| Eskom | Scope of Work | Generation<br>Komati Power Station |
|---|---|---|

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# 1. Introduction

Komati Power Station is situated in Mpumalanga, 40km west of Middelburg along the R35 Bethal road. Komati Power Station has undertaken to Repurpose and Repower the station towards the Production of Renewable Energy as well as project to uplift the community. The process in terms of transition further delves into the skilling/upskilling of employees and qualifying community members. This led to the setting up of several initiatives and project to create opportunities to promote sustainable business initiatives, utilising and repurposing current facilities on the Power Station.

South Africa's Just Energy Transition (JET) is aimed at supporting the decarbonization of the minerals and energy sectors in a socially responsible manner while contributing to the economic development of the country. Komati Power Station has been decommissioned and, Repowering & Repurposing efforts have been identified at the site to realise this.

## 1.1 Scope

### 1.1.1 Purpose

The purpose of this document is to outline the scope of work required to design, supply, install, commission and maintain an **Agricultural solution** under 5 sets of solar tables. The design will include the base construction under 5 sets of solar tables , inclusive of a drainage system to ensure excess water and effluent is catered for effectively.

### 1.1.2 Applicability

This document shall apply to Komati Power Station only.

### 1.1.3 Effective date

The effective date will be from the authorisation date.

## 1.2 Normative/Informative References

### 1.2.1 Normative

[1] ISO 9001 Quality Management Systems

### 1.2.2 Informative

N/A

## 1.3 Definitions

### 1.4 Abbreviations

| Abbreviation | Explanation |
|---|---|
| ISO | International Standards Organisation |
| N/A | Not Applicable |
| QCP | Quality Control Plan |
| QIP | Quality Inspection Plan |
| SANS | South African National Standards |

### 1.5 Roles and Responsibilities

#### 1.5.1 Employer representative

- Responsible to coordinate the works, and for all contract management and liaising with the supplier.
- Responsible for managing and supervising the works being always executed.
- Compiles scope of work for the procurement and installation of the required equipment at Komati Power Station
- Conducts technical evaluation, as per the issued technical evaluation strategy.

#### 1.5.2 Principal Contractor

- As per OHS Act (85/1993) executes scope of work issued by the Employer.

#### 1.5.3 Komati Safety

- Ensures safety legislation and standards are adhered to, and that safety practices are always implemented during execution of the works.

### 1.6 Process for Monitoring

The tender committee will adjudicate the tender evaluation and contract appointment.

The Contractor will compile a QCP, which will ensure the works are executed within the relevant technical, and SHEQ requirements, as well as specified duration including a program/Gantt chart.

### 1.7 Related/Supporting Documents

- Eskom SHE specification for working on site.

## 2. Constraints

### 2.1 General Constraints

a) A compulsory site tender briefing session/scope clarification meeting to be conducted and if the Tenderer/Contractor does not attend or send a technical representative to the meeting, that Tenderer/ Contractor **will be disqualified.**

b) All technical queries to be directed to Project lead

c) Contractor to provide returnable schedules in accordance with the technical evaluation strategy issued by the Employer.

d) All works to be executed in accordance with standards referenced.

e) Deliverables/objectives of this works includes but not limited to:

i. Submit detailed method statement and material and/or equipment and machinery data sheet for Employer to approve before commencement of the works.

ii. Submit detailed programme/plan including breakdown of tasks to be executed, date of completion for each task and amount of time needed to complete task for Employer to approve before commencement of the works.

iii. Submit detailed QCP, which ties in with the submitted method statement, signatories to be Contractor, Eskom Senior Technician.

iv. Conduct all necessary site investigation and assessments to enable effective execution of the scope of work.

v. Execute scope of work for the Establishment of the NFT plant and systems.

vi. Comply to all SHEQ requirements by ensuring safety of plant and personnel.

### 2.2 Site Constraints

i. Contractor to provide all machinery, equipment, plant, materials, and skilled labour to execute the required works.

ii. Contractor to provide and install necessary mechanism/s and/or equipment to execute the works safely.

iii. All SHEQ laws and regulations are to be adhered to during the execution of works.

iv. The establishment will be inside the Eskom Power Station premises and within the National Key Point regulated area.

## 3. Site Description

a. The site comprises of 5 arrays of solar panels, labelled as Table 1 to Table 5.. The project requires building an agricultural solution underneath the tables as well as installing supplementary lighting, constructing a suitable base, landscaping of the area between and around the tables and provide training and material to 5 individuals.

## 4. Scope of Work

The Eskom Holdings SOC Limited, the Recipient has been allocated grant funds (the “Grant”) from the Energy Sector Management Assistance Program (ESMAP) which are administered by the International Bank for Reconstruction and Development (IBRD) (the “Bank”) and executed by the Eskom Holdings SOC Limited (“the Client”). The Client intends to apply the funds to eligible payments under the contract which may arise from this Initial Selection process and subsequent Request for Proposal processes that may follow. Payments by the Bank will be made only at the request of the Client and upon approval by the Bank, and will be subject, in all respects, to the terms and conditions of the grant agreement.

