

PART C2: PRICING DATA

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C2.1 Pricing assumptions: Option A

1. GENERAL

1.1. How work is priced and assessed for payment

Clause 11 in NEC3 Term Service Contract (TSC3) core clauses and Option A states:

Identified and defined terms

11.2 (12) The Price List is the price list unless later changed in accordance with this contract.

(17) The Price for Services Provided to date is the total of the Price for each lump sum item in the Price List which the Contractor has completed and where a quantity is stated for an item in the Price List, an amount calculated by multiplying the quantity which the Contractor has completed by the rate.

(19) The Prices are the amounts stated in the Price column of the Price List. Where a quantity is stated for an item in the Price List, the Price is calculated by multiplying the quantity by the rate.

Clause 50 in NEC3 Term Service Contract (TSC3) core clauses and Option A states:

Assessing the amount due

50.2 The amount due is the Prices for the Services Provided to date plus other amounts to be paid to the Contractor, less amounts to be paid by or retained from the Contractor.

This confirms that Option A is a priced contract where the Prices are derived from a list of items of service which can be priced as lump sums or as estimated quantities of service multiplied by a rate or a mix of both.

1.2 Function of the Price List

Clause 54.1 in Option A states: "Information in the Price List is not Service Information". This confirms that instructions to do work or how it is to be done are not included in the Price List but in the Service Information. This is further confirmed by Clause 20.1 which states, "The Contractor Provides the Service in accordance with the Service Information". Hence the Contractor does not provide the Service in accordance with the Price List. The Price List is only a pricing document.

1.3 Preparing the price list

Before preparing the price list, both the Employer and tendering contractors should read the TSC3 Guidance Notes pages 14 and 15. In an Option A contract, either Party may have entered items into the price list either as a process of offer and acceptance (tendering) or by negotiation depending on the nature of the service to be provided. Alternatively, the Employer, in his Instructions to Tenderers or in a Tender Schedule, may have listed some items that he requires the Contractor to include in the price list to be prepared and priced by him. The Contractor should make a provision of standing time when pricing. Standing time which might be due to the Employer or external factors such as weather, theft and incidents during the occupations and outside of the occupation should be factored on the main rate while pricing.

It is assumed that in preparing or finalising the price list the Contractor:

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/ 11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

- Has taken account of the guidance given in the TSC3 Guidance Notes relevant to Option A;
- Understands the function of the Price List and how work is priced and paid for;
- Is aware of the need to link priced rates with parameters for the volume of work involved in Providing the Service as contemplated in *price list* contained in section C2.2;
- Has listed and priced items in the price list which are inclusive of everything necessary and incidental to Providing the Service in accordance with the Service Information, as it was at the time of tender, as well as correct any Defects not caused by an Employer's risk. This should also include all liabilities and obligations set forth or implied in the Contract data, as well as any profit.
- Has priced work he decides not to show as a separate item within the Prices or rates of other listed items in order to fulfil the obligation to complete the service for the tendered total of the Prices.
- Understands there is no adjustment to items priced as lump sums if the amount, or quantity, of work within that item later turns out to be different to that which the Contractor estimated at time of tender. The only basis for a change to the (lump sum) Prices is as a result of a compensation event.

2. FORMAT OF THE PRICE LIST

Entries in the first four columns in the price list in section C2.2 are made either by the Employer or the tendering contractor.

If the Contractor is to be paid an amount for the item which is not adjusted if the quantity of work in the item changes, the tendering Contractor enters the amount in the Price column only, the Unit, Estimated Quantity and Rate columns being left blank.

The pricing table contained in section C2.2 contemplates;

- (i) Volume based pricing with applicable rates based on actual volumes of work provided to the Contractor

3. GENERAL PRICING ASSUMPTIONS

- 3.1.** The agreement is based on the NEC Term Service Contract.
- 3.2.** It will be assumed that prices included in the Price List are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders.
- 3.3.** The Price List is not intended for the ordering of materials. Any ordering of materials, based on the Price List, is at the Contractor's risk.
- 3.4.** The prices should cover the cost (as explained in par 1.3 above) for the work as described. The quantities set out in these Price Lists are estimates and do not necessarily represent the actual amount of work to be done per quantity item. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in these Price Lists (refer to par 1.1 above).
- 3.5.** The short descriptions of the items of payment given in this Price List are only for purposes of identifying the items. More details regarding the extent of the work entailed under each item appear in the Service Information.
- 3.6.** For each item in the Price List, the *Contractor* shall provide in the appropriate column the portion of the tendered sum (inclusive of labour and material).
- 3.7.** The total in the Price List shall be exclusive of VAT and shall be transferred to form C1.1 (Form of Offer and Acceptance).

