RFP 23/2024: Establishment of a Panel of Contractors for Engineering, Designing and Installation of Solar Photovoltaic (PV) System at SARS Offices

Virtual Briefing Session: 15 November 2024, at 11H00

RFP No.: RFP 23/2024

Closing Date: 09 December 2024, at 11H00

South African Revenue Service

Table of Content

1. INTRODUCTION: SARS TEAM

Procurement
Sourcing Lead: Procurement
B-BBEE Specialist
SARS Business Unit
Bid Specification Committee
Corporate Legal Services
Legal Specialist

2. Purpose

Non- Compulsory Briefing Session

- Purpose
  - explain selected concepts, procedures and other aspects of the RFP
  - confirm formal registration of Bidders for notices and other communications
- It does not
  - cover every item in the RFP
  - replace any of the issued RFP material
  - change any of the RFP rules unless explicitly communicated in writing

- The briefing session slides will be posted on the e-tender and SARS website

- The RFP pack remains the primary source of information for the Bidder to respond

2.1 Procedures during Briefing Session

- Questions during the session.
  - SARS will take questions submitted at the end of the session
  - SARS will review and focus on most pertinent themes arising from the questions and provide answers where possible
  - Bidders are requested to submit written question to Tender Office email published
  - All questions and answers will be published as part of the wider Q & A process
  - The published answers will take precedence over any verbal response given in the briefing session
- The session is being recorded.

2.2 Governance Requirements

- Strict communication channels
  - Bidders will be disqualified for non-compliance
- No solicitation of information will be allowed other than by prescribed channels
- Deadlines to be strictly met
- Adhere to prescribed submission format to ensure queries are properly dealt with

3. Background and Scope of Work

Annexure A: Business Requirements Specification (BRS) for the detailed Scope of Work.

Array Structure

- Hot Dip Galvanized Mounting Structures
  used for mounting modules/panels/arrays
- Angle of Inclination
  - Adjusted as per site conditions for maximum insolation
  - May be reduced to meet performance ratio requirements
- Wind Zone Considerations
  - Designed to withstand wind speed at SARS Building location
  - Certified by recognized Lab/Institution
  - Wind loading calculation sheet to be submitted
- Corrosion Resistant Structural Material
- Stainless Steel Fasteners
- Civil Structures Considerations

Junction Boxes

- Junction Boxes in PV Array
  - Termination of connecting cables made of GRP/FRP/Powder Coated Aluminium/cast aluminium alloy
  - Full dust, water & vermin proof arrangement
  - Input & output termination through suitable cable glands
- Copper Bus Bars/Terminal Blocks housed in the junction box
  - Conforming to IP65 standard and IEC 62208
  - Hinged door with EPDM rubber gasket
  - Single/double compression cable glands
- High Quality Components
- Markings and Identification

DC Distribution Board

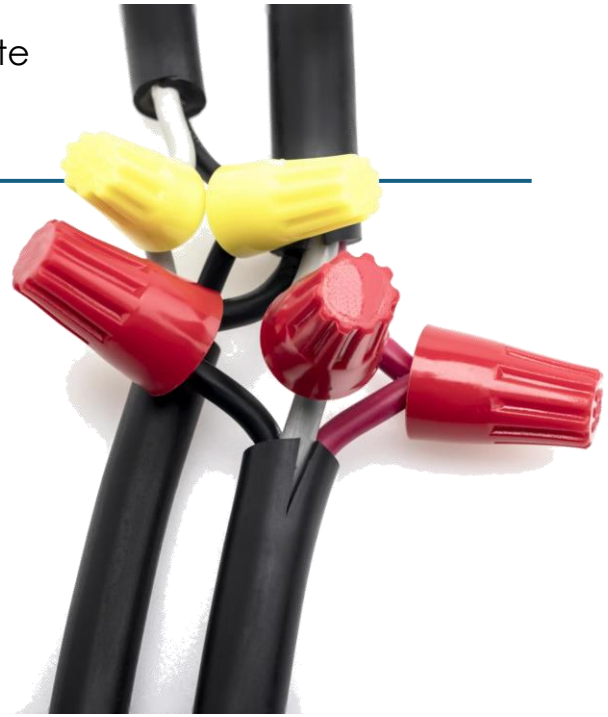
- DC Distribution Board Function
- Receives DC output from the array field
- Enclosure Specifications
  - Sheet form enclosure
  - Dust and vermin proof
  - Conforms to IP 65 protection
- Bus Bars
  - Made of copper
  - Desired size
- Control Components
- Suitable capacity MCBs/MCCB
- Controls DC power output to PCU

