - \frac{Pt - P_{\text{min}}}{P_{\text{min}}} \right)
\]

Where:
- \( Ps \) = Points scored for price of bid under consideration
- \( Pt \) = Rand value of bid under consideration
- \( P_{\text{min}} \) = Rand value of lowest acceptable bid submitted

#### Preference Points

Preference points will be awarded to bidders attaining their B-BBEE status level of contribution in accordance with the table below:

<table>
<thead>
<tr>
<th>B-BBEE Contribution Level</th>
<th>Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>14</td>
</tr>
<tr>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>2</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
</tr>
</tbody>
</table>

TOTAL: 100 points

---

**F3.13** Bid offers will only be accepted if:

(a) The Bidder or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector either;

(b) The Bidder has not:
   (i) Abused the Employer’s Supply Chain Management System; or
   (ii) Failed to perform on any previous contract and has been given a written notice to this effect;

(c) The Bidder has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the Bidder’s ability to perform the contract in the best interests of the Employer or potentially compromise the bid process and persons in the employ of the State are not permitted to submit bids or participate in the contract;

(d) The Bidder is registered and in good standing with the compensation fund or with a licensed compensation insurer;

(e) The following Stage 1 compliance verification supporting documentation is submitted:
(1) **Covering Letter**

The Bidder must include a *Covering Letter* whereby the following are stated:

- Acceptance of the rules of bidding, evaluation of bids, and bid evaluation criteria set out in the Terms of Reference;
- Provide full contact details of the Bidder;
- Providing the Bidder's VAT Registration Number;

(2) **Confirmation of Registration on National Treasury Central Supplier Database**

- Proof that the Bidder is registered on the National Treasury Central Supplier Database

(3) **Schedule 1: Schedule of Key Design and Engineering Personnel**

- In order to be considered for an appointment in terms of this bid, the Bidder must submit a schedule of the key Design and Construction Personnel required to execute this project (as per Table 1) in its permanent employment for the duration of the project. Alternatively, the Bidder needs to have entered into sub-contractor agreements and or joint ventures. These agreements will need to be appended to the compulsory completed and returnable ‘**Schedule 1: Schedule Key Design and Construction Personnel**’. Bidders should note that the names submitted for the key design and Construction disciplines for the successful Bidder may not be changed without prior written approval by the SARAO in the implementation of this Scope of Work.

(4) **Schedule 2: Professional Qualification**

- Certified copies of professional qualification of each Team Member must be attached to Schedule 1: Key Design and Construction Personnel.

(5) **Schedule 3: Professional Registration**

- Certified copies of professional registration certificates (where relevant Councils’ exist) of each individual Team Member must be attached to the Schedule 1: Schedule of Key Design and Construction Personnel.

(6) **Schedule 4: Curriculum Vitae**

- CVs must be submitted in the required format;
• Only include CV’s for the required personnel as listed in the above table and in the format of the template as per Schedule 4. Please attach in the order that the key Design and Construction Personnel are listed on the schedule;

• Do NOT include CVs for support staff.

Please Note:

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

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

• The names listed in Table 1 for the Key Design and Engineering disciplines will be those personnel that carry design responsibility for the respective design engineering discipline;

• Do not include support staff in the Schedule of Key Design and Construction Personnel. Only key personnel will be assessed. Support staff with therefore not be assessed. It is however the responsibility of the Bidder to ensure that the project is provide with adequate support capacity;

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

• In order to qualify, the team must include all the Key Design and 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.

• The Key Design and Construction personnel must be registered with their respective related regulatory bodies and have recognised qualifications. Registration with Councils, for those professions where Councils exist, and with Associations or Institutes for those professions where only Associations and / or Institutes exist is required.
Table 1: Key Design and Construction Personnel, Qualifications and Registration

<table>
<thead>
<tr>
<th>Key Design &amp; Construction Personnel</th>
<th>Minimum Academic Qualification Required</th>
<th>Professional Registration required</th>
<th>Required minimum years of experience, skills pre-requisites and knowledge in the profession relevant to this project, calculated from date of qualification in that specific professional role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager</td>
<td>Built Environment Degree or equivalent</td>
<td>Yes</td>
<td>7 Years’ experience in project managing contracts of a similar nature and ensuring integration of various built environment / specialist disciplines during design and construction</td>
</tr>
<tr>
<td>Cooling Design Specialist</td>
<td>Relevant degree or equivalent specialising in Cooling design</td>
<td>Yes, with relevant body</td>
<td>7 Years’ experience in Cooling design work</td>
</tr>
<tr>
<td>Mechanical Engineer</td>
<td>Mechanical Engineering Degree or equivalent</td>
<td>Yes</td>
<td>7 Years’ experience in Cooling systems</td>
</tr>
<tr>
<td>Building Electrical Engineer</td>
<td>Electrical Engineering Degree or equivalent</td>
<td>Yes</td>
<td>7 Years’ experience in electrical reticulation design work for building</td>
</tr>
<tr>
<td>Key Design &amp; Construction Personnel</td>
<td>Minimum Academic Qualification Required</td>
<td>Professional Registration required</td>
<td>Required minimum years of experience, skills pre-requisites and knowledge in the profession relevant to this project, calculated from date of qualification in that specific professional role</td>
</tr>
<tr>
<td>-----------------------------------------------------</td>
<td>----------------------------------------</td>
<td>----------------------------------</td>
<td>--------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Project Manager (The Incumbent may be the same as above)</td>
<td>Built Environment Degree or equivalent</td>
<td>Yes</td>
<td>7 Years’ experience in project managing contracts of a similar nature and ensuring integration of various built environment / specialist disciplines during design and construction</td>
</tr>
<tr>
<td>Site Agent/Foreman (Full time on site)</td>
<td>Built Environment degree or equivalent</td>
<td>Yes</td>
<td>7 Years’ experience as a Site Agent/Foreman on projects of a similar nature</td>
</tr>
<tr>
<td>Master Installation Electrician (Full time on site)</td>
<td>Built Environment degree or equivalent</td>
<td>Yes</td>
<td>7 Years’ experience as a Master Installation Electrician on projects of a similar nature</td>
</tr>
<tr>
<td>Occupational Health, Safety &amp; Environmental (SHE) Representative (Full time on site)</td>
<td>Relevant degree / diploma</td>
<td>Yes, with relevant body</td>
<td>5 Years’ experience as a SHE Representative on projects of a similar nature</td>
</tr>
</tbody>
</table>

F3.17 The number of paper copies of the signed contract to be provided by the Employer is two (2).
Part T2: Returnable Documents

4.1.3 T2.1: List of Returnable Documents

The Bidder must complete the following returnable documents:

1 Returnable Schedules required for bid evaluation purposes

   SCHEDULE 1: SCHEDULE OF KEY DESIGN AND CONSTRUCTION PERSONNEL
   SCHEDULE 2: CERTIFIED COPIES OF PROFESSIONAL QUALIFICATIONS OF KEY DESIGN AND CONSTRUCTION PERSONNEL
   SCHEDULE 3: CERTIFIED COPIES OF PROFESSIONAL REGISTRATION OF KEY DESIGN AND CONSTRUCTION PERSONNEL
   SCHEDULE 4: CURRICULUM VITAE OF KEY DESIGN AND CONSTRUCTION PERSONNEL
   SCHEDULE 5: PROJECT ORGANISATIONAL CHART FOR KEY DESIGN AND CONSTRUCTION PERSONNEL
   SCHEDULE 6: BIDDING ENTITY PAST EXPERIENCE IN DELIVERING SIMILAR POWER AND AIR-CONDITIONING UPGRADE CONTRACTS AND OTHER PROJECTS OF SIMILAR SCALE
   SCHEDULE 7: THREE (3) CREDIBLE REFERENCES OF THE BIDDING ENTITY, SUBCONTRACTORS AND JOINT VENTURE PARTNERS
   SCHEDULE 8: EVIDENCE OF THE BIDDER, SUBCONTRACTOR & JV PARTNERS EXISTING SOCIO-ECONOMIC DEVELOPMENT ACTIVITIES AND WHAT WILL BE IMPLEMENTED SPECIFIC TO THIS CONTRACT

   FORM A1: AUTHORITY FOR SIGNATORY
   FORM A2: TENDERER’S BANK DETAILS AND FINANCIAL REFERENCES
   FORM A3: CERTIFICATE OF INSURANCE COVER
   FORM A4: CERTIFICATE OF AUTHORITY FOR JOINT VENTURE (IF APPLICABLE)
   FORM A5: FORM CONCERNING THE FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014
   FORM A6: AMENDMENT AND QUALIFICATION BY BIDDER

2 Other documents required for bid evaluation purposes

   FORM B1: CERTIFICATE OF BIDDER’S ATTENDANCE AT THE COMPULSORY SITE CLARIFICATION MEETING
   FORM B2: RECORD OF ADDENDA TO BID DOCUMENTS
   FORM B3: COMPULSORY ENTERPRISE QUESTIONNAIRE
   FORM B4: DECLARATION OF INTEREST (SBD 4)
   FORM B5: DECLARATION OF BIDDER’S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (SBD 8)
   FORM B6: CERTIFICATE OF INDEPENDENT BID DETERMINATION (SBD 9)

3 Returnable Schedules for Technical Evaluation Purposes
3.1. METHOD STATEMENT BASED ON THE SCOPE OF WORK SPECIFIC TO THIS PROJECT.

3.2 PROJECT MANAGEMENT PLAN (PMP) SPECIFIC TO THIS PROJECT.

3.3 PROPOSED HEALTH, SAFETY, ENVIRONMENTAL AND QUALITY MANAGEMENT PLAN FOR THE EXECUTION OF THE SCOPE OF WORK FOR THIS CONTRACT AND A QUALITY MANAGEMENT SYSTEM OR EQUIVALENT.

4 Returnable Schedules which will form part of the Contract

FORM C1.1 – FORM OF OFFER AND ACCEPTANCE IN BID INVITATION

FORM C1.2 – CONTRACT DATA PROVIDED BY BIDDER

FORM C2.1 – PRICING SCHEDULE

FORM C3 – PREFERENCE CERTIFICATE AND PREFERENCE POINTS CLAIM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS (SBD 6.1)

4.1.4 T2.2: Returnable Schedules

The tenderer must complete the following returnable documents.