4. MEASUREMENT AND PAYMENT FOR CONTRACT

This part C2 of the specification as well as any reference in part **C3** will apply to determine conditions under which payments for this contract are to be made.

This section must be read together with the Additional Definitions and Interpretation Provisions contained in the Z- Clauses contained in **Contract Data provided by the Employer (C1.2 TSC3 Contract Data)** and in particular **Clause ZD6** providing for the annual assessment of the amount due to the Contractor for Providing the Services.

The basis of payment of this contract is the **final m3 removed from the drains by the drain cleaner machine or manual/hand team**. The quantities provided on the price list are estimates and not guaranteed.

4.1 Item 1 Cubic meters removed

4.1.1 Item 1.1: Cubic Meters Removed by Machine Rate

This refers to the spoil removed in cubic meters (m3) by the machine. The *Contractor* shall be paid for the spoil removed.

4.1.2 Item 1.2: Cubic Meters Removed by Hands Rate

This refers to cleaning of drains and removal of spoil manually using hands. Payment shall be done for the spoil removed.

4.1.3 Item 1.3: Cleaning of Culverts by Hands Rate

This refers to cleaning and opening of culverts manually using hands. The item shall be paid for each culvert cleaned manually using hands.

4.1.4 Item 1.4: Stand-by Rate

This shall be applicable during the annual December break provided that the Contractor is requested to be on stand-by.

4.1.5 Item 1.5: Cleaning of level crossings by Hands Rate

This refers to cleaning and opening of level crossings manually using hands. The item shall be paid for each level crossing cleaned manually using hands.

4.2 Item 2 Overtime

4.2.1 Item 2.1 Normal Overtime

Only approved overtime agreed between the Project Manager, Depot and *Contractor* shall be paid. No overtime shall be paid due to *Contractor* related issues i.e. productivity related or *Contractor* working extra hours to catch-up on daily targets and availability.

Overtime payments will be made for occupation time during weekdays (Monday to Friday) in excess of the hours of maximum occupation time (TOM) of 8 (eight) hours per day.

4.2.2 Item 2.2 Saturday Overtime

Overtime payment will also be made for work performed on a Saturday when in excess of 5 consecutive days out of every 7 days or in excess of 10 consecutive days out of every 14 days.

Overtime payment will also be made for work performed on a Saturday shift day when work is performed in excess of 8 hours for the day.

Only the occupation time allocated will be considered for the calculation of overtime. This implies excluding preparation time outside of the 8 hours occupation time.

4.2.3 Item 2.3 Sunday and Public Holiday overtime

Sunday time payment will be made for work performed on a Sunday or Paid Public Holiday when in excess of 5 consecutive days out of every 7 days or in excess of 10 consecutive days out of every 14 days.

Sunday time payment will also be made for work performed on a Sunday shift day when work is performed in excess of 8 hours for the day.

Only the occupation time allocated will be considered for the calculation of overtime. This implies excluding preparation time outside of the 8 hours occupation time.

4.3 Item 3 Shift Allowance

4.3.1 Item 3.1 Saturday shift allowance

A shift allowance payment will be made for work performed on a Saturday when working five days out of every seven days or ten days out of every fourteen days.

4.3.2 Item 3.2 Sunday and Public Holiday

A shift allowance payment will be made for work performed on a Sunday or Paid Public Holiday when working five days out of every seven days or ten days out of every fourteen days.

4.3.3 Item 3.3 Night shift

A night shift allowance payment will be made when an 8-hours occupation or part thereof falls between 18h00 and 06h00.

4.4 Item 4 Labour rates

This item shall also be used for any required and approved day labour. The rates are to be for labour (including hand tools), supervision and transport for additional preparation work, approved by the Project Manager. Payment of labour rates is provisional, and the Contractor should get approval from the Project Manager prior to hiring additional labour for any project.

4.5 Item 5 Plant Hire

This item is paid per day and approval by the Project Manager is required prior to the Contractor hiring any of the vehicles or machinery listed under this item.

4.6 Item 6 Moving Machine

This item will be paid for distance travelled from one depot to another in kilometres after completion of work. The distance travelled from stage area to working site during an occupation does not form part of this item.

4.7 Item 7 Excess for a Cell phone

This item is Provisional and it will only be paid if personnel acting on behalf of the Employer make use of the Contractor’s cell phone for communication in relations to the occupation.

