

BILL OF QUANTITY: FOR THE DESIGN, SUPPLY, INSTALLATION FOR THE REPLACEMENT AND REPAIRS OF ELECTRICAL SUBSTATIONS MV AND LV EQUIPMENT FOR (COMPRESSOR HOUSE, BAY 2, BAY 28 AND BAY 55), INCLUDING TESTING AND COMMISSIONING. DURBAN MAIN CENTRE



1. Bill of quality compressor house substation

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	INSTALL	TOTAL
1 CABLE REPAIRS						
1.1	Disconnect and remove existing damaged 11kV XLPE cables between the transformer and 11kV switchgear. (20M)	m	20			
1.2	Replace damages 11kV bushings on 2MVA transformer (3EA)	ea	3			
1.3	Supply and install new 11kV, 70mm ² , 3core XLPE cable between the transformer and switchgear. (20M)	m	20			
1.4	Supply and terminate 70mm ² , 11kV, 3core XLPE cable onto transformer and switchgear. (2EA)	ea	2			
1.5	Supply and install damaged AC/DC cables for BTU – 2,5mm ² x4C, SWA ECC. (50M)	m	50			
1.6	Supply and install damaged 2,5mm ² x7c SWA ECC cable between transformer and 11kV switchboard – control cable for transformer protection. (20M)	m	20			
1.7	Servicing of OCB's to confirm functionality of breaker trip/close circuits. (2EA)	ea	2			
1.8	Provide temporary 11kV ring main unit	ea	1			
2 EXISTING SUBSTATION EQUIPMENT						
2.1	MEDIUM-VOLTAGE EQUIPMENT This activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections.					
2.1.1	Removal of existing 11kV panels, switchgear and return to the client (including loading, transportation within a 2km radius; offloading and disposal of oil). The activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar	sum	1			
2.2	LOW-VOLTAGE EQUIPMENT					
2.2.1	Allowance for de-energizing, dismantling and removal of existing Low-voltage busway(1600kVA transformer), (including loading, transportation within a 2km radius and offloading).	sum	1			
2.2.2	Allowance for the disconnecting and removal of existing 1600kVA transformer (including loading, transportation within a 2km radius and offloading).	sum	1			
3 PROPOSED SUBSTATION EQUIPMENT						
3.1	MEDIUM-VOLTAGE EQUIPMENT Supply and installation shall be carried out in accordance with SANS 10142-2 and Transnet MV Specification TE-001-MVSPEC. Contractor to ensure they obtain a copy of the Transnet MV specification .					
3.1.1	Supply and install 1250A, 31.5kA, 11kV Incomer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Compressor House Substation.	ea	2			
3.1.2	Supply and install 1250A, 31.5kA, 11kV Transformer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Compressor House Substation.	ea	2			
3.1.3	Supply and install 1250A, 31.5kA, 11kV Bus-section panel, comprising of Protection relays and Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Compressor House Substation.	ea	1			
3.1.4	Supply and install a Voltage transformer panel, comprising of Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Compressor House Substation.	ea	1			
3.1.5	Supply and install a Bus-riser panel, comprising of Voltage transformers, etc, as per specification TE-001-MVSPEC and Annexure 1 - Compressor House Substation.	ea	1			
3.1.6	Supply and install a Arc ducting as per specification TE-001-MVSPEC (Ducting to extend to the exterior of the substation with suitable weatherproof stainless steel cowl.	sum	1			
3.1.7	Termination of new 11kV, XLPE cables into new 11kV switchgear panels and transformers.	ea	6			
3.1.8	Disconnect and remove existing 11kV, transformer feeder cables and install with new.	ea	2			