AC Distribution Board

- Switches and Circuit Breakers must conform to SANS IEC 60947
- Changeover Switches and Cabling
  To be undertaken by the bidder
- Panel Design and Construction
- Metal clad, totally enclosed, rigid, floor mounted
- Suitable for three phase/single phase, 415 or 230 volts, 50 Hz
- Environmental Conditions
- Protection Standards
- Compliance
- Device Suitability
- AC Distribution Board

Lightning Protection

- Lightning Protection
  - SPV power plants must have lightning and overvoltage protection
  - Aim is to reduce overvoltage to a tolerable value before it reaches PV or other components
  - Sources of overvoltage include lightning and atmospheric disturbances
  - Entire SPV array space should be protected with required number of Lightning Arrestors
  - Protection should comply with SANS IEC62305 standard
  - Use metal oxide varistors (MOVs) and suitable earthing to provide alternate route to earth for induced transients



Earthing Protection

- Grounding Requirements
  - Each array structure must be grounded as per SANS 10199
  - Lightning arrester/masts should be earthed inside the array field
- Earth Resistance Assessment
  - Assessed in presence of SARS representative
  - Use calibrated earth tester
  - PCU, AC DB, and DC DB should be properly earthed
- Earth Resistance Standards
  - Resistance should not exceed five ohms
  - All earthing points must be bonded together

Grid Islanding

- Grid Islanding Prevention
  - Inverters must turn off during grid power failure
  - Prevents power feeding into grid sections (islands)
- Risks of Powered Islands
  - Danger to workers expecting unpowered areas
  - Potential damage to grid-tied equipment
- Rooftop PV System Requirements
  - Must have islanding protection
  - Disconnection for under and over voltage conditions
- Manual Disconnect Switch
  - 4-pole isolation switch for grid disconnection
  - Utility personnel can lock the switch for maintenance

Surge Protection

- Internal Surge Protection
  - Consists of three MOV type surge-arrestors
  - Connected from +ve and -ve terminals to earth
  - Uses Y arrangement for connection

Cables

- Standards and Temperature Range
  - Comply with SANS IEC 60227, SANS IEC 60502
  - Temperature range: –10°C to +80°C
- Voltage Rating
  - 660/1000V
- Resistance and Flexibility
  - Resistant to heat, cold, water, oil, abrasion, UV radiation
- Cable Sizing and Insulation
  - Selected to minimize voltage drop
- Cable Routing and Marking
- Compatibility and Ratings
- Insulation and Standards

Connectivity

- Maximum Capacity for Interconnection
  - Specified in the engineer's report
  - Adheres to Distribution Code/Supply Code of the State
- Selection Criteria for Voltage Level
  - Suggested for solar suppliers
  - Based on distribution system requirements

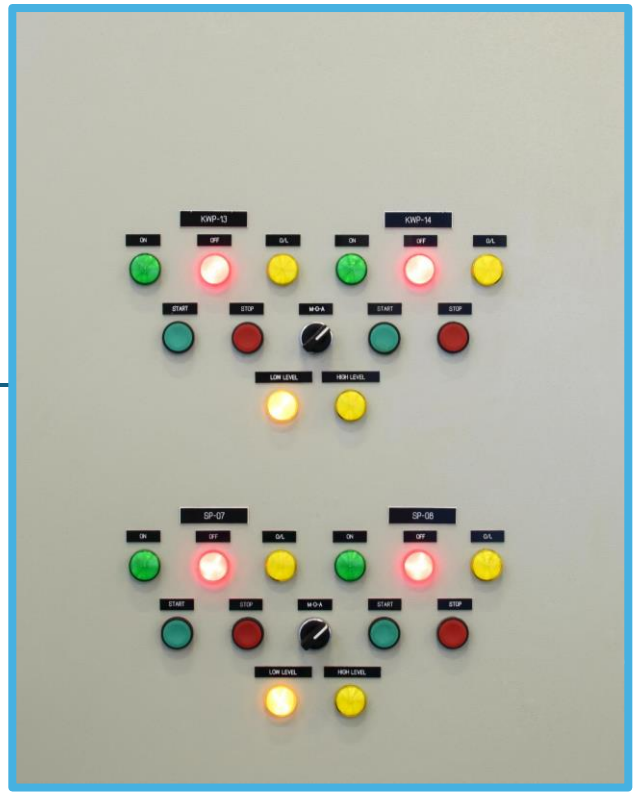
Plant Capacity	Connecting Voltage
Up to 10 kW	**240V-single phase or 415V-three phase at the option of the consumer**
Above 10kW and up to 100 kW	**415V – three phases**
Above 100kW	**At HT/EHT level (11kV/33kV/66kV)**