T2.2.1 RETURNABLE SCHEDULES REQUIRED FOR BID EVALUATION PURPOSES

T2.2.2 OTHER DOCUMENTS REQUIRED FOR BID EVALUATION PURPOSES

T2.2.3 RETURNABLE SCHEDULES FOR TECHNICAL EVALUATION PURPOSES

T2.2.4 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED INTO THE CONTRACT
T2.2.1 RETURNABLE SCHEDULES REQUIRED FOR BID EVALUATION PURPOSES

SCHEDULE 1: SCHEDULE OF KEY DESIGN AND CONSTRUCTION PERSONNEL

SCHEDULE 2: CERTIFIED COPIES OF PROFESSIONAL QUALIFICATIONS OF KEY DESIGN AND CONSTRUCTION PERSONNEL

SCHEDULE 3: CERTIFIED COPIES OF PROFESSIONAL REGISTRATION OF KEY DESIGN AND CONSTRUCTION PERSONNEL

SCHEDULE 4: CURRICULUM VITAE OF KEY DESIGN AND CONSTRUCTION PERSONNEL

SCHEDULE 5: PROJECT ORGANISATIONAL CHART FOR KEY DESIGN AND CONSTRUCTION PERSONNEL

SCHEDULE 6: BIDDING ENTITY PAST EXPERIENCE IN DELIVERING SIMILAR POWER AND AIR-CONDITIONING UPGRADE CONTRACTS AND OTHER PROJECTS OF SIMILAR SCALE

SCHEDULE 7: THREE (3) CREDIBLE REFERENCES OF THE BIDDING ENTITY, SUBCONTRACTORS AND JOINT VENTURE PARTNERS

SCHEDULE 8: EVIDENCE OF THE BIDDER, SUBCONTRACTOR & JV PARTNERS EXISTING SOCIO-ECONOMIC DEVELOPMENT ACTIVITIES AND WHAT WILL BE IMPLEMENTED SPECIFIC TO THIS CONTRACT

FORM A1: AUTHORITY FOR SIGNATORY

FORM A2: TENDERER’S BANK DETAILS AND FINANCIAL REFERENCES

FORM A3: CERTIFICATE OF INSURANCE COVER

FORM A4: CERTIFICATE OF AUTHORITY FOR JOINT VENTURE (IF APPLICABLE)

FORM A5: FORM CONCERNING THE FULFILMENT OF THE CONSTRUCTION REGULATIONS, 2014

FORM A6: AMENDMENT AND QUALIFICATION BY BIDDER
### SCHEDULE 1: SCHEDULE OF KEY DESIGN AND CONSTRUCTION PERSONNEL

<table>
<thead>
<tr>
<th>Key Design &amp; Construction Personnel</th>
<th>Name</th>
<th>Qualifications</th>
<th>Registration Number</th>
<th>No of years’ experience in terms of required skills</th>
<th>Company Name &amp; Physical address and contact details of local office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design Team:</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Project Manager</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Cooling Design Specialist</td>
<td></td>
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<tr>
<td>Mechanical Engineer</td>
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<tr>
<td>Building Electrical Engineer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key Design &amp; Construction Personnel</td>
<td>Name</td>
<td>Qualifications</td>
<td>Registration Number</td>
<td>No of years' experience in terms of required skills</td>
<td>Company Name &amp; Physical address and contact details of local office</td>
</tr>
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<td>---------------------------------------------------</td>
<td>-------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Construction Team:</strong></td>
<td></td>
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</tr>
<tr>
<td>Project Manager (The Incumbent may be the same as above)</td>
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</tr>
<tr>
<td>Site Agent/Foreman (Full time on site)</td>
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<td></td>
<td></td>
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<tr>
<td>Master Installation Electrician (Full time on site)</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Occupational Health, Safety &amp; Environmental (SHE) Representative (Full time on site)</td>
<td></td>
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<td></td>
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<td></td>
</tr>
</tbody>
</table>
NOTE: SCHEDULE 2 & SCHEDULE 3: CERTIFIED COPIES OF PROFESSIONAL QUALIFICATIONS AND PROFESSIONAL REGISTRATION OF KEY DESIGN AND CONSTRUCTION PERSONNEL TO BE APPENDED TO SCHEDULE 1
SCHEDULE 4: CURRICULUM VITAE TEMPLATE OF KEY DESIGN AND CONSTRUCTION PERSONNEL LISTED IN SCHEDULE 1

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:

<table>
<thead>
<tr>
<th>Qualification</th>
<th>Institution</th>
<th>Date Obtained</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

6. Membership of Professional Bodies

   Body:

   Registration Number:

7. Key Qualifications relevant to this project:
8. Key skills and expertise relevant to this project:

9. High-level overview of professional experience directly related to the role of the team member in **this project**:

<table>
<thead>
<tr>
<th>Date (From – To)</th>
<th>Client</th>
</tr>
</thead>
<tbody>
<tr>
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</table>

<table>
<thead>
<tr>
<th>Location</th>
<th>Position in firm or project role</th>
<th>High-level description of duties or responsibilities in position or project team</th>
</tr>
</thead>
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<tr>
<th>Date (From – To)</th>
<th>Client</th>
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<tbody>
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<tr>
<td>Location</td>
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<td>Position in firm or project role</td>
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<td>Date (From – To)</td>
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<tr>
<td>Client</td>
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<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Position in firm or project role</td>
<td></td>
</tr>
<tr>
<td>High-level description of duties or responsibilities in position or project team</td>
<td></td>
</tr>
</tbody>
</table>

10. **References:**

Name:

Position:

Tel:

Email:
NOTE: SCHEDULE 5 PROJECT ORGANISATIONAL CHART FOR KEY DESIGN AND CONSTRUCTION PERSONNEL TO BE PROVIDED
SCHEDULE 6: BIDDING ENTITY PAST EXPERIENCE IN DELIVERING SIMILAR COOLING UPGRADE AND OTHER PROJECTS OF SIMILAR SCALE (LISTS OF CURRENT AND COMPLETED PROJECTS TO BE SUBMITTED). MUST INCLUDE ALL CONSULTANTS AND SUB-CONTRACTORS.

<table>
<thead>
<tr>
<th>PROJECT/EMPLOYER (Name, tel. no and fax no)</th>
<th>NATURE OF WORK</th>
<th>VALUE OF WORK</th>
<th>YEAR OF COMPLETION</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>
SCHEDULE 7: REFERENCE TEMPLATE (MINIMUM OF 3) FOR THE BIDDING ENTITY, FOR SUB-CONTRACTORS AND JOINT VENTURE PARTNERS

1.1. References for Bidding Entity, Sub-contractors and Joint Venture Partners

The bidding entity, its sub-contractors and joint venture partners must provide at least three (3) credible, written and contactable references each from the clients for whom projects have been undertaken similar to the nature of the SKA Power and Air-Conditioning upgrade and has indicated their willingness to take SARAO representatives on such site visits to such client premises. The references must be provided in the following format:

<table>
<thead>
<tr>
<th>Company</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Client Point of Contact &amp; Tel Number</td>
<td></td>
</tr>
<tr>
<td>Date of Project (From – To)</td>
<td></td>
</tr>
<tr>
<td>Description of Project</td>
<td></td>
</tr>
<tr>
<td>Role of bidder in project</td>
<td></td>
</tr>
<tr>
<td>Professionalism (please justify reasons for scoring in columns adjacent)</td>
<td>Poor Score 1</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>Was the project delivered on time? If not, why not?</td>
<td>Poor Score 1</td>
</tr>
<tr>
<td>Was the project delivered within budget? If not, why not?</td>
<td>Poor Score 1</td>
</tr>
<tr>
<td>Was the project delivered to the</td>
<td>Poor</td>
</tr>
<tr>
<td><strong>required satisfaction/quality to the Client? If not, why not?</strong></td>
<td>Score 1</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
<td>---------</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Were there contract variations in the project? If yes, list them and the reason for them</strong></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Role of bidder in project</strong></th>
<th>Poor</th>
<th>Average</th>
<th>Met requirements</th>
<th>Exceeded requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Score 1</td>
<td>Score 2</td>
<td>core 3</td>
<td>Score 4</td>
</tr>
</tbody>
</table>
Would you use the Bidder/Sub-contractors/JV Partners again?

Yes

No (reasons)

Overall Impression:

Company Representative: .................................................................

Position in Company: ........................................................................

Company Stamp and Date (Reference must be done in 2016):
NOTE: SCHEDULE 8 METHOD STATEMENT BASED ON THE SCOPE OF WORK SPECIFIC TO THIS PROJECT
NOTE: SCHEDULE 9 PROJECT MANAGEMENT PLAN (PMP) SPECIFIC TO THIS PROJECT
NOTE: SCHEDULE 10 HEALTH, SAFETY, ENVIRONMENTAL AND QUALITY (SHEQ) MANAGEMENT PLAN FOR THE EXECUTION OF THIS CONTRACT AND A QUALITY MANAGEMENT SYSTEM OR EQUIVALENT, BASED ON QUALITY MANAGEMENT PRINCIPALS (THIS IS APPLICABLE TO SQ BIDDERS)
### SCHEDULE 11: EVIDENCE OF THE BIDDER, SUB-CONTRACTORS AND JOINT VENTURE PARTNERS SOCIO-ECONOMIC DEVELOPMENT ACTIVITIES AND PROPOSED ACTIVITIES SPECIFIC TO THIS PROJECT

The bidder, joint venture partners and sub-contractors must provide evidence of the entities implementing skills development, and/or mentorship programmes and corporate social investment programmes within each entity and the value of all entities investment into skills development and/or mentorship programmes. The bidder must provide information on these programmes as part of its response to this bid as well as what skills development programme/ corporate social investment programme will be proposed for the scope of this project. The response must be provided in the following format:

<table>
<thead>
<tr>
<th>Bidder Name / Joint Venture Name / Subcontractor</th>
<th>Description of skills development programme/s &amp; number of staff participating</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Description of mentorship programmes (if any) and number of people in programme</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Monetary value of programmes to date &amp; awards</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Description of corporate social investment (CSI) programmes implemented by bidding entities</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of people impacted by</td>
<td></td>
</tr>
<tr>
<td>Implementation of CSI programme</td>
<td></td>
</tr>
<tr>
<td>---------------------------------</td>
<td>---</td>
</tr>
<tr>
<td>Total monetary value of CSI programmes implemented</td>
<td></td>
</tr>
<tr>
<td>Description of what the Bidder and partners propose in terms of skills development / corporate social investment for this project</td>
<td></td>
</tr>
</tbody>
</table>
FORM A1: AUTHORITY FOR SIGNATORY

Signatories for close corporations and companies shall confirm their authority by attaching to this form a duly signed and dated copy of the relevant resolution of their members or their board of directors, as the case may be.

Notes to Bidder:

1. In the event that the Bidder is a joint venture, a certificate is required from each member of the joint venture, clearly setting out:
   - authority for signatory,
   - undertaking to formally enter into a joint venture contract should an award be made to the joint venture,
   - name of designated lead member of the intended joint venture

An example for a company is shown below:

"By resolution of the board of directors passed on (date)…………………………………………………

Mr ……………………………………………………………………………………………………………….

has been duly 65authorized to sign all documents in connection with the Tender for Contract No

……………………………………………….. and any Contract which may arise there from on behalf of

(BLOCK CAPITALS) …………………………………………………………………………………………………

……………………………………………………………………………………………………………………

……………………………………………………………………………………………………………………

SIGNED ON BEHALF OF THE COMPANY : …………………………………………………………………

IN HIS CAPACITY AS : …………………………………………………………………

DATE : …………………………………………………………………

FULL NAMES OF SIGNATORY : …………………………………………………………………

AS WITNESSES : 1 …………………………………………………………………

: 2 …………………………………………………………………
FORM A2:  BIDDER’S BANK DETAILS AND FINANCIAL REFERENCES

Notes to Bidder:

1. The Bidder shall attach to this form a letter from the bank at which he declares he conducts his account. The contents of the bank’s letter must state the credit rating that it, in addition to the information required below, accords to the tenderer for the business envisaged by this tender. Failure to provide the required letter with the tender submission may render the Bidder’s offer unresponsive.

2. The Bidder’s banking details as they appear below shall be completed.

3. In the event that the tenderer is a joint venture enterprise, details of all the members of the joint venture shall be similarly provided and attached to this form.

The tenderer shall provide the following:

(i) Name of Account Holder: ..........................................................................................................................

(ii) Account Number: ....................................................................................................................................... 

(iii) Bank name: .................................................................................................................................................

(iv) Branch Number: .......................................................................................................................................... 

(v) Bank and branch contact details: ................................................................................................................ 

..................................................................................................................................................................

SIGNED ON BEHALF OF BIDDER: .....................................................................................................................
FORM A3: CERTIFICATE OF INSURANCE COVER

Note to Bidder:
In the event of the Bidder being a joint venture/consortium the details of the individual members must also be provided.

Refer to Particular Conditions of Tender. Professional Indemnity Insurance must be a minimum of double the contract value for this contract.

The Bidder shall provide the following details of this insurance cover:

(i) Name of Bidder: ........................................................................................................................................

(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: ..................................................................................................................................................

The successful Bidder shall take full responsibility to restore any damaged existing NRF (SARAO) infrastructure to the status it was prior to damage.

SIGNED ON BEHALF OF BIDDER: ....................................................................................................................
FORM A4: CERTIFICATE OF AUTHORITY FOR JOINT VENTURE (if applicable)

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this bid offer in Joint Venture and hereby authorised Mr./Me. ........................................
.............................................................................................................................................. , authorised signatory of the company ...............................................
.............................................................................................................................................. , 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.