3.1	Joining of existing 11kV, 240mm ² PILC into new 11kV, 185mm ² XLPE cables. All medium voltage jointing shall be done outside the substation walls.	ea	2			
3.2	LOW-VOLTAGE EQUIPMENT					
3.2.1	Refurbish existing spare 2MVA, 11kV/400V transformer.	ea	1			
3.2.2	Installation of refurbished 2MVA, 11kV/400V transformer (including rigging)	ea	1			
3.2.3	Supply and installation of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable from transformers to Low-voltage panel main earth terminal.	m	40			
3.2.4	Termination of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable (both ends).	ea	2			
3.2.5	Supply and install new 3200A rated busbars and supports between the refurbished 2MVA transformer and existing low-voltage panel Main ACB.	m	6			
3.2.6	Trace, locate and repair damaged Pilot wire cable between F47(Comp) and F21(Main)	ea	1			
4 MISCELLANEOUS SUBSTATION ITEMS/EQUIPMENT						
4.1	Tool rack (wall mounted).	ea	1			
4.2	VCB trolley.	ea	2			
4.3	Chequer plates to cover cable ducts around the switchgear panels (including cutting to fit equipment and painting).	sum	1			
4.4	Supply and install new 110Vdc Battery charger (using maintenance free Ni-Cad cells) as per specification TE-001-MVSPEC including all supply cables wiring from low-voltage panel local DB to battery charger and terminals.	ea	1			
4.5	Wiring for Main low-voltage ACB's / MV inter-tripping.	sum	1			
4.6	Epoxy coating of substation switchroom floors including surface preparation of floors.	m ²	40			
4.7	Allowance for removal of existing metering equipment from existing MV panels and reinstating on new MV panels.	sum	1			
4.8	Design, manufacture and install new substation doors as per Eskom specifications and Transnet Engineering's Works Information (Xpanda).	ea	2			
5 TESTING AND COMMISSIONING						
5.1	MEDIUM-VOLTAGE PANELS					
5.1.1	Allowance for FATattendance by the client's representative and and contractors appointed Professional Engineer.	sum	1			
5.1.2	Pre-commissioning tests of 11kV panels by registered ECSA Professional Engineer specializing in commissioning of MV equipment and protection relays, including protection study and uploading of protection settings to various relays.	sum	1			
5.1.3	On-site commissioning and testing of 11kV panels by contractors appointed Professional Engineer (including of CoC in accordance with SANS 10142-2).	sum	1			
6 EARTHING						
6.1	Testing of existing substation earth mat/bonding in accordance with specification TE-005- EARTHINGSPEC. Provisional amount of Fifty Thousand rands for any remedial action to be taken if readings obtained is below acceptable value.	sum	1			
Subtotal A: To be carried forward to summary						R
NOTE: Contractor to insert required PGG items for successful completion of works in terms of all conditions of contract						
7 PRELIMINARY AND GENERAL ITEMS						
ITEM	DESCRIPTION	UNIT	QTY		RATE	TOTAL COST
7.1	Office and storage facilities	day				
7.2	Ablution and latrine facilities	day				
7.3	Tools and equipment	day				
7.4	Supervision	day	15			
7.5	LDV's	day	15			
7.6	7ton Drop side truck	day				
7.7	Crane truck	day	3			
7.8	Site establishment	sum	1			
#	Safety and Compliance	sum	1			
#	Medicals	sum	1			
7.10	Medicals	sum	1			
7.11	Contractual requirements	sum	1			
Subtotal B: To be carried forward to summary						R
8 SUMMARY OF ELECTRICAL SCHEDULE G RATES						
8.1	Subtotal A					
8.2	Subtotal B (P&G's)					
Total Tender Price						R