5 GENERAL

Payment for a cubic meter (m3) of spoiled removed shall be made per machine. This rate shall include for the full-time availability of the machine including the provision and maintenance of the machine in full operational condition, and also including all maintenance and support staff and fuels.

All time and productivity records and calculations shall be recorded on every month’s payment calculations to monitor time allowed for the contractor to achieve the required output.

6. Contract Skills Development Goals for CIDB

The Contractor shall determine the CSDG, expressed in Rand, which shall not be less than the sub-total multiplied by a percentage (%) factor given in **Table 2 of the Standard for the applicable class of construction works**. The Employer shall state the percentage (%) factor in the Final Tender Summary section dependant on the Class of Construction Works.

<p>Table 2: Construction skills development goals for different classes of engineering and construction works contracts. Class of construction works as identified in terms of the cidb regulation</p>	<p>Construction skills development goal (%)</p>
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Designation	Description
EP	Civil Engineering 0.25

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C2.2 the price list

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
De Aar "B" Substation	3.8 x 4 x 2.5	6.6kV	Differential Protection	Buchholz & Oil Temp	CT Ratio						
CB/Panel number + Designation	kWh Meter	Voltmeter			Protection CT Ratio	Metering CT Ratio					
1 E Substation		X	Solkor 300/5		100/5	100/5	+IDMT	Ring Cable			
2 F Substation		X	Solkor 300/5		50/5	50/5	+IDMT	Ring Cable			
3 Transformer 1 (500kVA)				X	50/5	50/5	Intertripping	Transformer			
4 Transformer 2 (500kVA)				X	50/5	50/5	Intertripping	Transformer			
									SUB TOTAL (1)		

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SUBSTATION LOW VOLTAGE PANELS: DE AAR "B" SUBSTATION								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 800 Amps MCCB	Transformer 1 and Transformer 2	2	each			
	Bus coupler:	3 phase, 800 Amps MCCB	Buscoupler	1	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Hostel,G1/6 D3, Station building and old station	4	each			
		3 phase, 200 Amps MCCB	Nuwe stasie,Wag Kamer and undesignated	3	each			
		3 phase, 100 Amps MCCB	SI/S and 3x undesignated	4	each			
		4 phase, 100 Amps MCCB	Undesignated	2	each			
		3 phase, 30 Amps MCB	Signal room and 5x undesignated	6	each			
		1 phase, 30 Amps MCB	3x Undesignated	3	each			
		1 phase, 15 Amps MCB	Undesignated	5	each			

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1.02 Indicating instruments								
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
1.03 Steelwork, Busbar and cabling								
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete			
							SUB TOTAL (2)	

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ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 500kVA transformers incl. terminations	30	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			

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1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR De Aar "B" Substation (1+2+3)	
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Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
De Aar "D" Substation	8 x 3 x 3,3	6.6kV	Differential Protection	Buchholz & Oil Temp	CT Ratio						
CB/Panel number + Designation	kWh Meter	Voltmeter			Protection CT Ratio	Metering CT Ratio	+IDMT	Ring Cable	Bus Coupler		
1 Transformer No.1 (200kVA)				X							
2 Municipal Feeder		X			200/5	200/5		Incomer			
3 L Substation		X	Solkor 300/5		150/5	150/5	+IDMT	Ring Cable			
4 Bus Coupler								Bus Coupler			
5 H Substation		X	Solkor 300/5		150/5	150/5	+IDMT	Ring Cable			
6 E Substation		X	Solkor 300/5		150/5	150/5	+IDMT	Ring Cable			
7 Transformer No.2 (200kVA)				X	30/5	30/5	Intertripping	Transformer			
										SUB TOTAL (1)	

SUBSTATION LOW VOLTAGE PANELS : DE AAR "D" SUBSTATION								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 600V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer :	3 phase, 300 Amps MCCB	Transformer 1 and Transformer 2	2	each			
	Bus coupler:	3 phase, 300 Amps MCCB	Buscoupler	1	each			
	Outgoing Feeders :	3 phase, 200 Amps MCCB	D2, D3 and Yard lights	3	each			
		3 phase, 60 Amps MCB	Kiosk and 2x Undesignated	3	each			
		3 phase, 30 Amps MCB	3 x Undesignated	3	each			
		1 phase, 50 Amps MCB	3 x Undesignated	3	each			
		1 phase, 30 Amps MCB	HT Supply	3	each			