<table>
<thead>
<tr>
<th>NAME OF FIRM</th>
<th>ADDRESS</th>
<th>DULY AUTHORISED SIGNATORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lead partner:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participation: %</td>
<td></td>
<td>Signature ................................</td>
</tr>
<tr>
<td></td>
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<td>Name ..................................</td>
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<td>Designation ........................</td>
</tr>
<tr>
<td>Partner 2:</td>
<td></td>
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<tr>
<td>Participation: %</td>
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<td>Signature ................................</td>
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<td>Name ..................................</td>
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<td>Designation ........................</td>
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<tr>
<td>Partner 3:</td>
<td></td>
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<tr>
<td>Participation: %</td>
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<td>Signature ................................</td>
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<td>Name ..................................</td>
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<td>Designation ........................</td>
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<tr>
<td>Partner 4:</td>
<td></td>
<td></td>
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<tr>
<td>Participation: %</td>
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<td>Signature ................................</td>
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<tr>
<td></td>
<td></td>
<td>Name ..................................</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Designation ........................</td>
</tr>
</tbody>
</table>

Signed: ___________________________ Date: ___________________________

Name: ___________________________ Position: ___________________________

The Bidder must be a single legal entity which is registered with the CIDB as a Mechanical Engineering Design, Manufacture and Installation company with a Mechanical Engineering Works 6ME grading, with all other necessary expertise secured via subcontract or under a Joint Venture Agreement. A Joint Venture may be considered between CIDB Registered companies to make up the required grading in terms of Table E of the relevant CIDB grading document. Should there be more than two Joint Venture partners, the CIDB Registered ME Graded company with the higher grading must be the lead company in the JV and must maintain a higher stake than the other Joint Venture partners combined.

The bid is only open to South African companies. The NRF will enter into a single contract for the delivery of the work set out in the Scope of Work for this bid;

SIGNED ON BEHALF OF BIDDER: ..........................................................
FORM A5: FORM CONCERNING THE FULFILMENT 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) 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:

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6 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: ___________________________  Date: ___________________________
Name: ___________________________  Position: ___________________________
Bidder: ___________________________

SIGN ON BEHALF OF BIDDER: ……………………………………………………………………………………………………………………
FORM A6: AMENDMENTS AND QUALIFICATION BY BIDDER

Refer to General Conditions of Contract

<table>
<thead>
<tr>
<th>PAGE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
</table>

SIGNED ON BEHALF OF BIDDER:  ..............................................................................................................
T2.2.2 OTHER DOCUMENTS REQUIRED FOR BID EVALUATION PURPOSES

FORM B1: CERTIFICATE OF BIDDER'S ATTENDANCE AT THE COMPULSORY SITE CLARIFICATION MEETING

FORM B2: RECORD OF ADDENDA TO BID DOCUMENTS

FORM B3: COMPULSORY ENTERPRISE QUESTIONNAIRE

FORM B4: DECLARATION OF INTEREST (SBD 4)

FORM B5: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (SBD 8)

FORM B6: CERTIFICATE OF INDEPENDENT BID DETERMINATION (SBD 9)
FORM B1: CERTIFICATE OF BIDDER'S ATTENDANCE AT THE COMPULSORY CLARIFICATION MEETING

This is to certify that I, ..........................................................................................................

Representative of (Bidder) ............................................................................................... 

..........................................................................................................................................

of (address) ......................................................................................................................

..........................................................................................................................................

..........................................................................................................................................

..........................................................................................................................................

Telephone number ............................................................................................................

..........................................................................................................................................

Fax number ....................................................................................................................... 

..........................................................................................................................................

Visited and examined the Site on (date) ............................................................................

..........................................................................................................................................

In the company of (Employer) ...........................................................................................

..........................................................................................................................................

..........................................................................................................................................

..........................................................................................................................................

BIDDER'S REPRESENTATIVE ............................................................................................

..........................................................................................................................................

..........................................................................................................................................

EMPLOYER'S REPRESENTATIVE ......................................................................................

..........................................................................................................................................

...........................................................................................................................................
**FORM B2: RECORD OF ADDENDA TO BID DOCUMENTS**

We confirm that the following communications issued by the Employer before the submission of this bid offer, amending the bid documents, have been taken into account in this bid offer:

<table>
<thead>
<tr>
<th>Date</th>
<th>Title or details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>3</td>
<td></td>
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<td>4</td>
<td></td>
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<td>9</td>
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</tr>
<tr>
<td>10</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td></td>
</tr>
</tbody>
</table>

Attach additional pages if more space is required.

Signed ...........................................  Date: ...........................................

Name: ...........................................  Position: ...........................................

SIGNED ON BEHALF OF BIDDER: ........................................................................................................

**FORM B3: COMPULSORY ENTERPRISE QUESTIONNAIRE**
The following particulars must be furnished. In the case of a joint venture, 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:** Association membership, if any: ………………………………………………………………………………………………………………………………………………………………………………………………………..

**Section 4:** Particulars of sole proprietors and partners in partnerships

<table>
<thead>
<tr>
<th>Name*</th>
<th>Identity number*</th>
<th>Personal income tax number*</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*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:** Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently, or has been within the last 12 months, in the service of any of the following:

- □ a member of any municipal council
- □ a member of any provincial legislature
- □ a member of the National Assembly or the National Council of Province
- □ a member of the board of directors of any municipal entity
- □ an official of any municipality or municipal entity
- □ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- □ a member of an accounting authority of any national or provincial public entity
- □ an employee of Parliament or a provincial legislature

If any of the above boxes are marked, disclose the following:

<table>
<thead>
<tr>
<th>Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder</th>
<th>Name of institution, public office, board or organ of state and position held</th>
<th>Status of service (tick appropriate column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Current</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Section 7: Record of spouses, children and parents in the service of the state**

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent or a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently, or has been within the last 12 months, in the service of any of the following:

- [ ] a member of any municipal council
- [ ] a member of any provincial legislature
- [ ] a member of the National Assembly or the National Council of Province
- [ ] a member of the board of directors of any municipal entity
- [ ] an official of any municipality or municipal entity
- [ ] an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999)
- [ ] a member of an accounting authority of any national or provincial public entity
- [ ] an employee of Parliament or a provincial legislature

<table>
<thead>
<tr>
<th>Name of spouse, child or parent</th>
<th>Name of institution, public office, board or organ of state and position held</th>
<th>Status of service (tick appropriate column)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Current</td>
</tr>
<tr>
<td></td>
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</tr>
</tbody>
</table>

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

a) to obtain a tax clearance certificate from the South African Revenue Services that my/our tax matters are in order;

b) confirms that neither the name of the enterprise or 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;

c) 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;

d) 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 tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest; and

e) 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 .................................................. Date

Name .................................................. Position ..................................................

Enterprise name ..........................................................................................................................
FORM B4: DECLARATION OF INTEREST (SBD 4)

DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state*, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to bid (includes a price quotation, advertised competitive bid, limited bid or proposal). In view of possible allegations of favouritism, should the resulting bid, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the bidder or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority and/or take an oath declaring his/her interest, where:
   - the bidder is employed by the state; and/or
   - the legal person on whose behalf the bidding document is signed, has a relationship with persons/a person who are/are involved in the evaluation and/or adjudication of the bid(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the bid.

2. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid:

   2.1 Full Name of bidder or his or her representative: .................................................................

   2.2 Identity Number: ..................................................................................................................

   2.3 Position occupied in the Company (director, shareholder etc.): ..............................................

   2.4 Company Registration Number: ...........................................................................................

   2.5 Tax Reference Number: ........................................................................................................

   2.6 VAT Registration Number: ....................................................................................................

* "State" means –
(a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
(b) any municipality or municipal entity;
(c) provincial legislature;
(d) national Assembly or the national Council of provinces; or
(e) Parliament.

2.7 Are you or any person connected with the bidder presently employed by the state? YES / NO

2.7.1 If so, furnish the following particulars:

   Name of person / director / shareholder/ member: .................................................................

   Name of state institution to which the person is connected: .....................................................

   Position occupied in the state institution: ..................................................................................

   Any other particulars:
   .............................................................................................................................................

   .............................................................................................................................................
2.8 Did you or your spouse, or any of the company's directors/shareholders/members or their spouses conduct business with the state in the previous twelve months? YES / NO

2.9.1 If so, furnish particulars:

........................................................................................................
........................................................................................................

2.9 Do you, or any person connected with the bidder, have any relationship (family, friend, other) with a person employed by the state and who may be involved with the evaluation and or adjudication of this bid? YES / NO

2.9.1 If so, furnish particulars.

........................................................................................................
........................................................................................................

2.10 Are you, or any person connected with the bidder, aware of any relationship (family, friend, other) between the bidder and any person employed by the state who may be involved with the evaluation and or adjudication of this bid? YES / NO

2.10.1 If so, furnish particulars.

........................................................................................................
........................................................................................................
2.11 Do you or any of the directors /shareholders/ members of the company have any interest in any other related companies whether or not they are bidding for this contract?

YES / NO

2.11.1 If so, furnish particulars:

........................................................................................................................................
........................................................................................................................................

DECLARATION

I, THE UNDERSIGNED (NAME)........................................................................................................

CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 2.1 TO 2.11.1 ABOVE IS CORRECT.
I ACCEPT THAT THE STATE MAY ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.................................................................  .................................................................
Signature                                           Date

.................................................................  .................................................................
Position                                             Name of bidder
FORM B5: DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES (SBD 8)

DECLARATION OF BIDDER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES

1. This Standard Bidding Document must form part of all bids invited.

2. It serves as a declaration to be used by institutions in ensuring that when goods and services are being procured, all reasonable steps are taken to combat the abuse of the supply chain management system.

3. The bid of any bidder may be disregarded if that bidder, or any of its directors have:
   a. abused the institution's supply chain management system;
   b. committed fraud or any other improper conduct in relation to such system; or
   c. failed to perform on any previous contract.

4. In order to give effect to the above, the following questionnaire must be completed and submitted with the bid.

<table>
<thead>
<tr>
<th>Item</th>
<th>Question</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.1</td>
<td>Is the bidder or any of its directors listed on the National Treasury's database as companies or persons prohibited from doing business with the public sector? (Companies or persons who are listed on this database were informed in writing of this restriction by the National Treasury after the audit alternus partem rule was applied).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.1.1</td>
<td>If so, furnish particulars:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 4.2  | Is the bidder or any of its directors listed on the Register for Tender Defaulters in terms of section 29 of the Prevention and Combating of Corrupt Activities Act (No 12 of 2004)?
To access this Register enter the National Treasury’s website, www.treasury.gov.za, click on the icon “Register for Tender Defaulters” or submit your written request for a hard copy of the Register to facsimile number (012) 3265445. |     |    |
| 4.2.1| If so, furnish particulars:                                                                                                                                                                           |     |    |
| 4.3  | Was the bidder or any of its directors convicted by a court of law (including a court outside of the Republic of South Africa) for fraud or corruption during the past five years? |     |    |
| 4.3.1| If so, furnish particulars:                                                                                                                                                                           |     |    |
| 4.4  | Was any contract between the bidder and any organ of state terminated during the past five years on account of failure to perform on or comply with the contract? |     |    |
| 4.4.1| If so, furnish particulars:                                                                                                                                                                           |     |    |
CERTIFICATION

I, THE UNDERSIGNED (FULL NAME)..............................................................
CERTIFY THAT THE INFORMATION FURNISHED ON THIS DECLARATION
FORM IS TRUE AND CORRECT.

I ACCEPT THAT, IN ADDITION TO CANCELLATION OF A CONTRACT,
ACTION MAY BE TAKEN AGAINST ME SHOULD THIS DECLARATION
PROVE TO BE FALSE.