2. Bill of Quantity Bay 2 subststion

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	INSTALL	TOTAL
1 EXISTING SUBSTATION EQUIPMENT						
1.1	MEDIUM-VOLTAGE EQUIPMENT This activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections.					
1.1.1	Removal of existing 11kV panels, switchgear and return to the client (including loading, transportation within a 2km radius; offloading and disposal of oil). The activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections.	sum	1			
1.2	LOW-VOLTAGE EQUIPMENT					
1.2.1	Allowance for de-energizing, dismantling and removal of existing Low-voltage panels; and return to the client (including loading, transportation within a 2km radius and offloading).	sum	1			
1.2.2	Allowance for de-energizing, dismantling and removal of existing Low-voltage busways (including loading, transportation within a 2km radius and offloading).	sum	1			
2 PROPOSED SUBSTATION EQUIPMENT						
2.1	MEDIUM-VOLTAGE EQUIPMENT Supply and installation shall be carried out in accordance with SANS 10142-2 and Transnet MV Specification TE-001-MVSPEC. Contractor to ensure they obtain a copy of the Transnet MV specification prior to pricing the works.					
2.1.1	Supply and install 1250A, 31.5kA, 11kV Incomer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 2 Substation).	ea	2			
2.1.2	Supply and install 1250A, 31.5kA, 11kV Transformer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 2 Substation).	ea	4			
2.1.3	Supply and install 1250A, 31.5kA, 11kV, 3200kVA Feeder panel, comprising of Current transformers, Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 2 Substation).	ea	1			
2.1.4	Supply and install 1250A, 31.5kA, 11kV Bus-section panel, comprising of Protection relays and Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 2 Substation).	ea	1			
2.1.5	Supply and install a Voltage transformer panel, comprising of Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 2 Substation).	ea	1			
2.1.6	Supply and install a Bus-riser panel, comprising of Voltage transformers, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 2 Substation).	ea	1			
2.1.7	Supply and install a Arc ducting as per specification TE-001-MVSPEC (Ducting to extend to the exterior of the substation with suitable weatherproof stainless steel cowl).	sum	1			
2.1.8	Termination of new 11kV XLPE cables into new 11kV switchgear panels and transformers.	ea	10			
2.1.9	Disconnect and remove existing 11kV, 70mm ² transformer feeder cables and install with new.	ea	4			
2.1.10	Jointing of existing 11kV, 240mm ² PILC unto new 11kV, 185mm ² XLPE cables. All medium voltage cable jointing shall be done outside the substation walls.	ea	2			
2.2	LOW-VOLTAGE EQUIPMENT					
2.2.1	Supply and installation of new 400V top/bottom entry low-voltage switchgear panel and associated equipment as per specification TE-002-DBSPEC and drawings no: TE-DBN-BAY2- 2025-01	sum	1			
2.2.2	Supply and installation of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable from transformers to Low-voltage panel main earth terminal.	m	80			
2.2.3	Termination of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable (both ends).	ea	4			
2.2.4	Supply and install new 630mm ² Single core unarmoured XLPE insulated PVC sheathed 600/1000V cable from transformer low-voltage bushings to low-voltage panel Main ACB switches.	m	200			
2.2.5	Termination of new 630mm ² Single core unarmoured XLPE insulated PVC sheathed 600/1000V cables between existing transformer bushings and low-voltage Main ACB switches.	ea	32			
2.2.6	Design, manufacture and install new low-voltage transformer extention boxes to be fitted unto existing transformers.	ea	4			
2.2.7	Provisional allowance amount of One-hundred and Thirty thousand rands for low-voltage cable and cable joints. All jointing shall be done outside the substation, and not in the cable trenches.	sum	1			
3 MISCELLANEOUS SUBSTATION ITEMS/EQUIPMENT						
3.1	Tool rack (wall mounted).	ea	1			
3.2	VCB trolley.	ea	2			
3.3	Chequer plates to cover cable ducts around the switchgear panels (including cutting to fit equipment and painting).	sum	1			
3.4	Supply and install new 110Vdc Battery charger (using maintenance free Ni-Cad cells) as per specification TE-001-MVSPEC including all supply cables wiring from low-voltage panel local DB to	ea	1			
3.5	Wiring for Main low-voltage ACB's / MV inter-tripping.	sum	1			
3.6	Epoxy coating of substation switchroom floors including surface preparation of floors.	m ²	65			

