RFI No.: SO/001/11/2023

Request for Information (RFI)
for
Design and implementation of 1MW Solar Plant at Matjiesfontein Site

Date of issue: 15 November 2023

Response deadline: 30 November 2023 at 11:00am

1. BACKGROUND

The South African National Space Agency (SANSA) is a public entity under the National Department of Science and Technology (DST) and was established in terms of the South African National Space Agency Act, 2008 (Act No 36 of 2008).

SANSA has a mandate to drive the promotion and use of space and cooperation in space-related activities. To achieve this mandate, the Agency fosters research in space science and technology advances space engineering programmes, and supports the creation of an environment conducive to industrial development in space technologies within the framework of national government policy. More information about the organization can be found at http://www.sansa.org.za.

SANSA will be building a new ground station facility in Matjiesfontein that will host a number of local and international antenna systems including one of NASA's Lunar Explorations Ground Sites (LEGS). SANSA entered into an agreement with the Matjiesfontein Trust and was given authorization by the Department of Agriculture to enable SANSA to utilize the identified land to develop the ground station in Matjiesfontein. The Matjiesfontein site is a greenfield site which is located in the Western Cape Province, surrounded by the Matjiesfontein town in the Laingsburg Municipality.

The SANSA MTJ site complex is located proximately 5 km to the south of Matjiesfontein with the following coordinates:

- Latitude 30 14' 36.86" S Longitude 20 32' 52.90" E

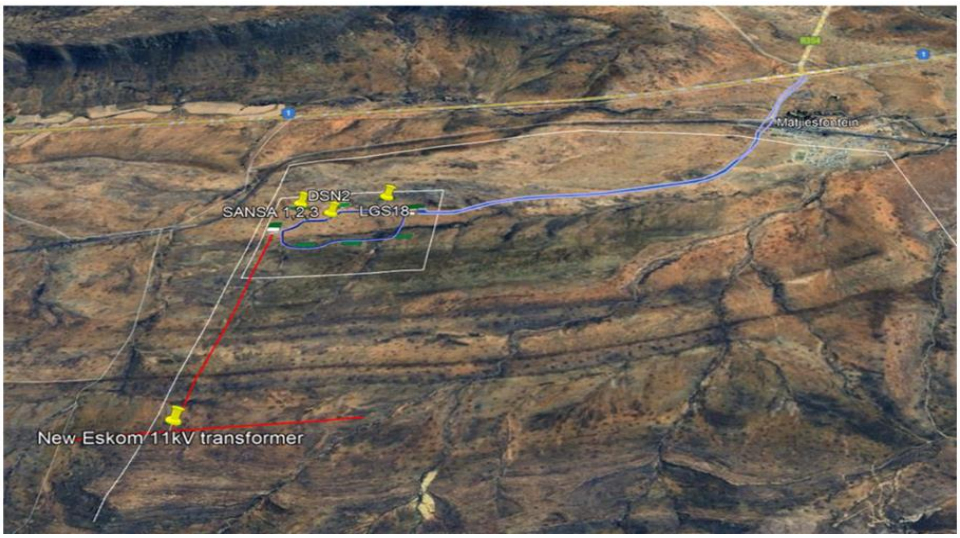

Figure 1: Site position on the Map

2. PURPOSE OF THE RFI

This RFI aims to determine and identify capability in the South African Energy sector that could assist SANSA in the design and implementation of a 1MW Solar plant at the ground station. Vendors are thus invited to provide information that would enable SANSA to determine their capability to design, procure, and commission the plant. Vendors are further invited to provide information that would support building the requisite capacity at SANSA to maintain and further develop the Matjiesfontein project.

The outcome of this RFI is therefore the following:

- Provide detailed availability analysis.
- Provide a design proposal.
- Provide an indication of the cost of designing, procuring, and commissioning the solar plant to the existing Eskom grid.
- Provide a project plan detailing the Estimated Period for the completion of the Installation Works.

In addition, to the outcomes highlighted above vendors must consider the content listed in Section 4 as a guide in response to this RFI. All information submitted in response to the RFI will not be distributed by SANSA to any other respondents or other third parties. In responding to this RFI, vendors should note that any information provided is only intended to enable SANSA to understand the extent of South African market capability to design and commission a 1MW solar plant. SANSA will not pay for any information submitted nor will it pay for the use of such information. The information could, in the future, be used to solicit responses to a Request for Proposal (RFP) for the purchase and implementation of a preferred solution. SANSA would follow normal tender processes in that instance.

This RFI shall not limit any rights of SANSA, and SANSA reserves all its rights including but not limited to its right to elect not to procure the goods and/or services that are the subject of this RFI and its right to procure them from a vendor that has not responded to this RFI.