.............................................  ..........................................
Signature                          Date

.............................................  ..........................................
Position                           Name of Bidder  J3565bW
FORM B6: CERTIFICATE OF INDEPENDENT BID DETERMINATION (SBD 9)

CERTIFICATE OF INDEPENDENT BID DETERMINATION

1 This Standard Bidding Document (SBD) must form part of all bids¹ invited.

2 Section 4 (1) (b) (iii) of the Competition Act No. 89 of 1998, as amended, prohibits an agreement between, or concerted practice by, firms, or a decision by an association of firms, if it is between parties in a horizontal relationship and if it involves collusive bidding (or bid rigging).² Collusive bidding is a per se prohibition meaning that it cannot be justified under any grounds.

3 Treasury Regulation 16A9 prescribes that accounting officers and accounting authorities must take all reasonable steps to prevent abuse of the supply chain management system and authorizes accounting officers and accounting authorities to:

a. disregard the bid of any bidder if that bidder, or any of its directors have abused the institution’s supply chain management system and or committed fraud or any other improper conduct in relation to such system.

b. cancel a contract awarded to a supplier of goods and services if the supplier committed any corrupt or fraudulent act during the bidding process or the execution of that contract.

4 This SBD serves as a certificate of declaration that would be used by institutions to ensure that, when bids are considered, reasonable steps are taken to prevent any form of bid-rigging.

5 In order to give effect to the above, the attached Certificate of Bid Determination (SBD 9) must be completed and submitted with the bid:

¹ Includes price quotations, advertised competitive bids, limited bids and proposals.

² Bid rigging (or collusive bidding) occurs when businesses, that would otherwise be expected to compete, secretly conspire to raise prices or lower the quality of goods and / or services for purchasers who wish to acquire goods and / or services through a bidding process. Bid rigging is, therefore, an agreement between competitors not to compete.
CERTIFICATE OF INDEPENDENT BID DETERMINATION

I, the undersigned, in submitting the accompanying bid:

_______________________________________________________________

(Bid Number and Description)

in response to the invitation for the bid made by:

_______________________________________________________________

(Name of Institution)

do hereby make the following statements that I certify to be true and complete in every respect:

I certify, on behalf of: ____________________________ that:

(Name of Bidder)

1. I have read and I understand the contents of this Certificate;

2. I understand that the accompanying bid will be disqualified if this Certificate is found not to be true and complete in every respect;

3. I am authorized by the bidder to sign this Certificate, and to submit the accompanying bid, on behalf of the bidder;

4. Each person whose signature appears on the accompanying bid has been authorized by the bidder to determine the terms of, and to sign the bid, on behalf of the bidder;

5. For the purposes of this Certificate and the accompanying bid, I understand that the word "competitor" shall include any individual or organization, other than the bidder, whether or not affiliated with the bidder, who:

   (a) has been requested to submit a bid in response to this bid invitation;

   (b) could potentially submit a bid in response to this bid invitation, based on their qualifications, abilities or experience; and

   (c) provides the same goods and services as the bidder and/or is in the same line of business as the bidder.
6. 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 consortium\(^2\) will not be construed as collusive bidding.

7. In particular, without limiting the generality of paragraphs 6 above, there has been no consultation, communication, agreement or arrangement with any competitor regarding:
   (a) prices;
   (b) geographical area where product or service will be rendered (market allocation)
   (c) methods, factors or formulas used to calculate prices;
   (d) the intention or decision to submit or not to submit, a bid;
   (e) the submission of a bid which does not meet the specifications and conditions of the bid; or
   (f) bidding with the intention not to win the bid.

8. In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications and conditions or delivery particulars of the products or services to which this bid invitation relates.

9. The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.

\(^2\) 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.
10. 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.

----------------------------------  ----------------------------------
Signature                        Date

----------------------------------  ----------------------------------
Position                         Name of Bidder

Js514w2
## T2.2.3. RETURNABLE SCHEDULES FOR TECHNICAL EVALUATION PURPOSES

### Stage 2 Technical Evaluation

<table>
<thead>
<tr>
<th>Capability which addresses the following aspects:</th>
<th>Weighting</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Schedule of Key Design and Construction Personnel; All proposed Key Design and Construction personnel's information; Qualification, Experience and Professional registration) to be included. Additional Qualifying requirement - Only personnel included on this schedule will be assessed in terms of qualifying criteria</td>
<td>20 (Total)</td>
</tr>
<tr>
<td>1.1 Design Team:</td>
<td></td>
</tr>
<tr>
<td>Project Manager (Min. 7 Years' experience)</td>
<td>2</td>
</tr>
<tr>
<td>Cooling Design Specialist (Min. 7 Years' experience)</td>
<td>2.5</td>
</tr>
<tr>
<td>Mechanical Engineer (Min. 7 Years' experience)</td>
<td>2.5</td>
</tr>
<tr>
<td>Building Electrical Engineer (Min. 7 Years' experience)</td>
<td>2</td>
</tr>
<tr>
<td>1.2 Construction Team:</td>
<td></td>
</tr>
<tr>
<td>Project Manager (Min. 7 Years' Mechanical Installation – Cooling experience) <em>(Can be the same individual as above)</em></td>
<td>2</td>
</tr>
<tr>
<td>Site Agent/Foreman (Min. 7 Years’ Mechanical Installation experience) <em>(Full time on site)</em></td>
<td>2.5</td>
</tr>
<tr>
<td>Master Installation Electrician (LV) (Min. 7 Years’ experience) <em>(Full time on site)</em></td>
<td>2.5</td>
</tr>
<tr>
<td>SHE Representative (Min. 5 Years’ experience) <em>(Full time on site)</em></td>
<td>2</td>
</tr>
<tr>
<td>1.3 Certified copies of Professional Qualification. Append to Schedule 1: Key Design and Construction Personnel (All key Design and Construction personnel. Please attach in the order that personnel are listed on the schedule)</td>
<td></td>
</tr>
<tr>
<td>1.4 The Curriculum Vitae. The CVs of each individual must be appended to the Schedule of Key Design and Construction Personnel (Template for CV provided. All CVs to be provided in this template)</td>
<td></td>
</tr>
<tr>
<td>1.5 Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
<td></td>
</tr>
<tr>
<td>2. Previous Experience and Track Record:</td>
<td>35 (Total)</td>
</tr>
<tr>
<td>2. Bidding Entity past experience in delivering similar Power and Air-Conditioning upgrade contracts and other projects of similar scale (lists of current and completed projects to be submitted). Must include all Consultants and Sub-contractors.</td>
<td>25</td>
</tr>
<tr>
<td>3. References - The Bidding Entity, its sub-contractors and JV Partners must each provide at least three (3) credible, written and contactable references from Clients for whom projects have been undertaken similar to the nature of the SKA site and building requirements and have indicated their willingness to take SARAO representatives on such site visit to such Client premises if requested</td>
<td>10</td>
</tr>
</tbody>
</table>
### 3. Method Statement, Project Management and SHEQ Management Plans specific to this project which addresses the following:

<table>
<thead>
<tr>
<th>3.1 Method Statement based on the scope of work specific to this project.</th>
<th>The method statement must as a minimum address the following aspects:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Planning;</td>
</tr>
<tr>
<td></td>
<td>• Detailed Design process and approvals;</td>
</tr>
<tr>
<td></td>
<td>• Lead time for manufactured products &amp; transportation to site;</td>
</tr>
<tr>
<td></td>
<td>• Safety, Health, Environmental &amp; Quality considerations during the design phase;</td>
</tr>
<tr>
<td></td>
<td>• Construction process (including all testing);</td>
</tr>
<tr>
<td></td>
<td>• Safety, Health, Environmental &amp; Quality compliance during the construction phase;</td>
</tr>
<tr>
<td></td>
<td>• Testing and Verification; • Completion and handover</td>
</tr>
<tr>
<td></td>
<td>• Skills development;</td>
</tr>
<tr>
<td></td>
<td>• Corporate Social Investment;</td>
</tr>
<tr>
<td></td>
<td>Total 35</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.2 Project Management Plan (PMP) specific to this project.</th>
<th>Provide a detailed PMP for the duration of this contract. The PMP must as a minimum address the following aspects:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Overview and project strategy</td>
</tr>
<tr>
<td></td>
<td>• Project standards and setup</td>
</tr>
<tr>
<td></td>
<td>• Project Scope</td>
</tr>
<tr>
<td></td>
<td>• Cost and financial management</td>
</tr>
<tr>
<td></td>
<td>• Project Schedule (Including Appointment and Commencement of contract, Design Activities, Reviews and Approvals, Construction, Testing and Verification and Handover to Client)</td>
</tr>
<tr>
<td></td>
<td>• Risk Management</td>
</tr>
<tr>
<td></td>
<td>• Sub-contractor management</td>
</tr>
<tr>
<td></td>
<td>• System Engineering</td>
</tr>
<tr>
<td></td>
<td>• Information &amp; document management</td>
</tr>
<tr>
<td></td>
<td>• Communication and reporting</td>
</tr>
<tr>
<td></td>
<td>Total 32</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>3.3 Health, Safety, Environmental and Quality (SHEQ) Management Plan for the execution of this Contract and a Quality Management System or Equivalent, based on Quality Management principals, Certification and Compliance Standard (This is applicable to the SQ Bidders, the Manufacture should be available for a SARAO site inspection).</th>
<th>Provide a detailed SHEQ plan for the duration of this contract. The SHEQ plan must as a minimum address the following aspects:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Applicable SHEQ standards</td>
</tr>
<tr>
<td></td>
<td>• SHEQ measures during the contract</td>
</tr>
<tr>
<td></td>
<td>• SHEQ Compliance management</td>
</tr>
<tr>
<td></td>
<td>• SHEQ meetings</td>
</tr>
<tr>
<td></td>
<td>• Communication and reporting</td>
</tr>
<tr>
<td></td>
<td>Total 33</td>
</tr>
<tr>
<td></td>
<td>10</td>
</tr>
</tbody>
</table>

| 4. Localisation specific to this project which addresses the following: | 10 (Total) |
| 4.4 Evidence of the Bidder and JV partners existing Socio-Economic development activities and proposed Skills Transfer development plan specific for this contract. | Existing Socio-Economic development activities |
|  | Skills Transfer development plan specific for this contract |
|  | Total 44 |
|  | 10 |
|  | 2 |
|  | 8 |
All Bidders with bids that have been successful at the Stage Two level by meeting the minimum of 75% or a total of 75 points out of 100 points threshold will be invited to the financial opening, for further consideration.

The Bid Evaluation Committee will use the following prompts in evaluating Bidders’ responses to the Quality Criteria defined for this bid:
## Stage 2 Technical Evaluation

### Technical Criteria

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Proposed Key Design and Construction Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 Total</td>
<td>Score 1</td>
</tr>
</tbody>
</table>

#### 1. Capability which addresses the following aspects:

1.1 Schedule of Key Design and Construction Personnel; All proposed Key Design and Construction personnel’s information; Qualification, Experience and Professional registration to be included. Additional Qualifying requirement - Only personnel included on this schedule will be assessed in terms of qualifying criteria.