3.7	Painting of substation walls and ceiling with high quality paint.	m ²	260			
3.8	Replacement of switchroom fluorescent lighting with new LED dustproof light fittings.	ea	9			
3. G	Allowance for removal of existing metering equipment from existing MV panels and reinstating on new MV panels.	sum	1			
4 TESTING AND COMMISSIONING						
4.1 MEDIUM-VOLTAGE PANELS						
4.1.1	Allowance for FAT attendance by the client's representative and and contractors appointed Professional Engineer.	sum	1			
4.1.2	Pre-commissioning tests of 11kV panels by registered ECSA Professional Engineer specializing in commissioning of MV equipment and protection relays, including protection study and uploading of protection settings to various relays.	sum	1			
4.1.3	On-site commissioning and testing of 11kV panels by contractors appointed Professional Engineer (including of CoC in accordance with SANS 10142-2).	sum	1			
4.2 LOW-VOLTAGE PANELS						
4.2.1	Commissioning and testing of complete low-voltage 400V switchboard by a registered Installation Electrician (as a minimum) as registered with the Department of Labour (including of CoC in accordance with SANS 10142-1).	sum	1			
5 CABLE MANAGEMENT SYSTEM						
5.1	Design, supply and installation of new Heavy-duty cable management system equal or similar to O-line 3CR12 / 304SS cable system including all cable ladders, supports, bends, accessories and fasteners. Cable management system shall be of rigid design (no threaded bar drop-down supports shall be used), including bonding of metallic wireways.	sum	1			
6 EARTHING						
6.1	Testing of existing substation earth mat/bonding in accordance with specification TE-005-EARTHINGSPEC. Provisional amount of Fifty Thousand rands for any remedial action to be taken if readings obtained is below acceptable value.	sum	1	R 0,00	R 50 000,00	R 50 000,00
Subtotal A: To be carried forward to summary						R
NOTE: Contractor to insert required PGG items for successful completion of works in terms of all conditions of contract						
7 PRELIMINARY AND GENERAL ITEMS						
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL COST	
7.1	Office and storage facilities	day				
7.2	Ablution and latrine facilities	day				
7.3	Tools and equipment	day				
7.4	Supervision	day				
7.5	LDV's	day				
7.6	7ton Drop side truck	day				
7.7	Crane truck	day				
7.8	Site establishment	sum	1			
7.	Safety and Compliance	sum	1			
7.10	Medicals	sum	1			
7.11	Contractual requirements	sum	1			
Subtotal B: To be carried forward to summary						R
8 SUMMARY OF ELECTRICAL SCHEDULE G RATES						
8.1	Subtotal A					
8.2	Subtotal B (P&G's)					
Total Tender Price		R				