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		1 phase, 15 Amps MCB	Sub lights	1	each			
		1 phase, 5 Amps MCB	Sub lights	2	each			
1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 300/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
1.03	Steelwork, Busbar and cabling							
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete			
							SUB TOTAL (2)	

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ITEM	Description	Quantity	Unit	Equipme nt rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	3	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 200kVA transformers incl. terminations	40	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			

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1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR De Aar "D" Sub (1+2+3)	
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Substation Name:	Space:	System Voltage:	Clearance OK								
De Aar "E" Substation	8 x 3 x 2,4	6.6kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
1 B Substation		X	Solkor 300/5		150/5	150/5	+IDMT	Ring Cable			
2 Transformer No.1 (315kVA)				X	30/5	30/5	Intertripping	Transformer			
4 Bus coupler								Bus Coupler			
5 Transformer No.2 (315kVA)				X	30/5	30/5	Intertripping	Transformer			
5 G Substation (50kVA)					10/5	10/5	+IDMT	Radial Cable			
6 D Substation		X	Solkor 300/5		150/5	150/5	+IDMT	Ring Cable			
										SUB TOTAL (1)	

SUBSTATION LOW VOLTAGE PANELS: De Aar "E" Substation								
ITEM	Description			Quantity	Unit	Equipme nt rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 500 Amps MCCB	Transformer 1 and Transformer 2	2	each			
	Bus coupler:	3 phase, 500 Amps MCCB	Buscoupler	1	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Yard lights, Kiosk, 2 x Undesignated	4	each			
		3 phase, 200 Amps MCCB	C & W workshop and compressor	2	each			
		3 phase, 100 Amps MCCB	6 Undesignated	6	each			
		3 phase, 60 Amps MCB	Sub lights	14	each			
		3 phase, 15 Amps MCB	Undesignated	5	each			
		1 phase, 30 Amps MCB	Sub lights	3	each			
		1 phase, 15 Amps MCB	Sub lights	3	each			
		1 phase, 5 Amps MCB	Sub lights	3	each			

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1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 500/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
1.03	Steelwork, Busbar and cabling							
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete			
							SUB TOTAL (2)	

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ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	3	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 315kVA transformers incl. terminations	30	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR De Aar "E" Sub (1+2+3)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
De Aar "F" Substation	7 x 5 x 3	6.6kV	Differential Protection	Buchholz & Oil Temp	CT Ratio	CT Ratio					
CB/Panel number + Designation	kWh Meter	Voltmeter			Protection CT Ratio	Metering CT Ratio					
1 L Substation		X	Solkor 300/5		100/5	100/5	+IDMT	Ring Cable			
2 Transformer 1 (800kVA)				X	75/5	75/5	Intertripping	Transformer			
3 Transformer 2 (800kVA)				X	75/5	75/5	Intertripping	Transformer			
4 B Substation		X	Solkor 300/5		100/5	100/5	+IDMT	Ring Cable			
6 A Substation (Mini Substation)		X			50/5	50/5	+IDMT	Radial Cable			
										SUB TOTAL (1)	

SUBSTATION LOW VOLTAGE PANELS: DE AAR "F" SUBSTATION								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 1200 Amps MCCB	Transformer 1 and Transformer 2	2	each			
	Bus coupler:	3 phase, 1200 Amps MCCB	Buscoupler	1	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Diesel shed, Kiosk and 2 x Undesignated	4	each			
		3 phase, 100 Amps MCCB	Sub DB, Diesel Workshop and 2 x Undesignated	4	each			
		3 phase, 50 Amps MCB	2 x Undesignated	2	each			
		3 phase, 30 Amps MCB	4 x Undesignated	4	each			
		1 phase, 5 Amps MCB	Yard lights bypass	2	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 1200/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
1.03	Steelwork, Busbar and cabling							
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete			
							SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipme nt rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 800kVA transformers incl. terminations	40	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR De Aar "F" Substation (1+2+3)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
De Aar "H" Substation	4,5 x 4 x 3	6.6kV	Differential Protection	Buchholz & Oil Temp	Protection CT Ratio	Metering CT Ratio					
CB/Panel number + Designation	kWh Meter	Voltmeter									
1 Local Transformer (400kVA)				X	30/5	30/5	Intertripping	Transformer			
2 Municipal Feeder	X	X			200/5	200/5		Incomer			
3 D Substation			Solkor 300/5		150/5	150/5	+IDMT	Ring Cable			
										SUB TOTAL (1)	