1.2 Certified copies of Professional Qualification. Append to Schedule 1: Key Design and Construction Personnel (All key Design and Construction personnel. Please attach in the order that personnel are listed on the schedule)

1.3 Certified copies of Professional Registration. Append to Schedule 1: Key Design and Construction Personnel (All key engineering personnel. Please attach in the order that personnel are listed on the schedule)

1.4 The Curriculum Vitae. The CVs of each individual must be appended to the Schedule of Key Design and Construction Personnel (Template for CV provided. All CVs to be provided in this template)

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Proposed Key Design and Construction Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Design Team:</td>
</tr>
<tr>
<td>2</td>
<td>Project Manager (Min. 7Years' experience)</td>
</tr>
<tr>
<td>2.5</td>
<td>Cooling Design Specialist (Min. 7Years' experience)</td>
</tr>
<tr>
<td>2.5</td>
<td>Mechanical Engineer (Min. 7Years' experience)</td>
</tr>
<tr>
<td>2</td>
<td>Building Electrical Engineer (Min. 7Years' experience)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Weighting</th>
<th>Proposed Key Design and Construction Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Construction Team:</td>
</tr>
<tr>
<td>2</td>
<td>Project Manager (Min. 7 Years' Mechanical Installation – Cooling experience) (Can be the same individual as above)</td>
</tr>
<tr>
<td>2.5</td>
<td>Site Agent/Foreman (Min. 7Years' Mechanical Installation experience) (Full time on site)</td>
</tr>
<tr>
<td>2.5</td>
<td>Master Installation Electrician (LV) (Min. 7Years' experience) (Full time on site)</td>
</tr>
<tr>
<td>2</td>
<td>SHE Representative (Min. 5Years' experience) (Full time on site)</td>
</tr>
</tbody>
</table>
### Stage 2 Technical Evaluation

<table>
<thead>
<tr>
<th>Technical Criteria</th>
<th>Weighting</th>
<th>Proposed Key Design and Construction Team</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
<th>Score 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.5 Project Organisational Chart for Key Design and Construction Personnel. (A project organisational structure identifying all resources indicated above and all support staff required to ensure successful delivery of the project, including interfaces with the SKA).</td>
<td>2</td>
<td>The Organogram and supplementary information presented is poor and there is insufficient information to assess whether the Bidder has sufficient resources to undertake this Contract</td>
<td>The Organogram and supplementary information is average, does not address all the requirements and leaves questions that the Bidder is capable of undertaking the Contract</td>
<td>The Organogram and supplementary information meets the requirements of this bid and confirms the Bidder’s capacity to undertake this Contract</td>
<td>The Organogram and supplementary information exceeds the requirements of this bid through the proposal of value-add options which are considered at the same cost or where a reduction in timelines is considered to reduce cost and schedule further</td>
<td></td>
</tr>
<tr>
<td>Technical Criteria</td>
<td>Weighting</td>
<td>Score 1</td>
<td>Score 2</td>
<td>Score 3</td>
<td>Score 4</td>
<td></td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td>--------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>2. Previous Experience and Track Record:</td>
<td>35 Total</td>
<td>2.1 Bidding Entity past experience in delivering similar Power and Air-Conditioning upgrade contracts and other projects of similar scale (lists of current and completed projects to be submitted). Must include all Consultants and Sub-contractors. 25 The Bidding entity has no experience in delivering similar Power and Air-Conditioning upgrade contracts and other projects of similar scale.</td>
<td>The Bidding entity has limited experience in delivering similar (Less than 3 Power and Air-Conditioning upgrade contracts) and other projects of similar scale.</td>
<td>The Bidding entity has relevant experience in delivering similar (3 Power and Air-Conditioning upgrade contracts) and other projects of similar scale.</td>
<td>The Bidding entity has extensive experience in delivering similar (More than 3 Power and Air-Conditioning upgrade contracts) and other projects of similar scale.</td>
<td></td>
</tr>
<tr>
<td>2.2 References - The Bidding Entity, its sub-contractors and JV Partners must each provide at least three (3) credible, written and contactable references from Clients for whom projects have been undertaken similar to the nature of the SKA Power and Air-Conditioning upgrade contracts and have indicated their willingness to take SARAO representatives on such site visit to such Client premises if requested.</td>
<td>10</td>
<td>Less than 3 reference letters are provided from each of the Bidding Entity, its sub-contractors and JV Partners. 1 of the letters has on average more than 50% &quot;Average&quot; scores and it has been indicated that the employer would use them again.</td>
<td>3 reference letters are provided from each of the Bidding Entity, its sub-contractors and JV Partners. 2 of the letters have on average more than 50% &quot;Average&quot; scores and it has been indicated that the employer would use them again.</td>
<td>3 Reference letters are provided from each of the Bidding Entity, its sub-contractors and JV Partners. 2 of the letters have on average more than 50% &quot;exceeded requirements&quot; scores and it has been indicated that the employer would use them again. 1 letter has on average more than 50% &quot;Met requirements&quot; scoring and it has been indicated that the employer would use them again.</td>
<td>3 Reference letters are provided from each of the Bidding Entity, its sub-contractors and JV Partners. 3 of the letters have on average more than 50% &quot;exceeded requirements&quot; scores and it has been indicated that the employer would use them again.</td>
<td></td>
</tr>
<tr>
<td>Technical Criteria</td>
<td>Weighting</td>
<td>Sub Criteria</td>
<td>Score 1</td>
<td>Score 2</td>
<td>Score 3</td>
<td>Score 4</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------</td>
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<td>--------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3. Method Statement, Project Management and SHEQ Management Plans specific to this project which addresses the following:</td>
<td>35 Total</td>
<td>3.1 Method Statement based on the scope of work specific to this project.</td>
<td>The method statement must as a minimum address the following aspects: Planning; Detailed Design process and approvals; Lead time for manufactured products &amp; transportation to site; Safety, Health, Environmental &amp; Quality considerations during the design phase; Construction process (including all testing); Safety, Health, Environmental &amp; Quality compliance during the construction phase; Testing and Verification; Completion and handover Skills development; Corporate Social Investment.</td>
<td>The method statement is generic and not tailored to address the specific project objectives and requirements. The approach does not adequately deal with the critical characteristics of the project.</td>
<td>The method statement is specifically tailored to address the specific project objectives and requirements. The approach is sufficiently flexible to accommodate changes that may occur during execution.</td>
<td>The method statement is specifically tailored and details ways to improve the project outcomes and the quality of the outputs which address the specific project objectives and requirements. The approach is sufficiently flexible to accommodate changes that may occur during execution.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>3.2 Project Management Plan (PMP) specific to this project.</td>
<td>Provide a detailed PMP for the duration of this contract. The PMP must as a minimum address the following aspects: Overview and project strategy Project standards and setup Project Scope Cost and financial management Project Schedule (Including Appointment and Commencement of contract, Design Activities, Reviews and Approvals, Construction, Testing and Verification and Handover to Client) Risk Management Sub-contractor management System Engineering Information &amp; document management Communication and reporting</td>
<td>The Project Management Plan is poor and does not meet the requirements for this criteria to be deemed sufficient for the project</td>
<td>The Project Management Plan meets the requirements with all the aspects required as part of the criteria are described in detail and the SARAO is satisfied that the Bidder is capable of managing the execution of the contract</td>
<td>The Project Management Plan exceeds the requirements in that it clearly defines how the contract will be successfully managed and leaves no doubt that the Bidder understands the requirements in terms of the project management and system engineering process and proposes clear processes &amp; procedures in terms of the management of cost, schedule, quality and risk</td>
</tr>
</tbody>
</table>
### Stage 2 Technical Evaluation

<table>
<thead>
<tr>
<th>Technical Criteria</th>
<th>Weighting</th>
<th>Sub Criteria</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
<th>Score 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.3 Health, Safety, Environmental and Quality (SHEQ) Management Plan for the</td>
<td>10</td>
<td>Provide a detailed SHEQ plan for the duration of this contract. The SHEQ plan</td>
<td>The SHEQ plan is poor and does not meet the requirements</td>
<td>The SHEQ Plan is generic and does not address project specific</td>
<td>The SHEQ plan meets the requirements with all the aspects required as</td>
<td>The SHEQ plan exceeds the requirements where innovative options</td>
</tr>
<tr>
<td>execution of this Contract and a Quality Management System or Equivalent, based</td>
<td></td>
<td>plan must as a minimum address the following aspects:</td>
<td>requirements</td>
<td>requirements</td>
<td>part of the criteria are described in detail and the SARAO.</td>
<td>(through technology/options/processes) are considered to manage</td>
</tr>
<tr>
<td>on Quality Management principals, Certification and Compliance Standard (This is</td>
<td></td>
<td>• Applicable SHEQ standards</td>
<td></td>
<td></td>
<td></td>
<td>SHEQ for the contract whilst also addressing: Health and Safety</td>
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<tr>
<td>applicable to the SQ Bidders, the Manufacture should be available for a SARAO site</td>
<td></td>
<td>• SHEQ measures during the contract</td>
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<td></td>
<td>analysis during the design phase and how the Bidder will manage (and</td>
</tr>
<tr>
<td>inspection).</td>
<td></td>
<td>• SHEQ Compliance management</td>
<td></td>
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<td>audit) during construction</td>
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<td></td>
<td></td>
<td>• SHEQ meetings</td>
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<td></td>
<td></td>
<td>• Communication and reporting</td>
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<td></td>
<td></td>
<td>5 Quality Management System or Equivalent, based on the following principals,</td>
<td>Quality Management System or Equivalent is poor and does not meet the</td>
<td>Quality Management System or Equivalent is generic and does not address</td>
<td>Quality Management System or Equivalent meets all the aspects and</td>
<td>Quality Management System or Equivalent exceeds the requirements</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Customer focus; Leadership; Involvement of people; Process approach; System</td>
<td>requirements</td>
<td>Quality Management principles</td>
<td>requirements of Quality Management principles</td>
<td>(through technology/options/processes) are considered to manage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>approach; Continual improvement; Fact-based decision making, and Mutually</td>
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<td></td>
<td>Quality during the design phase and how the Bidder will manage (and</td>
</tr>
<tr>
<td></td>
<td></td>
<td>beneficial supplier relationships</td>
<td></td>
<td></td>
<td></td>
<td>audit) during construction</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(This is applicable to SQ Bidders).</td>
<td></td>
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</tr>
</tbody>
</table>
Bidders must achieve a minimum of 75% or 75 points out of 100 points during this stage (Stage 2) to proceed to the Stage 3 Financial/B-BBEE evaluation.

Signed  ___________________________ Date  _________________________________

Name  ___________________________ Position  _______________________________

Bidder  __________________________________________________________________

SIGNED ON BEHALF OF BIDDER: ....................................................................................................................
T2.2.4 RETURNABLE SCHEDULES THAT WILL BE INCORPORATED IN THE CONTRACT

FORM C1.1 – FORM OF OFFER AND ACCEPTANCE IN BID INVITATION

FORM C1.2 – CONTRACT DATA PROVIDED BY BIDDER

FORM C2.1. – PRICING SCHEDULE

FORM C3 – PREFERENCE CERTIFICATE AND PREFERENCE POINTS CLAIM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS (SBD 6.1)
FORM C1.1 OFFER AND ACCEPTANCE (AGREEMENT)

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

Provision for Air-conditioning Upgrades for NRF SARAO's Karoo Array Processing Building (KAPB) of the MeerKAT telescope at the Losberg Site

The Bidder, identified in the Offer signature block below, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the Bidder, deemed to be duly authorized, signing this part of this Form of Offer and Acceptance, the Bidder 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.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE-ADDED TAX (VAT) 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 Consultant in the Conditions of Contract identified in the Contract Data.

Signature(s)  ____________________________    ________________________________
Name(s)  ____________________________    ________________________________
Capacity  ____________________________    ________________________________

______________________________________________________________
(Name and address of Organization)

Name and Signature of Witness  ____________________________    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. Acceptance of the Tenderer’s Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions in this Agreement and in the Contract that is the subject of this Agreement.

The terms of the contract are contained in:

- Agreements and Contract Data (which includes this Agreement)
- Pricing Schedule
- Scope of Work and Site Information.

And drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C3 above.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, 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 from the said documents are valid unless contained in this
Schedule, which must be duly signed by the authorized representative(s) of both parties.

Within 14 calendar days of the date of this form of acceptance (including the schedule of deviations if any) you shall deliver to the Employer (whose details are given in the Contract Data) the following:

- Proof of insurance in terms of the information provided in the Contract Data and Clause 18 of the FIDIC Conditions of Contract. Proof of currency of insured cover shall be provided on a monthly basis until contract completion
- Any other documentation to be provided in terms of the Conditions of Contract

The effective date of the contract shall be the date of this form of acceptance unless you, within seven (7) calendar days of the effective date, notify the Employer in writing of any justification why you cannot accept the contents of this Agreement.