Tools, Tackles & Spares

- Requisite Spares List
  - Control logic cards
  - IGBT driver cards
  - Junction Boxes
  - Fuses
  - MOVs / arrestors
  - MCCBs
  - Spare set of PV modules
- Maintenance and Replenishment
  - Minimum set of spares maintained in the plant
  - Replenished upon use

Danger Boards & Signages

- Provision of Danger Boards
  - Necessary as per SANS Act/SANS rules
- Placement of Signages
  - One at battery-cum-control room
  - One at solar array area
  - One at main entry from administrative block
- Text Finalization
  - To be done in consultation with SARS/Landlord



Fire Extinguishers

- Firefighting System Components
- Regulations and Standards
  - Installation must conform to regulations and SANS standards
- Fire Extinguishers Locations
  - Roof or site with PV arrays
- Additional Fire Safety Measures
  - Firebomb installation at each site
  - Lithium-based suppression

Engineering Drawings & Manuals

- Engineering and Electrical Drawings
- Two sets of drawings to be supplied Includes Installation and Operational & Maintenance manuals
- Technical Data Sheets
- Complete technical data sheets for each equipment
- Details of specifications and makes
- Basic design of power plant and power evacuation
- Synchronization and protection equipment
- Approved ISI and Reputed Makes
- Use of approved ISI and reputed makes for equipment
- Electro-Mechanical Works
- Complete design, details, and drawings for approval

Safety Measures

- Bidder's Responsibility
  - Complete responsibility for electrical safety
  - Ensure safe connectivity with the grid
- Compliance with Regulations
  - Adhere to all safety rules
  - Follow Electricity Regulation Act No. 4 of 2006

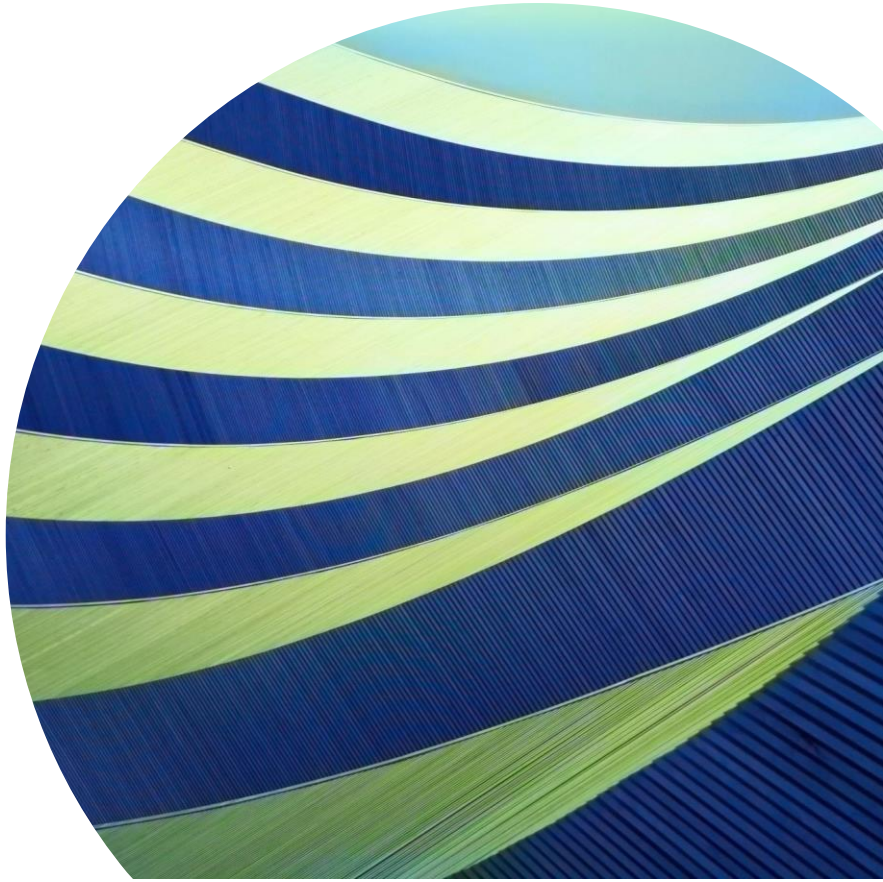
4. Bid Evaluation Process

REFER TO SECTION 7 OF THE MAIN RFP DOCUMENT:

Gate 0 – Prequalification Evaluation

Gate 1 – Mandatory Evaluation

Gate 2 – Technical Evaluation



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4.1 Bid Evaluation Process

SARS CONFIDENTIAL

SARS
South African Revenue Service

SOUTH AFRICAN REVENUE SERVICE

REQUEST FOR PROPOSAL

RFP 23/2024

Establishment of a Panel of Contractors for Engineering,

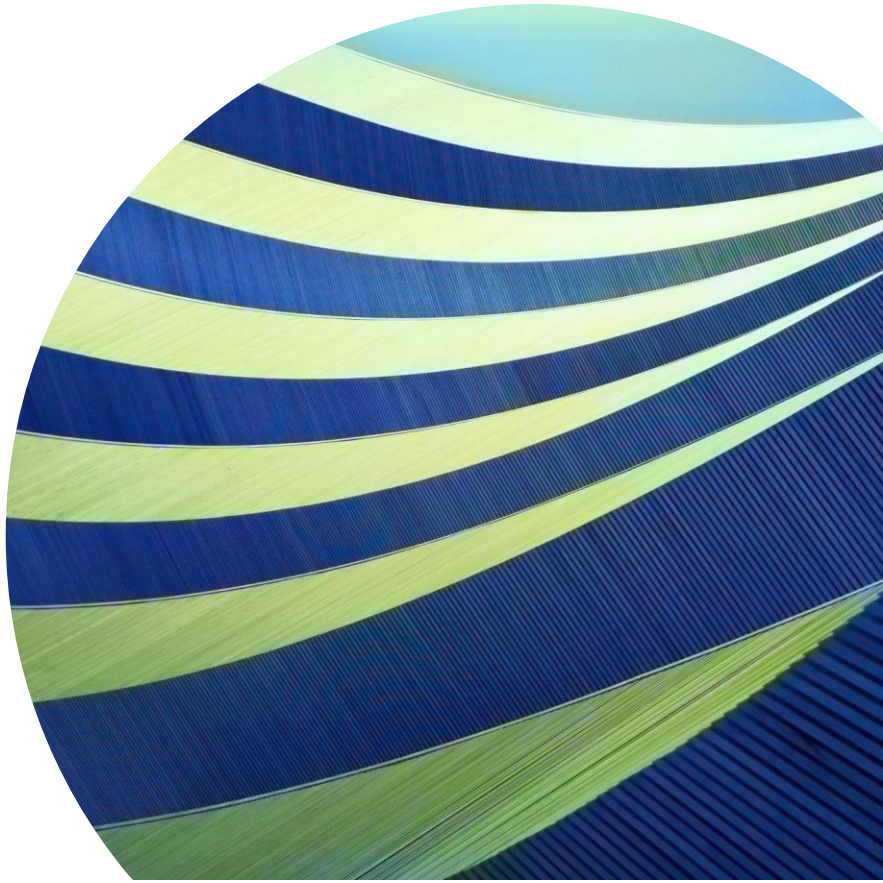
Designing and Installation of Solar Photovoltaic (PV) System at

SARS Offices

MAIN RFP DOCUMENT

INSTRUCTIONS, GUIDELINES, AND CONDITIONS OF TENDER

Main RFP Document (Section 7)



5. RFP submission and contact details

- Bidders must submit one (1) hard copy file and a USB with content of each file. **Refer to paragraph 6.5 of the Main RFP document**

1
Hard Copy File

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1
Electric Submission

TENDER BOX

Tender Office SARS Procurement, Lehae La
SARS Head Office,299 Bronkhorst Street Niew
Mucleneuk, Pretoria

Any enquiries must be referred, in writing via email: tenderoffice@sars.gov.za

5.1 RFP TIMELINES

ACTIVITY	DATE
Advertisement of Bid in the: • National Treasury e-Tender Portal. • SARS website	08 November 2024
Non-compulsory virtual briefing session	15 November 2024
Last date for questions relating to RFP	29 November 2024
Bid Closing Date	09 December 2024 at 11:00am

Thank you

Rea leboha

Re a leboga

Ndza Khenza

Dankie

Ndi a livhuwa

Ngiyabonga

Enkosi

Ngiyabonga

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