3. Bill of Quantity Bay 28 substation						
ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	INSTALL	TOTAL
EXISTING SUBSTATION EQUIPMENT						
1 MEDIUM-VOLTAGE EQUIPMENT						
1.1 This activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections. Contractor to advise the Project Manager at least four (4) weeks prior to commencing with this item.						
1.1.1	Removal of existing 11kV panels, switchgear and return to the client (including loading, transportation within a 2km radius; offloading and disposal of oil). The activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections.	sum	1			
1.2 LOW-VOLTAGE EQUIPMENT						
1.2.1	Allowance for de-energizing, dismantling and removal of existing Low-voltage panels; and return to the client (including loading, transportation within a 2km radius and offloading).	sum	1			
1.2.2	Allowance for de-energizing, dismantling and removal of existing Low-voltage busways (including loading, transportation within a 2km radius and offloading).	sum	1			
PROPOSED SUBSTATION EQUIPMENT						
2 MEDIUM-VOLTAGE EQUIPMENT						
2.1 Supply and installation shall be carried out in accordance with SANS 10142-2 and Transnet MV Specification TE-001-MVSPEC. Contractor to ensure they obtain a copy of the Transnet MV specification prior to pricing the works.						
2.1.1	Supply and install 1250A, 31.5kA, 11kV Incomer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 28 Substation).	ea	2			
2.1.2	Supply and install 1250A, 31.5kA, 11kV Transformer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 28 Substation).	ea	2			
2.1.3	Supply and install 1250A, 31.5kA, 11kV Bus-section panel, comprising of Protection relays and Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 28 Substation).	ea	1			
2.1.4	Supply and install a Voltage transformer panel, comprising of Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 28 Substation).	ea	1			
2.1.5	Supply and install a Bus-riser panel, comprising of Voltage transformers, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 28 Substation).	ea	1			
2.1.6	Supply, install, test and commission new Differential protection relay at F29 (Bay 34 substation) and F45 (Bay 44 substation). Remote end.	ea	2			
2.1.7	Supply and install a Arc ducting as per specification TE-001-MVSPEC (Ducting to extend to the exterior of the substation with suitable weatherproof stainless steel cow).	sum	1			
2.1.8	Termination of new 11kV XLPE cables into new 11kV switchgear panels and transformers.	ea	6			
2.1.9	Disconnect and remove existing 11kV, 70mm ² transformer feeder cables and install with new.	ea	2			
2.1.10	Jointing of existing 11kV, 240mm ² PILC into new 11kV, 185mm ² XLPE cables. All medium voltage cable jointing shall be done outside the substation walls.	ea	2			
2.1.11	Supply 11kV, 185mm ² x 3 core XLPE individually screened copper conductor cable.	m	300			
2.1.12	Supply 11kV, 70mm ² x 3 core XLPE individually screened copper conductor cable.	m	300			
2.2 LOW-VOLTAGE EQUIPMENT						
2.2.1	Supply and installation of new 400V top/bottom entry low-voltage switchgear panel and associated equipment as per specification TE-002-DBSPEC and drawing no: TE-DBN-BAY28- 2025-01	sum	1			
2.2.2	Supply and installation of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable from transformers to Low-voltage panel main earth terminal.	m	40			
2.2.3	Termination of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable (both ends).	ea	2			
2.2.4	Supply and install new 630mm ² Single core unarmoured XLPE insulated PVC sheathed 600/1000V cable from transformer low-voltage bushings to low-voltage panel Main ACB switches (both ends).	m	120			
2.2.5	Design, manufacture and install new low-voltage transformer extension boxes to be fitted into existing transformers.	ea	2			