The Commencement Date of the Contract shall be that on which the contract hand-over meeting is held which shall be no later than 28 calendar days after the date of this form, or earlier if circumstances demand and as agreed between tenderer/Employer.

Notwithstanding that a full, original-signed copy of the contract document containing all contract data an schedules (including that of accepted deviations) will be delivered to you, this form of acceptance constitutes the binding contract between us.
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 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 and 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.

<table>
<thead>
<tr>
<th>Subject</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
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<tr>
<td>3</td>
<td></td>
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<tr>
<td>4</td>
<td></td>
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<tr>
<td>5</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td></td>
</tr>
</tbody>
</table>
By the duly authorized representatives signing this Schedule of Deviations, the Employer and the Bidder 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 Tender Schedules, as well as any confirmation, clarification or change to the terms of the offer agreed by the Bidder 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.

FOR THE BIDDER:

Signature(s) ____________________________    ________________________________
Name(s) ____________________________    ________________________________
Capacity ____________________________    ________________________________

(Name and address of Organization)

Name and Signature of Witness ____________________________    Date __________________________

FOR THE EMPLOYER:

Signature(s) ____________________________    ________________________________
Name(s) ____________________________    ________________________________
Capacity ____________________________    ________________________________

(Name and address of Organization)

Name and Signature of Witness ____________________________    Date __________________________
CONFIRMATION OF RECEIPT

The Tenderer (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)

20 ………………. (year)

At …………………………………………………….. (place)

For the Contractor:  …………………………………………………………….

Signature

………………………………………………………………

Name

………………………………………………………………

Capacity

Signature and name of witness:  …………………………………………………………….

Signature

………………………………………………………………

Name
### PART 1: DATA PROVIDED BY THE EMPLOYER

#### C1.2.1 CONDITIONS OF CONTRACT

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

General Conditions which form part of the Conditions of Contract for Plant and Design Build for Electrical and Mechanical Plant, and for Building and Engineering Works, designed by the Contractor, First Edition 1999 (Yellow Book) published by the International Federation of Consulting Engineers.

Copies of these General Conditions (Yellow Book) 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).

#### C1.2.2 PARTICULAR CONDITIONS

Part A: References from Clauses in the General Conditions:

<table>
<thead>
<tr>
<th>Sub-Clause</th>
<th>Definitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1.2.2&amp;1.3</td>
<td>Employer’s Name and Address</td>
</tr>
<tr>
<td></td>
<td>NRF</td>
</tr>
<tr>
<td></td>
<td>NRF Building</td>
</tr>
<tr>
<td></td>
<td>South Gate</td>
</tr>
<tr>
<td></td>
<td>CSIR Complex</td>
</tr>
<tr>
<td></td>
<td>Meiring Naudé</td>
</tr>
<tr>
<td></td>
<td>Brummeria</td>
</tr>
<tr>
<td></td>
<td>Pretoria</td>
</tr>
<tr>
<td></td>
<td>South Africa</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:dhome@ska.ac.za">dhome@ska.ac.za</a></td>
</tr>
<tr>
<td>Telephone number</td>
<td>+27(0)21 506 7439</td>
</tr>
<tr>
<td>Facsimile number</td>
<td>+27(0)11 442 2454</td>
</tr>
<tr>
<td>1.1.2.3&amp;1.3</td>
<td>Contractor’s name and address</td>
</tr>
<tr>
<td>4.3</td>
<td>Contractor’s Representative’s name</td>
</tr>
<tr>
<td>1.1.2.4&amp;1.3</td>
<td>Engineer’s Name and address</td>
</tr>
<tr>
<td>1.1.3.3</td>
<td>Time for Completion of the works</td>
</tr>
<tr>
<td></td>
<td>275 Calendar days (including public holidays) for the whole of the works (Design 190 days, Construction 185 days)</td>
</tr>
<tr>
<td>1.1.3.7</td>
<td>Defects Notification Period</td>
</tr>
<tr>
<td></td>
<td>365 days</td>
</tr>
</tbody>
</table>
1.3 Electronic Transmission System  e-mail

1.4 Governing Law  Republic of South Africa

1.4 Ruling Language  English

1.4 Language for Communications  English

2.1 Time for access to the site  On completion of the Design and Approval Stage, unless otherwise agreed in writing by SARAO.

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

4.21 Contractor and Labour Participation Goals Penalties  R10 000.00 per month on failure to unreasonably meet the targets, as determined by the Engineer

5.1 Period for notifying unforeseeable errors, faults and defects in the Employer's Requirements  7 days

6.5 Normal working Hours  08:00 to 16:00

8.7 & 14.15(b) Delay damages for the Works  0.05% of the Final Contract Price per day, in the currencies and proportions in which the Contract Price is payable

8.7 Maximum amount of Delay damages  10% of the Final Contract Price

13.8 Adjustment for Changes in Cost  The Prices will be Fixed and Firm

<table>
<thead>
<tr>
<th>Coefficient; scope of index</th>
<th>Country of origin; currency of index</th>
</tr>
</thead>
<tbody>
<tr>
<td>a= 0.15 Fixed</td>
<td>n/a South Africa</td>
</tr>
<tr>
<td>b= ________________________</td>
<td></td>
</tr>
<tr>
<td>c= ________________________</td>
<td></td>
</tr>
<tr>
<td>d= ________________________</td>
<td></td>
</tr>
<tr>
<td>e= ________________________</td>
<td></td>
</tr>
</tbody>
</table>

14.2 Total advance payment  Not applicable

14.3 Percentage of retention  5% of completed works reducing to 2.5% upon issue of Taking-Over Certificate and the balance released upon issue of the Performance Certificate.

14.3 Limit of Retention Money  2.5% of the Accepted Contract Amount

14.6 Minimum amount of Interim Payment Certificates  R50'000.00

14.15 Currency/Currencies of Payment  South African Rands as named in the Section of the Form of Offer and Acceptance called “Offer”

Part B: Additional Clauses:

1 General Provisions

1.1 Definitions

Deleted and replace 1.1.1.1 with:
“Contract” means the Form of Offer and Acceptance, Contract Data, these Conditions, the Employer’s Requirements, the Specifications (Statement of Work), 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 1.1.1.2 with:

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

Deleted and replace 1.1.1.3 with:

“Letter of Acceptance” means the Form of Acceptance as contained in part C1.1 of the contract documents.

Deleted and replace 1.1.1.4 with:

“Letter of Tender” means the Form of Offer as contained in part C1.1 of the contract document.

Deleted and replace 1.1.1.6 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.

Deleted and replace 1.1.1.7 with:

“Contractor’s Proposal” means the information which the Contractor submitted with the Form of Offer and Acceptance, as included in the Contract. Such information shall include the proposal, structured as indicated in the Tender Data and information listed in the Returnable Schedules and may also include the Contractor’s preliminary design.

Deleted and replace 1.1.1.8 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.

Add the following to 1.1.1.8:


Deleted and replace 1.1.1.9 with:

“Appendix to Tender” means the completed section C1.2.2 “Contract Data”

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;
b) The Appendix to Tender within the Contract Data;
c) The Particular Conditions within the Contract Data;
d) These General Conditions;
e) The Employer’s requirements;
f) Standard and Project Specifications; and
g) The Schedules.

If any ambiguity or discrepancy is found in the documents, the engineer shall issue any necessary clarification or instruction.

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 1.12 Confidential Details

Add the following after the first paragraph:

“Any disclosure of information that form 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 3.4 Replacement of the Engineer

Change the notification period to:

“15 days”

CLAUSE 4 THE CONTRACTOR

Sub-Clause 4.4 Subcontractors

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

“The Contractor shall ensure that the requirements imposed on the Contractor by Sub-Clause 1.12 [Confidential Details] apply equally to each Subcontractor.”

Sub-Clause 4.16 Transport of Goods

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

“The Contractor shall request the Engineer’s permission to deliver any item of Goods to the Site. No Goods shall be delivered without this permission, which shall not relieve the Contractor from any obligation.”

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 4.21 Progress Reports

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

i) “Contractor and Labour participation goals, sub-contractors and suppliers, including their percentage participation in the Contract.”

j) The Contractor shall submit a monthly report indicating the targets that have been met, those that have not been met and the reasons thereof. The Engineer will make a determination as to whether the reasons for the variations are valid and justifiable. The Engineer shall after making the determination inform the contractor of such determination and the implications thereof.

Failure to reach the CLPG shall render the contractor liable for a penalty as specified in the Appendix to tender.
Sub-Clause 4.22  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 an 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 5  DESIGN

Sub-Clause 5.1 General Design Obligations

Add the following to the Sub-Clause at the end of the fourth paragraph:

“The Engineer and / or employer will review the Contractors Documents at the end of the Preliminary Design, the Detail Design Stages and during the Contract as and when required by the Engineer, prior to submission for approval by the Northern Cape Local Municipality.”

Sub-Clause 5.6 As-Built Documents

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

“The As-Built drawings shall be provided in DWG, DXF and PDF formats.”

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 6.7 Health and Safety

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), 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).

CLAUSE 8  COMMENCEMENT, DELAYS and SUSPENSION

Sub-Clause 8.2 Time for Completion

Add the following:

“The Contractor shall complete the preliminary and detail design within the time for Completion, as per latest accepted and approved programme.

CLAUSE 10  EMPLOYER’S TAKING OVER

Sub-Clause 10.2 Taking Over Parts of the Works

Delete this Sub-Clause and Replace with:

“The employer will not take over any parts of the works. Taking over of the fully completed works as defined in the scope of
works.

CLAUSE 13 VARIATIONS AND ADJUSTMENT

Sub-Clause 13.8 Adjustment in Cost

Replace the sub-clause with the following:

“The value of the payment certificate is to be adjusted in accordance with the Contract Price Adjustment Schedule determined according to the formula, where applicable:

\[(1 - x) \left[ \frac{C_t}{C_0} - 1 \right]\]

in which the symbols have the following meaning:

‘x’ is the proportion of “Ac” which is not subject to adjustment. Unless otherwise stated in the Appendix this proportion shall be 0.15.

Where the index C shall be the Consumer Price Index for the historical metropolitan areas (CPI) as published by Statistics South Africa in Table B.1 of Statistical release P0141.

The suffix ‘o’ denotes the basic index applicable to the base month, which shall be the month prior of the expired 12 month fixed priced contract.

The suffix ‘t’ denotes the current index applicable to the month in which the last day of the period falls to which the relevant payment certificate relates.

Refer to Sub Clause 13.8 of the Particular Conditions in the conditions of contract.

CLAUSE 14 CONTRACT PRICE AND PAYMENT

Sub-Clause 14.6 Issue of Interim Payment Certificates

Insert the following at the end of the last sentence of the first paragraph:

', and shall include any amounts due to or from the Contractor in accordance with a decision by the DAB made under Sub-Clause 20.4 [Obtaining Dispute Adjudication Board’s Decision]’

Sub-Clause 14.7 Payment

Insert the following before ‘; and’:

‘including any amounts due in accordance with a decision by the DAB which have been included in the Interim Payment Certificate’

CLAUSE 18 INSURANCE

Delete and replace Clauses 18.1, 18.2, 18.3 and 18.4 with the following:

18.1 Insurances to be affected by the Employer

18.1.1 Notwithstanding anything elsewhere contained in this Contract and without limiting the obligations liabilities or responsibilities of the Contractor in any way whatsoever (including but not limited to any requirement for the provision by the Contractor of any other insurances) the Employer shall effect and maintain as appropriate the following insurances which are subject to the terms limits exceptions and conditions of the Policy:

CONTRACT WORKS Insurance - which will provide cover against accidental physical loss of or damage to the Works including temporary works, Plant and Materials intended to form part of the Permanent Works, for the full contract value (including VAT);
SASRIA (SPECIAL RISKS) Insurance – which will provide cover against riot and associated risks of damage to the Works, including temporary works, Plant and Materials intended to form part of the Permanent Works, with a limit of indemnity of the full contract value (excluding VAT);

PUBLIC LIABILITY Insurance - which will provide indemnity against the Insured Parties legal liability in the event of death of or injury to third party persons and/or accidental loss of or damage to third party property arising directly from the execution of the contract on or about the Site and occurring during the Period of Insurance for a Limit of Indemnity of R 75,000,000 including costs and expenses in respect of all claims arising from any one occurrence or series of occurrences consequent on or attributable to one source or original cause; and

PROFESSIONAL INDEMNITY Insurance – which will provide cover for Single Project Professional Indemnity for a Limit of Indemnity of R 50,000,000 in the aggregate including costs and expenses, from commencement of the construction period until completion.

