

211Q/2025/26

DESIGN, MANUFACTURE, SUPPLY, DELIVERY TO SITE, OFF-LOADING, INSTALLATION, TESTING, COMMISSIONING AND MAINTENANCE OF 145 KV SWITCHGEAR AND ASSOCIATED EQUIPMENT (PHILIPPI SWITCHING STATION)



CITY OF CAPE TOWN
ISIXEKO SASEKAPA
STAD KAAPSTAD

Transmission System Development
Electricity Generation and Distribution

2026-04

Outline

- Introduction
- Tender clarification by City of Cape Town
- Clarification questions received
- Questions from Tenderers

Introduction

- Non-compulsory, but strongly recommended site meeting.
- Emphasize certain key aspects of the tender and clarify areas of uncertainty. This is not a comprehensive discussion of the tender document.
- Unless a formal notice is issued by the CCT, the tender document is to be viewed as correct. Anything stated at the clarification meeting that could alter the tender document is therefore not enforced unless it is contained in a formal notice to tenderers.
- **Closing date: 25 May 2026 @ 10:00**

Tenderers must note that wherever this document refers to any particular trade mark, name, patent, design, type, specific origin or producer, such reference shall be deemed to be accompanied by the words “or equivalent”.

Tender Clarification by City of Cape Town

Location



Tender Clarification by City of Cape Town

Location

The site is accessible by public road and the tenderer is responsible to acquire the necessary transport permits and authorisations.



Tender Clarification by City of Cape Town

Eligibility

1. CIDB Grading of at least **9EP**
2. Compliance with CCT SCM Policy and Procedures
(Note - MBD 4 / Schedule 5 to be complete in full)
 1. Functionality
 - a) Key Personnel
 - b) Track Record of Equipment
 - c) Demonstrated Experience of Tenderer
 - d) Maintenance and Service department in South Africa
 2. Good standing with the Bargaining Council
 3. Type Test
 4. Technical requirement and data sheets

Tender Clarification by City of Cape Town

Track record

Track record of equipment:

- **1. Track Record of Equipment (Manufacturer) – Schedule 11**

- Number of installations in listed SADC countries (South Africa, Namibia, Botswana, Zimbabwe, Mozambique) of similar HV indoor GIS equipment and similar scope/complexity : **6 installations within SADC countries**
- Number of global installations (worldwide) of similar HV indoor GIS equipment and similar scope/complexity : **50 installations worldwide**
- Service history of global installations of similar HV indoor GIS equipment and similar (132kV and above) scope/complexity: **95 001 bay years* worldwide**

**Bay Years = Number of GIS Bays multiplied by the Installed Years*

- **2. Demonstrated Experience of Tenderer/Manufacturer – Schedule 10**

- Number of high voltage switchgear installations (indoor or outdoor) projects undertaken by tenderer in last 10 years of similar scope to the tender : **11 HV AIS and/or GIS substations complete with control plant**

Tender Clarification by City of Cape Town

Track record of Equipment – Bay Years

BAY Years as a measure of Reliability of Equipment

- Philippi Switching Station is a critical corridor to the City's supply and thus Reliability and continuity of supply is of paramount.
- Method recognised by CIGRE to determine reliability of equipment.
- Bay years measures the Operational Years of GIS equipment of a particular OEM.
- Bay Years = Number of GIS Bays X Installed Years (over the entire history of the offered OEM)
- **Tenderers to Note” Full operational/ installed History of the Equipment since inception (1st GIS installed) to be appended to Schedule 11.**

Tender Clarification by City of Cape Town

Key personnel

Tenderer must have the following key personnel in its permanent employment at the close of tender or alternatively, a signed undertaking from a specialist company having the required personnel (page 8 – 9):