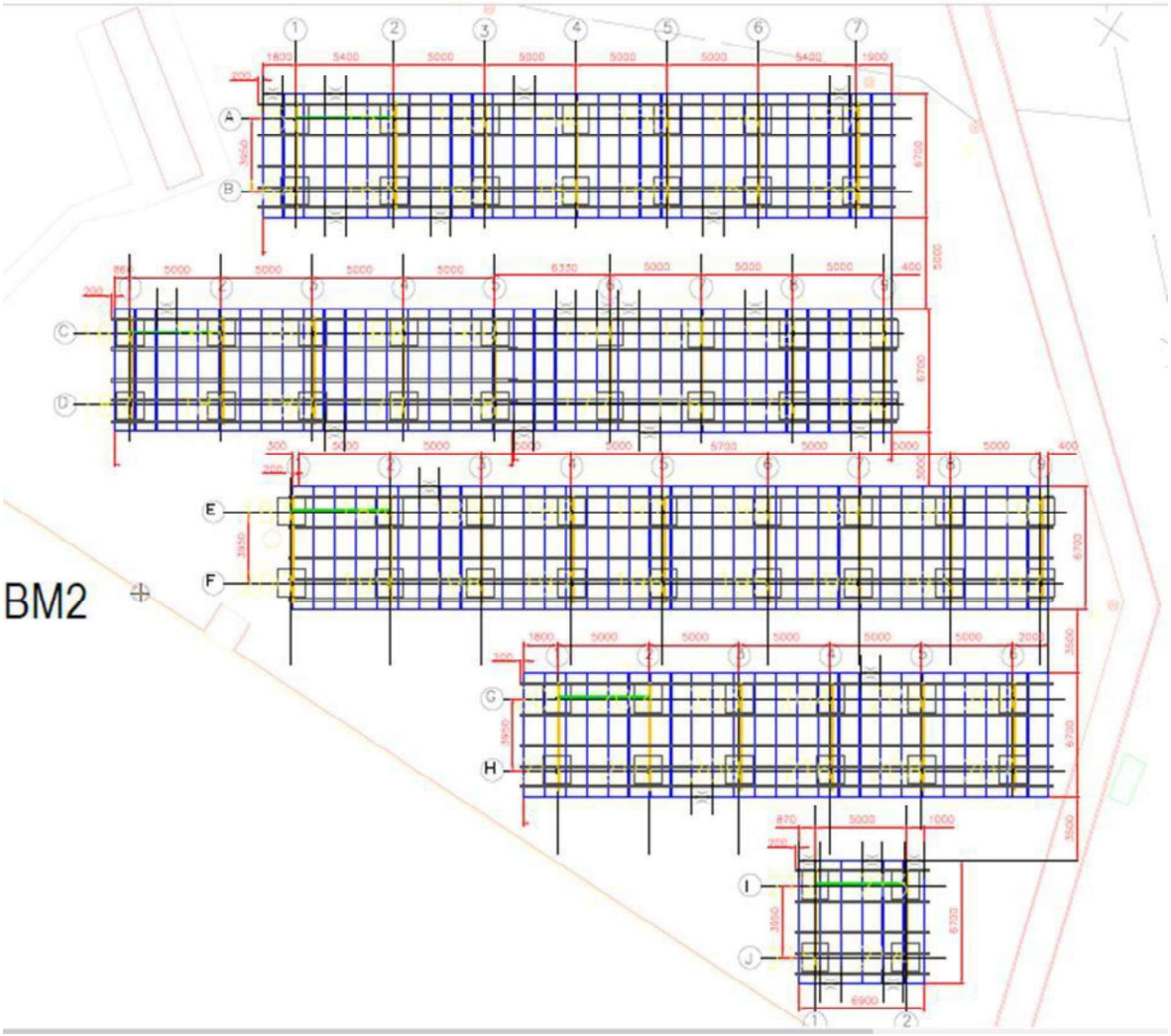
### 4.1 Outline description of the Works:

The EPC Contractor will be appointed on a maximum twenty-four (24) month contract and shall be responsible for the surveying, design, engineering, manufacture, procurement and supply of all materials and labour, delivery to site, offloading, construction, erection, installation, and supply of all detail design drawings.

The site comprises of 5 arrays of solar panels, labelled as Table 1 to Table 5.

(Available on Google Maps, Komati Power Station)

Below plan depicts size of PV solar panels:




The project requires installing sustainable farming solutions underneath the tables as well as installing supplementary lighting, constructing a suitable base, landscaping of the area between and around the tables and provide training and material to 5 individuals.