18.1.2 The Employer shall pay any premium due in connection with the insurance affected by the Employer.

18.1.3 The Contractor shall not include any premium charges for this insurance except to the extent that he may deem necessary in his own interests to effect supplementary insurance to the insurance effected by the Employer. The Employer reserves the right to call for full information regarding insurance costs included by the Contractor.

18.1.4 Any further clarification of the scope of cover provided by the Policies arranged by the Employer should be obtained from the Employer or their Insurance Brokers, Marsh (Pty) Ltd Private Bag X14, Benmore, 2010 Telephone: 011-060 7263 E-mail: rex.brown@marsh.com Attention: Rex Brown

18.1.5 In the event of any occurrence which is likely to or could give rise to a claim under the insurances arranged by the Employer the Contractor shall:

a) in addition to any statutory requirement or other requirements contained in the Contract immediately notify the Employer’s Insurance Brokers or the Insurers by telephone or e-mail giving the circumstances nature and an estimate of the loss or damage or liability

b) complete a Claims Advice Form available from the Insurance Brokers to whom the form must be returned without delay

c) negotiate the settlement of claims with the Insurers through the Employer’s Insurance Brokers and shall when required to do so obtain the Employers approval of such settlement.

The Employer and Insurers shall have the right to make all and any enquiries on the site of the Works or elsewhere as to the cause and results of any such occurrence and the Contractor shall co-operate in the carrying out of such enquiries.

18.1.6 The Contractor will be liable for the amount of the Deductible (First Amount Payable) in respect of any claim made by or against the Contractor or Subcontractors under the insurances effected by the Employer.

Where more than one Contractor is involved in the same claim the Deductible will be borne in pro-rata amounts by each Contractor in proportion to the extent of each Contractor’s admitted claim.

The Deductibles (First Amount Payable) for which the Contractors are responsible and which are applicable in respect of each and every occurrence or series of occurrences attributable to one source or original cause giving rise to loss or damage or liability indemnifiable are as follows:

a) under the Contract Works Insurance – R 100,000 in respect of loss or damage arising out of all losses

b) under the SASRIA (Special Risks) Insurance – 0,100% of Contract Value, minimum R 2,500 and maximum R 25,000 in respect of theft claims only

c) under the Public Liability Insurance – R 25,000 in respect of all claims for loss or damage to third party
property only and R 100,000 in respect of liability arising out of Spread of Fire

d) under the **Professional Indemnity Insurance** – R 500,000 in respect of each and every occurrence

e) under any other insurances shall be as specified in such insurance policies.

18.1.7 Any amount which becomes payable to the Contractor or any of his Subcontractors as a result of a claim under the Contract Works Insurance shall if required by the Employer be paid net of the Deductible to the Employer who shall pay the Contractor from the proceeds of such payment upon rectification repair or reinstatement of the loss or damage but this provision shall not in any way affect the Contractor's obligations liabilities or responsibilities in terms of the Contract.

In respect of any amount which becomes payable as a result of a claim under any Public Liability Insurances the Contractor or his Subcontractors shall be required to pay the amount of the Deductible to the Insurer to facilitate settlement of such claim.

18.2 Insurances to be affected by the Contractor

18.2.1 Without in any way detracting from any requirements contained elsewhere in this contract the Contractor and Subcontractors shall where applicable provide as a minimum the following:

a) Insurance of Contractor’s Equipment (including tools offices and other temporary structures and contents) and other things (except those intended for incorporation into the Works) brought onto the Site for a sum sufficient to provide for their replacement.

b) Insurance in terms of the provisions of the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 as may be amended or in terms of any similar Workers Compensation and Unemployment Insurance enactment’s.

c) Motor Vehicle Liability Insurance comprising (as a minimum) "Balance of Third Party" including Passenger Liability risks for an Indemnity Limit of not less than R 5,000,000.

b) Where the Contract involves manufacturing and/or fabrication of the Works or parts thereof at premises other than at the Site the Contractor shall satisfy the **Employer** that all Plant and Materials for incorporation in the Works are adequately insured during manufacture and/or fabrication. In the event of the **Employer** having an insurable interest in such Works during manufacture or fabrication then such interest shall be noted by endorsement to the relevant Policies of Insurance.

c) Imported equipment or component parts or materials to be supplied in terms of this Contract which require any process of assembly or finishing in South Africa prior to delivery to the Site are to be insured by the Contractor up to the commencement of transit to Site of the assembled or finished equipment component parts or materials.

18.2.2 The insurances to be provided by the Contractor and his Subcontractor shall;

a) be effected with Insurers and on terms approved by the **Employer** – these terms shall be consistent with any terms agreed by both Parties before the date of the Letter of Acceptance. This agreement of terms shall take precedence over the provisions of this Clause

b) be maintained in force for whatever period the perils to be insured by the Contractor are at risk (including any Defects Notification Period during which the Contractor is responsible for the care of the Works)

c) within the respective periods stated in the Appendix to Tender submit to the **Employer** the relevant Policy or Policies of Insurance or evidence acceptable to the Employer that such insurances have been effected.

18.2.3 In the event that the Contractor or his Subcontractor receives any notice of cancellation or restrictive modification to the insurance provided to them they shall immediately notify the **Employer** in writing of such cancellation or restriction and shall advise what action the Contractor or his Subcontractor will take to remedy such action.

If the Contractor fails to effect and keep in force the insurances referred to then the **Employer** may effect and keep in force any such insurances and pay such premium or premiums as may be necessary for that purpose and from time
to time deduct the amount paid by the Employer from any monies due or which may become due to the Contractor or recover same as a debt from the Contractor.

18.3 Subcontractors

The Contractor shall:

k) ensure that all potential and appointed Subcontractors are aware of the whole contents of this clause, and
l) enforce the compliance by Subcontractors with this clause where applicable.

CLAUSE 20 CLAIMS, DISPUTES AND ARBITRATION

Sub-Clause 20.4 Obtaining Dispute Adjudication Board’s Decision

Insert the following as a new penultimate paragraph:

‘If the decision of the DAB requires a payment by one Party to the other Party, the DAB may require the payee to provide an appropriate security in respect of such payment’

Sub-Clause 20.7 Failure to Comply with Dispute Adjudication Board’s Decision

Replace Sub-Clause 20.7 in its entirety with:

‘In the event that a Party fails to comply with any decision of the DAB, whether binding or final and binding, then the other Party may, without prejudice to any other rights it may have, refer the failure itself to arbitration under Sub-Clause 20.6 [Arbitration] for summary or other expedited relief, as may be appropriate. Sub-Clause 20.4 [Obtaining Dispute Adjudication Board’s Decision] and Sub-Clause 20.5 [Amicable Settlement] shall not apply to this reference.’
**FORM C2.1. PRICING SCHEDULE - (FIXED AND FIRM PRICE FOR DURATION OF THE CONTRACT)**

(Standard Bidding Document 3.1. and 3.3.)

**NOTE:**

<table>
<thead>
<tr>
<th>Note</th>
<th>Details</th>
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<tbody>
<tr>
<td>Only fixed and firm price will be accepted. Non-fixed and firm prices (including prices subject to rates of exchange variations) will not be considered</td>
<td></td>
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<tr>
<td>Price quotes is <strong>fully inclusive</strong> of all costs including delivery to the specified NRF site; Value Added Tax (VAT) and other taxes (this includes all disbursement and travel costs) and Consumer Price Adjustment (CPA) per annum</td>
<td></td>
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<tr>
<td>A full breakdown of costs, including the detailed pricing schedules (Annexure A), contingencies, professional fees, travel and disbursements must be in format as set out below and, where applicable, in supporting schedules and provided</td>
<td></td>
</tr>
<tr>
<td>The completed detailed pricing schedule Annexure A shall form part of this tender submission and will be completed in <strong>black ink only</strong>.</td>
<td></td>
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<tr>
<td>The Conditions of Contract, the Contract Data and the Scope of Work shall be read in conjunction with the Pricing Schedule</td>
<td></td>
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<tr>
<td>Bid price in South African currency, foreign exchange risk is for the account of the bidder</td>
<td></td>
</tr>
<tr>
<td>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 <a href="http://www.stanza.org.za">www.stanza.org.za</a> or <a href="http://www.iso.org">www.iso.org</a> for information on standards)</td>
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</tr>
<tr>
<td>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</td>
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</table>

**OFFER TO BE VALID FOR** | **150 DAYS** | **FROM THE CLOSING DATE OF THE BID**
### PRICING SCHEDULE

Refer to Annexure A for Detailed Pricing Schedule

**NOTE: ALL SUMMARY COSTS CARRIED FROM DETAILED PRICING SCHEDULE ANNEXURE A. THE COMPLETED DETAILED PRICING SCHEDULE ANNEXURE A SHALL FORM PART OF THIS TENDER SUBMISSION AND WILL BE COMPLETED IN BLACK INK ONLY.**

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Unit</th>
<th>Bid Amount</th>
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<tbody>
<tr>
<td>1</td>
<td>PRELIMINARIES AND GENERAL</td>
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<tr>
<td>1.1</td>
<td>Preliminary and General</td>
<td>Sum</td>
<td>R</td>
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<td>2</td>
<td>DATA RACK COOLING</td>
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<td>Notes to Tenderers</td>
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<td>2.2</td>
<td>Piping</td>
<td>Sum</td>
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<td>2.3</td>
<td>Mechanical Equipment</td>
<td>Sum</td>
<td>R</td>
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<td>2.4</td>
<td>BMS &amp; Controls</td>
<td>Sum</td>
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<td>2.5</td>
<td>Electrical</td>
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<td>2.6</td>
<td>Ducting and Fittings</td>
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<td>2.7</td>
<td>Air Terminals</td>
<td>Sum</td>
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<td>2.8</td>
<td>Other</td>
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<td>2.9</td>
<td>Commissioning</td>
<td>Sum</td>
<td>R</td>
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<tr>
<td>2.10</td>
<td>Phased Installation</td>
<td>Sum</td>
<td>R</td>
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**SUB TOTAL (0+1+2)**  

**DESIGN FEES AND DISBURSEMENT**  

**TOTAL (EXCLUDING VAT)**  

**VALUE ADDED TAX (15%)**  

**TOTAL (INCLUDING VAT) CARRIED TO FORM C1.1 OFFER AND ACCEPTANCE AGREEMENT**  

SIGNED ON BEHALF OF BIDDER: ............................................................................................................................................
SUMMARY FOR BID OPENING PURPOSES

NAME OF BIDDER: ..............................................................................................................................................

OFFERED TOTAL: R..............................................................................................................................................
(Amount brought forward from
The Form of Offer)*

Signed by authorized representative of the Bidder: ............................................................................................

DATE: .........................................................................................................................................................

* Should any discrepancy occur between this figure and that stated in the Form of Offer and Acceptance, the latter shall apply.
All delivery costs indicated below must be included in the bid price for Pricing Schedule 1, for delivery at the prescribed destination.

“All applicable taxes” includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies.