- **Contractor representative**
 - A qualified **electrical engineering Artisan/Technician/ Technologist/ Engineer/ Project Manager** who has undertaken and completed at least **seven (7) projects** of a **similar nature** as detailed in the Scope of Works.
- **Site agent**
 - A qualified electrical engineering **Artisan/Technician/ Technologist/Engineer** who has undertaken and completed at least **seven (7) projects** in the installation of **high voltage switchgear** and responsible for executing all work carried out in terms of this tender.
- **General Foreman / Construction supervisor**
 - The Foreman shall be responsible for supervising the site installation crew, and shall be **certified and accredited by the Original Manufacturer** of the switchgear as competent to oversee the installation work specified for the switchgear installation work envisaged in accordance with this specification.
 - The Foreman shall have undertaken **at least 4 (four) projects** in the **installation of high voltage switchgear** and responsible for executing all work carried out in terms of this tender.
- **Commissioning Engineer**
 - A qualified **electrical engineering Technician/Technologist/Engineer** with at least **4 (four) projects** in the **commissioning of installation of high voltage switchgear** (primary and secondary plant) and responsible for executing all work carried out in terms of this tender.

CVs of all employees to be included



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Key personnel

Tenderer must have the following key personnel in its permanent employment at the close of tender or alternatively, a signed undertaking from a specialist company having the required personnel (page 8 – 9):

- **Contractor representative**
 - A qualified **electrical engineering Artisan/Technician/ Technologist/ Engineer or Project Manager** who has undertaken and completed at least **7 (seven) projects** of a **similar nature** as detailed in the Scope of Works.

CONTRACTOR'S REPRESENTATIVE	NAME: Piet PompiesNQF LEVEL 10			
CONTRACT & CLIENT	NATURE OF WORK	POSITION HELD	VALUE OF WORK	YEAR COMPLETED
1. City of Cape Town	Paardevlei switching station: Install 18 new GIS bays	Contracts Manager	R50 m	2022
2. City of Cape Town	Morgen Gronde switching station: Install 17 new GIS bays	Projects Manager	R60 m	2023
3. City of Cape Town	Triangle switching station: Install 16 new GIS bays	Contracts Manager	R65 m	2023
4. City of Cape Town	Paardevlei switching station: Install outdoor termination yard	Projects Manager	R5 m	2022

- This employee will score **0** points for functionality, since only 4 projects are listed.
- Generic CVs are not sufficient: the different projects must be detailed in order to score functionality
- The BEC cannot clarify further lists of projects. It must be included in the original tender submission

Tender Clarification by City of Cape Town

Pricing assumptions

Only the Bills of Quantities may be completed electronically as described in C2.13.11 of the Tender Data.

Pricing Assumptions (p.82)

- If the Tenderer wishes to complete the Schedule of Quantities on separate sheets, the Tenderer must use the same Item numbers and must tender for every Item. (Refer to clause 11 above) In other words, an EXACT REPLICA of the Schedule of Quantities as found in the tender must be used.
- The rest of the tender must be completed in non-erasable black ink, by hand

Tender Clarification by City of Cape Town

Pricing assumptions

Pricing Assumptions (p.82)

- Clause 2. Estimated quantities are set out in the Schedules of Rates. The final Contract Price shall be computed from the actual quantities of work done.
- Clause 5: A rate is to be entered against each item in the Schedules of Rates.
 - If a nil rate (i.e. “nil” or “0.00”) is considered that there is no charge for that particular item.
 - An item against which no rate (or e.g. a zero, a dash or the word “included” or abbreviations thereof) is entered, will also be regarded as a nil rate.

The Tenderer may be requested to clarify nil rates, or items regarded as having nil rates; and the Employer may also perform a risk analysis with regard to the reasonable of such rates.

Tender Clarification by City of Cape Town

Pricing assumptions

Pricing Assumptions (p.82)

- Clause 20.
 - The switchgear will be installed in phases, but all switchgear and relay panels should be shipped to Cape Town before starting with the first phase / Section A1.
 - Only in the event where the Employer are unable to provide site access as per the agreed dates, an advance payment will be made for all switchgear and relay panels once it is in storage in Cape Town (as per the rate allowed in C2.2 Schedules of Quantities Definite Work: Schedule 4, rate 4.13), in accordance with Sub-Clause 14.2 Advance Payment and 14.5 Plant and Materials intended for the Works.
 - Storage cost for contractor delays will not be paid.
- Clause 21: Design fees will be paid once all the required design drawings have been submitted and approved by the engineer (as per the rate allowed in C2.2 Schedules of Quantities Definite Work: Schedule 4, rate 4.10).