2.2.6	Termination of new 630mm ² Single core unarmoured XLPE insulated PVC sheathed 600/1000V cables between existing transformer termination boxes and Low-voltage Main ACB switches (both ends).	ea	16			
2.2.7	Provisional allowance amount of One-hundred and Thirty thousand rands for low-voltage cable and cable joints. All jointing shall be done outside the substation, and not in the cable trenches.	sum	1			
MISCELLANEOUS SUBSTATION ITEMS/EQUIPMENT						
3.1	Tool rack (wall mounted).	ea	1			
3.2	VCB trolley.	ea	2			
3.3	Chequer plates to cover cable ducts around the switchgear panels (including cutting to fit equipment and painting).	sum	1			
3.4	Supply and install new 110Vdc Battery charger (using maintenance free Ni-Cad cells) as per specification TE-001-MVSPEC including all supply cables wiring from low-voltage panel local DB to battery charger and terminals.	ea	1			
3.5	Wiring for Main low-voltage ACBs / MV inter-tripping.	sum	1			
3.6	Epoxy coating of substation switchroom floors including surface preparation of floors.	m ²	70			
3.7	Painting of substation walls and ceiling with high quality paint.	m ²	270			
3.8	Replacement of switchroom fluorescent lighting with new LED dustproof light fittings.	ea	9			
#	Design, manufacture and install new substation doors as per Eskom specification and Transnet Engineering's Works Information. (Xpanda)	ea	2			
#	Allowance for removal of existing metering equipment from existing MV panels and reinstating on new MV panels.	sum	1			
TESTING AND COMMISSIONING						
4.1 MEDIUM-VOLTAGE PANELS						
4.1.1	Allowance for FAT attendance by the client's representative and and contractors appointed Professional Engineer.	sum	1			
4.1.2	Pre-commissioning tests of 11kV panels by registered ECSA Professional Engineer specializing in commissioning of MV equipment and protection relays, including protection study and uploading of protection settings to various relays.	sum	1			
4.1.3	On-site commissioning and testing of 11kV panels by contractors appointed Professional Engineer (including of CoC in accordance with SANS 10142-2).	sum	1			
4.2 LOW-VOLTAGE PANELS						
4.2.1	Commissioning and testing of complete low-voltage 400V switchboard by a registered Installation Electrician (as a minimum) as registered with the Department of Labour (including of CoC in accordance with SANS 10142-1).	sum	1			
CABLE MANAGEMENT SYSTEM						
5.1	Design, supply and installation of new Heavy-duty cable management system equal or similar to O-line 3CR12 / 304SS cable system including all cable ladders, supports, bends, accessories and fasteners. Cable management system shall be of rigid design (no threaded bar drop-down supports shall be	sum	1			
EARTHING						
6.1	Testing of existing substation earth mat/bonding in accordance with specification TE-005- EARTHINGSPEC. Provisional amount of Fifty Thousand rands for any remedial action to be taken if readings obtained is below acceptable value.	sum	1			
Subtotal A: To be carried forward to summary						R
NOTE: Contractor to insert required PGG items for successful completion of works in terms of all conditions of contract						
PRELIMINARY AND GENERAL ITEMS						
7	DESCRIPTION	UNIT	QTY	RATE	TOTAL COST	
7.1	Office and storage facilities	day				
7.2	Ablution and latrine facilities	day				
7.3	Tools and equipment	day				
7.4	Supervision	day				
7.5	LDV's	day				
7.6	7ton Drop side truck	day				
7.7	Crane truck	day				
7.8	Site establishment	sum	1			
7.9	Safety and Compliance	sum	1			
7.10	Medicals	sum	1			
7.11	Contractual requirements	sum	1			
Subtotal B: To be carried forward to summary						R
SUMMARY OF ELECTRICAL SCHEDULE G RATES						
8.1	Subtotal A					
8.2	Subtotal B (P&G's)					
Total Tender Price		R				