SUBSTATION LOW VOLTAGE PANELS: De Aar "H" SUB									
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total	
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS								
1.01	Low Voltage panels								
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:								
	Feeder type	Technical Description	Designation						
	Incomer:	3 phase, 400 Amps MCCB	Transformer 1	1	each				
	Outgoing Feeders:	3 phase, 200 Amps MCCB	Signal Kiosk and North Kiosk, Yard Lights, 3 x Undesignated	5	each				
		3 phase, 160 Amps MCCB	Mess + Ablution, Operating and Undesignated	3	each				
1.02	Indicating instruments								
	Meter type	Technical Description	Designation						
	Ammeter:	Supply and install 400/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1	3	each				
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1	1	each				
	Killowatt Hour Meters:	Supply and install a new Killowatthour meter		1	each				

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.03	Steelwork, Busbar and cabling						
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits	1	complete			
						SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the 400kVA transomer incl. terminations	40	metres			
1.09	Supply and Install Battery and charger	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR De Aar "H" Sub (1+2+3)	
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MAIN SUMMARY (De Aar)		
ITEM	TRACTION SUBSTATION	AMOUNT
1	B Substation 6.6 kV	
2	D Substation 6.6 kV	
3	E Substation 6.6 kV	
4	F Substation 6.6 kV	
5	H Substation 6.6 kV	
6	L Substation 6.6 kV	
TOTAL (EXCL. VAT)		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUMMARY OF BILL OF QUANTITIES

for

Contract No.

Item	Description	Amount
1	Total for De Aar Depot	
2	Training for De Aar Depot (2 Training Sesion)	
Total of tender carried forward to summary of BoQ		Subtotal

SUBSTATION LOW VOLTAGE PANELS: DBN CONTAINER SUB									
ITEM	Description			QTY	Unit	Equipment rate	Labour rate	Total	
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS								
1.01	Low Voltage panels								
LV Panel 1	Design, supply, install and commission 400V Low Voltage panel comprising of the following:								
	Feeder type	Technical Description	Designation						
	Incomer:	3 phase, 2000 Amps MCCB	Transformer 1 and Transformer 4	2	each				
	Bus coupler:	3 phase, 2000 Amps MCCB	Buscoupler	1	each				
	Outgoing Feeders:	3 phase, 600 Amps MCCB	Kiosk E: Goods shed and Kiosk F: Loading	2	each				
		3 phase, 400 Amps MCCB	Bridge Shipping 1	1	each				
		3 phase, 200 Amps MCCB	2 x Shore Supply, 4 x non designated, Electrical Workshop, Mechanical Workshop, 6 x Area Lighting, Bridge Shipping 2 and CCTs 4 to 11	16	each				
		3 phase, 200 Amps Contactors	4 x Shore supply and 6 x Area Lighting	10	each				
		3 phase, 60 Amps MCB	5 x Non designated	5	each				

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

		2 phase, 15 Amps ELCB	Earth Leakage and Tunnel Lights	4	each		
		2 phase, 30 Amps ELCB	Socket Outlets Tunnel	4	each		
		1 phase, 30 Amps MCB	4 x Test and 4 x non designated	8	each		
		1 phase, 10 Amps MCB	Non designated	1	each		
LV Panel 2	Design, supply, install and commission 550V Low Voltage panel comprising of the following:						
	Feeder type	Technical Description	Designation				
	Incomer:	3 phase, 1500 Amps MCCB	Transformer 2 and Transformer 3	2	each		
	Bus coupler:	3 phase, 1500 Amps MCCB	Buscoupler	1	each		
	Outgoing Feeders:	3 phase, 3000 Amps MCCB	Container Crane A and Container Crane B	2	each	XFRs paralleled??	
		3 phase, 60 Amps MCB	Feed to CCT 6 and Feed to CCT 9	2	each		
		1 phase, 10 Amps MCB	Control circuit	2	each		
	Supply and install an overcurrent and earthfault relay for the 3000A Cranes supplies complete with 3000/5 metering and protection CTs.			2	each		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.02		Indicating instruments						
Meter type	Technical Description	Designation						
Ammeter:	Supply and install 2000/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #4	6	each				
	Supply and install 1500/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #2 and #3	6	each				
Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #4	2	each				
	Supply and install 600V Voltmeters in accordance with clause 15 of CEE0082	Incomer #2 and #3	2	each				
Killowatt Hour Meters:	Relocate existing meters with their respective CTs to new MV panels (Transformer panel)	Transformer 1, Transformer 2, Transformer 3 and Transformer 4	4	each				
1.03		Steelwork, Busbar and cabling						
Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		2	complete				
							SUB TOTAL (1)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (1.6m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the four 1250kVA transformers incl. terminations	100	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (2)	