Tender Clarification by City of Cape Town

Optional work

- Schedule 1 – 145 kV SF₆ Insulated Metal Enclosed Switchgear Equipment

Alternative GAS

(These items will only be supplied on instruction from the Employer)

Tender Clarification by City of Cape Town

Technical clarification – Pressure relief

5.2.3 Overpressure created by arcing in an enclosure shall be relieved by means of bursting discs venting into the atmosphere. Pressure relief by collapse of internal gas barriers is not acceptable.

- ☞ The specification asks for a **pressure relief (vent) on each enclosure**, not only the circuit breaker enclosure.

Tender Clarification by City of Cape Town

Technical clarification – DC

- Schedule 4: 4.4 - 110V DC power supply equipment:
 - Complete with Lead Acid Planté cells, battery stands, charger and DC distribution
 - SCS is supplied @ 110V DC
 - RTU is supplied by 110V DC,
 - If the RTU offered cannot be supplied by 110V DC, then also price separately for 48V DC system.
- DC system sizing will need to be done by the supplier as only they can determine this based on the equipment supplied.

Tender Clarification by City of Cape Town

Technical clarification – Earthing

- Substation earth mat is not part of this tender.
- See Clause 10 in Part 1: Employer will bring the earth mat out at the corners of the basement onto a small earth bar
- The Contractor shall supply and install an earthing system to connect all equipment in the substation to the earth bars. Earthing connections to equipment included in this contract shall be provided under this contract.

Tender Clarification by City of Cape Town

Technical clarification – Relays and SCADA

- Remote RED's model & versions , to ensure whether existing remote relays can communicate with new relays for inter-tripping: RED 670.
- **New remote** MicroSCADA required and will replace the existing system.
- Control centre details: ABB Network Manager
- Please ensure to comply to the requirements for relay inputs as per Volume 1
- Schedule 2: 2.1 – 2.6 Control and Relay Panels allowed in bill:
- Seven (7) Types / Variance specified :
 - Bus Coupler Panel (incl. UFLS Scheme)
 - Bus Section Panel
 - Line Feeder Panel fitted with VT (incl. Bay controller and SEL 735 QOS meter)
 - Cable Feeder Panel fitted with VT (incl. both Line diff & Impedance and bay controller)
 - Cable Feeder Panel fitted with VT (incl. Line diff and bay controller, SEL 735 QOS meter and wiring in order to connect to external meter panel)
 - Cable Feeder Panel without VT (incl. Line diff and bay controller)
 - Busbar and breaker fail panel

Tender Clarification by City of Cape Town

Technical clarification – Testing

Clause 6.9.1.12 Technical Specification - Partial discharge measurements shall be conducted to IEC 62271-203 clause 11.101.2.2 **Procedure B**.

- Site tests include a PD test

Contract Requirement of a Field Agent

- The Contractor shall be responsible to appoint a **Field Agent** under this contract. The field agent shall be a resource who can respond to site within 48 hours during the defects and latent defects liability period. **It is preferred that this resource be a local resource, permanently based in South Africa, who is able to attend to first line response to a problem. Additional resources from a specialist work centre may support this resource, but they should be able to respond to site within 3 working days.**
- The Contractor shall nominate this suitable resource and ensure the person is **accredited/ certified** within six (6) months of the contract commencement date by the Original Equipment Manufacturer (OEM) to execute installation, maintenance and repair work independently on the switchgear offered.
- The Field Agent shall either be a qualified engineering Technician/ Technologist or Engineer with at least 15 years' experience in the installation and/or maintenance of similar primary plant. The field agent shall be responsible to perform first line response during the defects and latent defects liability period.