4. Bill of Quantity Bay 55 subststion

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL	INSTALL	TOTAL
1 EXISTING SUBSTATION EQUIPMENT						
1.1 MEDIUM-VOLTAGE EQUIPMENT This activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections.						
1.1.1	Removal of existing 11kV panels, switchgear and return to the client (including loading, transportation within a 2km radius; offloading and disposal of oil). The activity shall be carried out by the contractor in accordance with the proposed method statement regarding switching and isolation of busbar sections.	sum	1			
2 PROPOSED SUBSTATION EQUIPMENT						
2.1 MEDIUM-VOLTAGE EQUIPMENT Supply and installation shall be carried out in accordance with SANS 10142-2 and Transnet MV Specification TE-001-MVSPEC. Contractor to ensure they obtain a copy of the Transnet MV specification.						
2.1.1	Supply and install 1250A, 31.5kA, 11kV Incomer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 55 Substation).	ea	2			
2.1.2	Supply and install 1250A, 31.5kA, 11kV Transformer panels, comprising of Current transformers and Protection relays as per specification TE-001-MVSPEC and Annexure 1 - Bay 55 Substation).	ea	2			
2.1.3	Supply and install 1250A, 31.5kA, 11kV Bus-section panel, comprising of Protection relays and Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 55 Substation).	ea	1			
2.1.4	Supply and install a Voltage transformer panel, comprising of Busbar earthing switch, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 55 Substation).	ea	1			
2.1.5	Supply and install a Bus-riser panel, comprising of Voltage transformers, etc, as per specification TE-001-MVSPEC and Annexure 1 - Bay 55 Substation).	ea	1			
2.1.6	Supply and install a Arc ducting as per specification TE-001-MVSPEC (Ducting to extend to the exterior of the substation with suitable weatherproof stainless steel cow).	sum	1			
2.1.7	Termination of new 11kV, XLPE cables into new 11kV switchgear panels and transformers.	ea	6			
2.1.8	Disconnect and remove existing 11kV,70mm ² transformer feeder cables and install with new.	ea	2			
2.1.9	Jointing of existing 11kV, 240mm ² PILC into new 11kV,185mm ² XLPE cables. All medium voltage cable jointing shall be done outside the substation walls.	ea	2			
2.1.10	Supply, install and commission new compatible Differential Protection relay at Store Substation (F82), remote end of Bay 55 Substation.	ea	1			
2.2 LOW-VOLTAGE EQUIPMENT						
2.2.1	Supply and installation of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable from transformers to Low-voltage panel main earth terminal.	m	40			
2.2.2	Termination of new 150mm ² Single core PVC insulated Green/Yellow earth conductor cable (both ends).	ea	2			
3 MISCELLANEOUS SUBSTATION ITEMS/EQUIPMENT						
3.1	Tool rack (wall mounted).	ea	1			
3.2	VCB trolley.	ea	2			
3.3	Chequer plates to cover cable ducts around the switchgear panels (including cutting to fit equipment and painting).	sum	1			
3.4	Supply and install new 110Vdc Battery charger (using maintenance free Ni-Cad cells) as per specification TE-001-MVSPEC including all supply cables wiring from low-voltage panel local DB to battery charger and terminals.	ea	1			
3.5	Wiring for Main low-voltage ACB's / MV inter-tripping.	sum	1			
3.6	Epoxy coating of substation switchroom floors including surface preparation of floors.	m ²	45			
3.7	Painting of substation walls and ceiling with high quality paint.	m ²	50			
3.8	Replacement of switchroom fluorescent lighting with new LED dustproof light fittings.	ea	14			
#	Allowance for removal of existing metering equipment from existing MV panels and reinstating on new MV panels.	sum	1			
4 TESTING AND COMMISSIONING						
4.1 MEDIUM-VOLTAGE PANELS						
4.1.1	Allowance for FATattendance by the client's representative and and contractors appointed Professional Engineer.	sum	1			
4.1.2	Pre-commissioning tests of 11kV panels by registered ECSA Professional Engineer specializing in commissioning of MV equipment and protection relays, including protection study and uploading of protection settings to various relays.	sum	1			
4.1.3	On-site commissioning and testing of 11kV panels by contractors appointed Professional Engineer (including of CoC in accordance with SANS 10142-2).	sum	1			
5 EARTHING						
5.1	Testing of existing substation earth mat/bonding in accordance with specification TE-005-EARTHINGSPEC. Provisional amount of Fifty Thousand rands for any remedial action to be taken if readings obtained is below acceptable value.	sum	1			
Subtotal A: To be carried forward to summary						R
NOTE: Contractor to insert required PGG items for successful completion of works in terms of all conditions of contract						
7 PRELIMINARY AND GENERAL ITEMS						
ITEM	DESCRIPTION	UNIT	QTY	RATE	TOTAL COST	
7.1	Office and storage facilities	day				
7.2	Ablution and latrine facilities	day				
7.3	Tools and equipment	day				
7.4	Supervision	day				
7.5	LDV's	day				
7.6	7ton Drop side truck	day				
7.7	Crane truck	day				
7.8	Site establishment	sum	1			
7.	Safety and Compliance	sum	1			
7.10	Medicals	sum	1			


7.1.1	Contractual requirements	sum	1	
Subtotal B: To be carried forward to summary				R
SUMMARY OF ELECTRICAL SCHEDULE G RATES				
8				
8.1	Subtotal A			
8.2	Subtotal B (P&G's)			
Total Tender Price		R		


Summary of Total cost	
1. Compressor House sub Total Vat exclusive	
2. Bay 2 sub Total vat exclusive	
3. Bay 28 sub Total vat exclusive	
4. BAY 55 sub Total vat exclusive	
Sub Total	
Vat 15 %	
Total	

Name: Zolani Mngqithi Designation: Engineering Technician

Name: Mzwenkosi Mapuko Designation: Senior Project Manager

Name: Mhlonipheni Nxumalo Designation: Executive Manager

Signature and date:  19.03.2026

Signature and date:  19.03.2026

Signature and date:  19/03/2025