3. Submission dates and contact details.

Vendors are kindly requested to provide their responses to this RFI in duplicate to SANSA by no later than **30 November 2023 at 11:00am**. Submissions can be made in person at the SANSA offices located at Farm 502JQ, Space Operations Office, Hartebeesthoek site, Westrand District Or electronically to spaceops-scm@sansa.org.za

4. Technical performance requirements

The energy requirement informs these technical requirements of the Matjiesfontein ground station site. Site Location portion 8, Koenieskraal, Matjiesfontein, Latitude 33 14 79.45S and Longitude 20 32 32.18E:

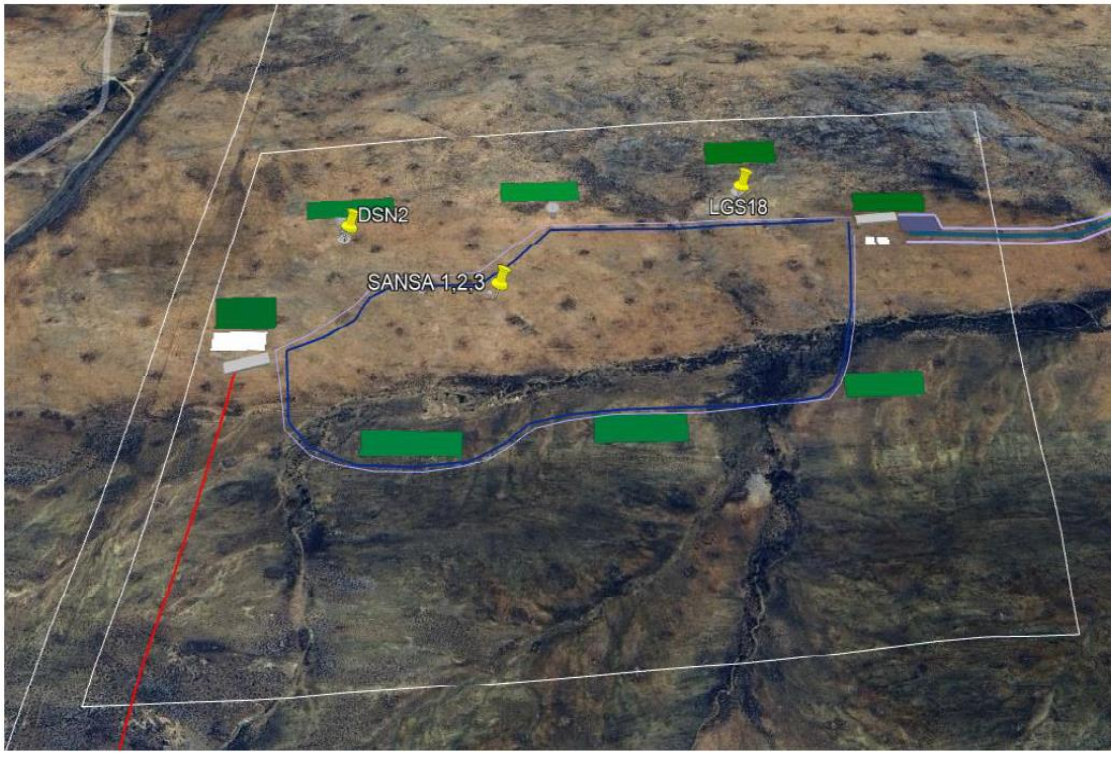

Figure 2:Pnitial proposed solar renewable configuration.

Please note: This is SANSA initial proposed solar plant. Suppliers are welcome to suggest other configurations and layout.

Scope of work:

- Design of a 1MW solar plant with a battery capacity of 17h at full load to meet the site availability of 99.95%.
- The solar plant design shall be Ring feed from the power station with 7 mini substations(315kva) configuration as shown in figure 2.
- The systems must be modular to cater for future expansion.
- Provide detailed availability analysis.
- Design shall be designed such that the extra capacity is fed back into the grid.
- Provision for gradual degradation shall be included in the design.

- Indicate required permits, licenses, and processes required for the solar plant.
- Submit project timeline.
- Design shall have management systems integrated/interface to the main building's BMS.

Vendor responses

Vendors must prepare their responses using the following format.

5.1 Company Information

5.1.1	Vendor Contact Details
	Registered Company Name
	Company Registration Number
	VAT Registration Number
	Registered Address
	Trading Address
	Main Telephone Number
	Website Address
5.1.2	Vendor Background
	Abridged History
	Description of Company's primary line of business
5.1.3	Vendor Offering
	Respond to the key factors for consideration about the solution presented on the table to follow.

5.2 Key factors for consideration

	Category	Required Documentation	Yes/No
1	The company designed an adequate 1MW solar plant as per the technical requirement defined in Section 4	Provide a reference of the project, a CV of the Technical lead in the team as well as documents that indicate the flow of the system from ingest, analysis, product development, delivery, and commissioning.	
2	The company has provided a project plan detailing the Estimated Period for the completion of the Installation Works.	A detailed plan showing the estimated duration has been submitted.	
3	Experience in engineering designing of Solar plant: • Engineering practices. • Project management for a large-scale solution with a similar size and complexity. • OHSA practices	Provide a reference for the project. • Provide a CV of an Electrical Engineer in your team who worked on a project of this nature. • Provide a CV of a Project Manager in your team who worked on a project of this nature.	