Tender Clarification by City of Cape Town

Implementation program

The new switchgear installation can be done independently of the existing switchgear, except for the GIS to AIS bushings on the two Eskom incomer bays

The Works shall be executed in two sections, Section A & B, each consisting of their respective subsections. Any equipment or tools left on site shall remain the responsibility of the Contractor.

Section A1: Installation and testing complete GIS board **excluding** the two Eskom Incomer bays

- Site access to the new HV switch-room will be given 14 days prior to delivery of switchgear.
- Contractor will be responsible for delivering, off-loading, erection and cold commissioning of the entire 25-panel switchboard, including HV and PD testing before energising, for a duration of approximately 720 days.

Section A2: First Eskom Incomer SF₆ – AIS Bushing works and testing

- **Outage is required on the first Eskom bay** to remove existing Siemens open terminal bushings and installation of new bushings utilising the same location and wall aperture.
- Contractor shall also be responsible to blanked off and re-gassing of the remaining Eskom bay.
- Erection of the internal extension Bus Ducts shall also take place during this outage, **while the existing Siemens switchboard and the new switchgear will be in service.**
- HV and PD Testing must be performed again prior to energising the first new Eskom Incomer bay.
- Outage duration to do the change-over of the first Eskom bay will be approximately 30 days.

Section A3: HV Change Over Phase 1

- Access to the switchgear shall be given to the HV Cable Contractor for termination of existing cable feeders onto new Switchgear in turn.
- The HV GIS Contractor's commissioning engineer and other relevant personnel shall be available during the HV cable termination and hot commissioning period, approximately 75 days, for the individual feeder protection schemes (end-to-end test and on-load test), as per the Contractor's scope of works.

Tender Clarification by City of Cape Town

Implementation program

Section B1: Second Eskom Incomer SF₆ – AIS Bushing works and testing

- **Outage is required on the second Eskom bay** to remove existing Siemens open terminal bushings and installation of new bushings utilising the same location and wall aperture.
- Contractor shall also be responsible to blanked off and re-gassing of the remaining Eskom bay.
- Erection of the internal extension Bus Ducts shall also take place during this outage, **while the first Eskom extension Bus Ducts and the new switchgear will be in service.**
- HV and PD Testing must be performed again prior to energising the second new Eskom Incomer bay.
- Outage duration to do the change-over of the second Eskom bay will be approximately 28 days.

Section B2: HV Change Over Phase 2

- The HV Cable Contractor will proceed with termination of the remaining existing cable feeders onto new Switchgear in turn.
- The HV GIS Contractor's commissioning engineer and other relevant personnel shall be available during the HV cable termination and hot commissioning period, approximately 67 days, for the individual feeder protection schemes (end-to-end test and on-load test), as per the Contractor's scope of works.

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Implementation program



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Implementation program

**Blank-off and re-gassing
of remaining Eskom Bays**

**Replace with new open
terminal bushings**

**Utilise same location and wall aperture for
new open terminal bushings on the existing Eskom Bays**

Tender Clarification by City of Cape Town Implementation program



145 kV extensions
bus-ducts for line
connected feeders
– 3 150 A
**(incl. support
structure – refer to
drawing)**

To be priced under
Item - 1.3.2

Issues on previous tender submissions

- Changing the tender document (e.g. changing the units from “each” to “provisional sum”)
- CIDB status not active
- Pricing only 90% of the items (optional items & items “on instruction of the employer” **must** also be priced)
- Changing the conditions of contract (e.g. advance payment, payment for any of the resources’ time and contractual deliverables (e.g. guarantees) prior to the delivery of any switchgear plant)
- **Refrain from submitting any separate cover page(s) with any commercial deviation proposal from the City SCM Policies and Conditions.**

Tender Clarification by City of Cape Town Documents

Tender office issued:

- Tender document and Volume 1
- Drawings (5)

Available electronically (upon request, provide proof of payment)

- Tender document and Volume 1 – pdf format only
- Drawings – pdf format
- BOQ – in excel

Questions from Tenderers

- Floor is open for questions.



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Thank You

Making progress possible. Together.