1. The accompanying information must be used for the formulation of proposals
PERSONS WHO WILL BE INVOLVED IN THE PROJECT AND RATES APPLICABLE (These rates will be used as the basis for calculation in the case where additional work is required on the Contract)

<table>
<thead>
<tr>
<th>PERSON AND POSITION</th>
<th>HOURLY RATE (VAT INCL.)</th>
<th>DAILY RATE (VAT INCL)</th>
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<tr>
<th>PERSON AND POSITION</th>
<th>HOURLY RATE (INCL. VAT)</th>
<th>DAILY RATE (INCL. VAT)</th>
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</table>
OTHER EXPENSES (These rates will be used as the basis for calculation in the case where additional work is required on the Contract)

(Printing, Car Hire, Per/km mileage, Air travel, accommodation etc.)

<table>
<thead>
<tr>
<th>DESCRIPTION OF EXPENSE</th>
<th>RATE</th>
<th>QUANTITY</th>
<th>AMOUNT (INCL VAT)</th>
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</table>

SIGNED ON BEHALF OF BIDDER: ....................................................................................................................

FORM C3: PREFERENCE POINTS CLAIM IN TERMS OF PREFERENTIAL PROCUREMENT REGULATIONS, 2001

SBD 6.1

This preference form must form part of all bids invited. It contains general information and serves as a claim form for
preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, BIDDERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF B-BBEE, AS PRESCRIBED IN THE PREFERENTIAL PROCUREMENT REGULATIONS, 2011.

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to all bids:
- the 80/20 system for requirements with a Rand value of up to R1 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R1 000 000 (all applicable taxes included).

1.2 The value of this bid is estimated to exceed/not exceed R7 000 000 (all applicable taxes included) and therefore the...90/10... preference point system shall be applicable.

1.3 Preference points for this bid shall be awarded for:
   (a) Price; and
   (b) B-BBEE Status Level of Contribution.

1.4 The maximum points for this bid are allocated as follows:

<table>
<thead>
<tr>
<th></th>
<th>POINTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRICE</td>
<td></td>
</tr>
<tr>
<td>B-BBEE STATUS LEVEL OF CONTRIBUTION</td>
<td></td>
</tr>
<tr>
<td>Total points for Price and B-BBEE must not exceed</td>
<td>100</td>
</tr>
</tbody>
</table>

1.5 Failure on the part of a bidder to submit a B-BBEE Verification Certificate from a Verification Agency accredited by the South African Accreditation System (SANAS), or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or a sworn affidavit confirming annual turnover and level of black ownership in case of an EME and QSE together with the bid, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

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

2. DEFINITIONS

(a) “all applicable taxes” includes value-added tax, pay as you earn, income tax, unemployment insurance fund contributions and skills development levies;

(b) “B-BBEE” means broad-based black economic empowerment as defined in section 1 of the Broad-Based Black Economic Empowerment Act;

(c) “B-BBEE status level of contributor” means the B-BBEE status received by a measured entity based on its overall performance using the relevant scorecard contained in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act;

(d) “bid” means a written offer in a prescribed or stipulated form in response to an invitation by an organ of state for the provision of services, works or goods, through price quotations, advertised competitive bidding processes or proposals;

(e) “Broad-Based Black Economic Empowerment Act” means the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);
(f) “comparative price” means the price after the factors of a non-firm price and all unconditional discounts that can be utilized have been taken into consideration;

(g) “consortium or joint venture” 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;

(h) “contract” means the agreement that results from the acceptance of a bid by an organ of state;

(i) “EME” means an Exempted Micro Enterprise as defined by Codes of Good Practice under section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

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

(k) “functionality” means the measurement according to predetermined norms, as set out in the bid documents, of a service or commodity that is designed to be practical and useful, working or operating, taking into account, among other factors, the quality, reliability, viability and durability of a service and the technical capacity and ability of a bidder;

(l) “non-firm prices” means all prices other than “firm” prices;

(m) “person” includes a juristic person;

(n) “QSE” means a Qualifying Small Enterprise as defined by Codes of Good Practice under section 9(1) of the Broad-Based Black Economic Empowerment Act, 2003 (Act No. 53 of 2003);

(o) “rand value” means the total estimated value of a contract in South African currency, calculated at the time of bid invitations, and includes all applicable taxes and excise duties;

(p) “sub-contract” means the primary contractor’s assigning, leasing, making out work to, or employing, another person to support such primary contractor in the execution of part of a project in terms of the contract;

(q) “total revenue” bears the same meaning assigned to this expression in the Codes of Good Practice on Black Economic Empowerment, issued in terms of section 9(1) of the Broad-Based Black Economic Empowerment Act and promulgated in the Government Gazette on 9 February 2007;

(r) “trust” means the arrangement through which the property of one person is made over or bequeathed to a trustee to administer such property for the benefit of another person; and

(s) “trustee” means any person, including the founder of a trust, to whom property is bequeathed in order for such property to be administered for the benefit of another person.
3. **ADJUDICATION USING A POINT SYSTEM**

3.1 The bidder obtaining the highest number of total points will be awarded the contract.

3.2 Preference points shall be calculated after prices have been brought to a comparative basis taking into account all factors of non-firm prices and all unconditional discounts.

3.3 Points scored must be rounded off to the nearest 2 decimal places.

3.4 In the event that two or more bids have scored equal total points, the successful bid must be the one scoring the highest number of preference points for B-BBEE.

3.5 However, when functionality is part of the evaluation process and two or more bids have scored equal points including equal preference points for B-BBEE, the successful bid must be the one scoring the highest score for functionality.

3.6 Should two or more bids be equal in all respects, the award shall be decided by the drawing of lots.

4. **POINTS AWARDED FOR PRICE**

4.1 **THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS**

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

\[
P_{s} = 80 \left(1 - \frac{P_{t} - P_{\text{min}}}{P_{\text{min}}} \right) \quad \text{or} \quad P_{s} = 90 \left(1 - \frac{P_{t} - P_{\text{min}}}{P_{\text{min}}} \right)
\]

Where

\[
P_{s} = \text{Points scored for comparative price of bid under consideration}
\]

\[
P_{t} = \text{Comparative price of bid under consideration}
\]

\[
P_{\text{min}} = \text{Comparative price of lowest acceptable bid}
\]
### POINTS AWARDED FOR B-BBEE STATUS LEVEL OF CONTRIBUTION

5.1 In terms of Regulation 5 (2) and 6 (2) of the Preferential Procurement Regulations, preference points must be awarded to a bidder for attaining the B-BBEE status level of contribution in accordance with the table below:

<table>
<thead>
<tr>
<th>B-BBEE Status Level of Contributor</th>
<th>Number of points (90/10 system)</th>
<th>Number of points (80/20 system)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>10</td>
<td>20</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
<td>18</td>
</tr>
<tr>
<td>3</td>
<td>8</td>
<td>16</td>
</tr>
<tr>
<td>4</td>
<td>5</td>
<td>12</td>
</tr>
<tr>
<td>5</td>
<td>4</td>
<td>8</td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Non-compliant contributor</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

5.2 A bidder who qualifies as an EME in terms of the B-BBEE Act must submit a sworn affidavit confirming Annual Total Revenue and Level of Black Ownership.

5.3 A Bidder other than EME or QSE must submit their original and valid B-BBEE status level verification certificate or a certified copy thereof, substantiating their B-BBEE rating issued by a Registered Auditor approved by IRBA or a Verification Agency accredited by SANAS.

5.4 A trust, consortium or joint venture, will qualify for points for their B-BBEE status level as a legal entity, provided that the entity submits their B-BBEE status level certificate.

5.5 A trust, consortium or joint venture will qualify for points for their B-BBEE status level as an unincorporated entity, provided that the entity submits their consolidated B-BBEE scorecard as if they were a group structure and that such a consolidated B-BBEE scorecard is prepared for every separate bid.

5.6 Tertiary Institutions and Public Entities will be required to submit their B-BBEE status level certificates in terms of the specialized scorecard contained in the B-BBEE Codes of Good Practice.

5.7 A person will not be awarded points for B-BBEE status level if it is indicated in the bid documents that such a bidder intends sub-contracting more than 25% of the value of the contract to any other enterprise that does not qualify for at least the points that such a bidder qualifies for, unless the intended sub-contractor is an EME that has the capability and ability to execute the sub-contract.

5.8 A person awarded a contract may not sub-contract more than 25% of the value of the contract to any other enterprise that does not have an equal or higher B-BBEE status level than the person concerned, unless the contract is sub-contracted to an EME that has the capability and ability to execute the sub-contract.

### BID DECLARATION

6.1 Bidders who claim points in respect of B-BBEE Status Level of Contribution must complete the following:

7. **B-BBEE STATUS LEVEL OF CONTRIBUTION CLAIMED IN TERMS OF PARAGRAPHS 1.4 AND 5.1**

7.1 B-BBEE Status Level of Contribution: . = ..........(maximum of 10 or 20 points)
(Points claimed in respect of paragraph 7.1 must be in accordance with the table reflected in paragraph 5.1 and must be substantiated by means of a B-BBEE certificate issued by a Verification Agency accredited by SANAS or a Registered Auditor approved by IRBA or a sworn affidavit.

8. SUB-CONTRACTING

8.1 Will any portion of the contract be sub-contracted?

(Tick applicable box)

YES  NO

8.1.1 If yes, indicate:

i) What percentage of the contract will be subcontracted................................................%  
ii) The name of the sub-contractor.....................................................................................
iii) The B-BBEE status level of the sub-contractor.............................................................
iv) Whether the sub-contractor is an EME.

(Tick applicable box)

YES  NO

9. DECLARATION WITH REGARD TO COMPANY/FIRM

9.1 Name of company/firm:....................................................................................................

9.2 VAT registration number:.................................................................................................

9.3 Company registration number:........................................................................................

9.4 TYPE OF COMPANY/ FIRM

□ Partnership/Joint Venture / Consortium

□ One person business/sole propriety

□ Close corporation

□ Company

□ (Pty) Limited

[TICK APPLICABLE BOX]

9.5 DESCRIBE PRINCIPAL BUSINESS ACTIVITIES

........................................................................................................................................

........................................................................................................................................

........................................................................................................................................
9.6 COMPANY CLASSIFICATION

☐ Manufacturer

☐ Supplier

☐ Professional service provider

☐ Other service providers, e.g. transporter, etc.

[TICK APPLICABLE BOX]

9.7 Total number of years the company/firm has been in business: ………………………………

9.8 I/we, the undersigned, who is / are duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the B-BBEE status level of contribution indicated in paragraph 7 of the foregoing certificate, qualifies the company/ firm for the preference(s) shown and I / we 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 paragraph 7, the contractor may be required to furnish documentary proof to the satisfaction of the purchaser that the claims are correct;

iv) If the B-BBEE status level of contribution has been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the purchaser may, in addition to any other remedy it may have –

(a) disqualify the person from the bidding 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) restrict the bidder or contractor, its shareholders and directors, or only the shareholders and directors who acted on a fraudulent basis, 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.

WITNESSES

1. ..............................................

2. ..............................................

SIGNATURE(S) OF BIDDERS(S)
ANNEXURES

Annexure A: Detailed Pricing Schedule

Annexure B: KAPB Cooling Upgrade Specification (Doc No. FA00-0014-001 Rev. 01)

Annexure C: Data Rack Cooling Specification (Doc No. SKA-TEL-INS-0005091)

Annexure D: Applicable Documents and Drawings

Annexure E: Reference Documents and Drawings

Annexure H: SKA SA Minimum Site Safety Requirements, Rev 1 (Document No. SSA0000-0000V1-04MP)

Annexure I: SKA SA Transport Policy, Rev 2 (Document No. SSA0000-0000-001)


Annexure L: Annexure M: Directions to SKA SA Klerefontein complex from Carnarvon

Annexure N: SKA Site Location Overview

Annexure Q: CIDB Standard Conditions of Tender

Annexure R: SKA SA Baseline Risk Assessment Guide