Construct a suitable base/floor underneath each of the 5 tables (tables 1,2,3,4,5) with drainage systems to cater for excess water and effluent effectively

The Komati Power Station site preparation and setup will comprise of:

A. Establishment of the appropriate agricultural solution (Hydroponics) for the cultivation of tomatoes, strawberries, cabbage, lettuce and potatoes under all 5 tables.

- Design and Installation of appropriate system
- Design and construction of a suitable base/floor underneath each system.

- Procurement of all material, plants & equipment required.
- Installation and Commissioning of the systems and equipment
- Installation of supplementary lighting to support and manage growth.
- Installation of all storage, electrical systems and pump required to operate the plant effectively.
- Operation and maintenance philosophy of equipment as well operational specification.
- Training and employment of 5 individuals to operate and maintain the system:
  - ➢ Competitive selection of individuals with focus on agribusiness and aquaponics.
  - ➢ Structured mentorship and business development training and setting up of an SME.
  - ➢ Access to aquaponics facilities for pilot testing and prototyping.
  - ➢ Regular performance reviews and impact assessments.
  - ➢ Develop a committed supply chain for the SME for sustainable business
  - ➢ Stipends over 18 months, which should be phased out as soon as the business is developed into a self-sustaining business.
- 
- Construct a fully functioning pack house ( 12m contianer) for packing crops and distribution to market.

C. Outdoor Preparation areas: Establish a suitable space to wash hands, store equipment, store room (6m container) etc.

D. Provide supplies, spares and seedlings for a period of 24 months, (seedlings, Fertilizer, pH and EC pens, pH control chemicals, cleaning chemicals, mixing containers, scales, syringes, hardware etc.)

E. Design and create landscaping between and around the 5 tables:

- Incorporate stone pavers to enhance the functionality of the landscape.
- Integrate lighting into your landscape.
- Create grass and flowers areas
- Arrange seating areas.

Deliverables

(a) Submission of Preliminary and Detailed Engineering and Design Pack, which shall include:

→ Detailed Design report, inclusive of earthing simulations and report, lightning protection analysis and designs, lighting studies, insulation coordination

→ Reports of all supporting investigations, simulations and engineering studies

→ Constructability plan

→ Project execution schedule

→ Project Risks and Mitigation

→ Power and Control Plant detailed design drawings approved for construction

4.2. Operations and Maintenance:

Period of 6 months or earlier for the design, procurement, supply, installation, testing, commissioning, and energization of the facility into commercial operation, with a further 18 months operations and maintenance services.

Completion and handover shall take place only after the completion of the 24 months operational and maintenance obligations have been fulfilled. During the period, the EPC Contractor shall be responsible for all operational and maintenance requirements, which shall include the training of local staff to operate the facilities. During the Operational and Maintenance period, the EPC Contractor shall be responsible for the care, custody, and control of the system and its components, including preservation, maintenance, operation, security, and other measures or activities required including SHE responsibilities. Notwithstanding transfer of care, custody and control to the Client, the EPC Contractor's obligation shall be fulfilled when the Services have been completed.

## 5. Labour, Materials and Machine/Equipment

The Contractor shall be responsible for the supply and delivery of all materials, tools, equipment, tools, machinery, labour, approved machinery operators and specialist skills necessary to execute the required works. All equipment and machinery must be in working order. Contractor to conduct calibration tests on all tool's machinery, and equipment.

Contractor to provide their own resources to secure security of tools, materials, and machinery/equipment that will be stored on site. Employer will not be liable to account for any costs related to damages or theft of Contractor's tools, materials, and machinery and equipment.

Contractor to ensure that all machinery and equipment used on site will be replaced when damaged or scheduled for maintenance/service and ensure no delays due to unavailability of machinery.

## 6. Configuration Management

All documents supplied by the Contractor shall be subject to Eskom's approval. The language of all documentation shall be in English.

All project documents must be submitted to the Employer's Representative with transmittal note. The Contractor is required to submit documents as electronic and hard copies and both copies must be delivered to the Eskom Representative with a transmittal note.

## 7. DOCUMENT RETURNABLES

The contractor shall produce and submit a project plan, project quality plan, organogram, detailed method statement, QCP, safety file for approval prior to the commencement of work. The Contractor to conduct induction and medicals prior to commencement of work.

## 8. Acceptance

This document has been seen and accepted by:

| Name | Designation |
|---|---|
| Jurie Pieterse | Manager Maintenance (acting) |
| Jenny Prinsloo | Risk and Assurance Manager (acting) |
| Kingsley Dhlamini | General Manager (acting) |

## 9. Revisions

| Date | Rev. | Compiler | Remarks |
|---|---|---|---|
| 03 February 2024 | 0 | Jurie Pieterse | First issue |

## 10. Development Team

The following people were involved in the development of this document:

- Jurie Pieterse

## 11. Acknowledgements

N/A