TOTAL FOR DBN Container Sub (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage	Clearance OK				Rail Network	Sensitive for transmission lines	Frame leakage			
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total	
					Protection CT Ratio	Metering CT Ratio						
Pietermaritzburg Signal Supply Sub	9,9 x 7,1 x 4	11kV										
E63 Cato Ridge					75/5	75/5		Transmission line				
E64 Incomer	X	X	Class X 60/5		60/5	60/5	Restricted Earth Fault (60/5)	Incomer				
E65 Lidgeton					75/5	75/5		Transmission line				
										SUB TOTAL (1)		

TOTAL FOR Pietermaritzburg Sigal Supply Sub (1)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space	System Voltage	Clearance OK								
DBN Cato Ridge Sub	5,7 x 6 x 3,3	11kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
E71 Pietermaritzburg					20/5	20/5		Transmission line			
E72 Transformer No.1 (500kVA)				X	30/5	30/5	Intertripping	Transformer			
E73 Incomer	X	X			30/5	30/5		Incomer			
E74 Dellvillewood via Transformer No.2 (315kVA)				X	20/5	20/5		Transformer			
										SUB TOTAL (1)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUBSTATION LOW VOLTAGE PANELS: DBN CATO RIDGE SUB							
ITEM	Description		Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS						
1.01	Low Voltage panels						
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:						
	Feeder type	Technical Description	Designation				
	Incomer:	3 phase, 800 Amps MCCB	Transformer 1	1	each		
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Signal Kiosk 3 and Local Main DB	2	each		
		3 phase, 250 Amps MCCB	PWI Kiosk 3 and Yard Master Kiosk 2	2	each		
		3 phase, 150 Amps MCCB	Platform Kiosk 4, New Scissors Mast and Lighting	3	each		
		3 phase, 100 Amps MCCB	New Ticket Office	1	each		
		3 phase, 100 Amps Contactor	Dock yard Lighting	1	each		
		3 phase, 60 Amps MCB	Supply to kiosk, Old station building, Sewer pump, Signal quarters, New Ablution block and non designated	6	each		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

		1 phase, 60 Amps MCB	Drivers and 2 x non designated	3	each			
		1 phase, 30 Amps MCB	21 x Lighting, Sub LT, Heater, Battery charger, Telecontrol CB, DR-RM and Bypass (Test)	27	each			
		1 phase, 5 Amps MCB	Coil and non designated	2	each			
1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1	3	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1	1	each			
	Killowatt Hour Meters :	Supply and install Killowatt hour meters (to be installed on Incomer panel)		1	each			
1.03	Steelwork, Busbar and cabling							

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits	1	complete			
						SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Qty	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two transformers incl. terminations	35	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR DBN Cato Ridge Sub (1+2+3)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUBSTATION LOW VOLTAGE PANELS: DBN CANAL SUB									
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total	
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS								
1.01	Low Voltage panels								
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:								
	Feeder type	Technical Description	Designation						
	Incomer :	3 phase, 1250 Amps MCCB	Transformer 1 and Transformer 2	2	each				
	Bus coupler:	3 phase, 1250 Amps MCCB	Buscoupler	1	each				
	Outgoing Feeders :	3 phase, 400 Amps MCCB	North Coast Yard	1	each				
		3 phase, 200 Amps MCCB	High mast 16,19,20,21,22 and 55 , Electrical Workshop, Mechanical Workshop, and CCTs 30 to 36	9	each				
		3 phase, 200 Amps Contactors	Substation outside lights, New Scissors Mast, and Shore Supply	3	each				
		3 phase, 100 Amps MCB	CCTs 37 to 43 and 57 to 59, CCTs 7 to 14 and 46 to 50	2	each				
		3 phase, 60 Amps MCB	Non designated	1	each				

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

		2 phase, 15 Amps ELCB	Earth Leakage and Tunnel Lights	2	each			
		2 phase, 30 Amps ELCB	Socket Outlets Tunnel	4	each			
		1 phase, 60 Amps MCB	Non designated	1	each			
		1 phase, 15 Amps MCB	3 x non designated	3	each			
		1 phase, 30 Amps MCB	3 x Test and 3x non designated	6	each			
		1 phase, 5 Amps MCB	Breaker no 46(yard)	1	each			
1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 1250/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
	Killowatt Hour Meters:	Relocate existing meters with their respective CTs to new MV panels (Transformer panel)	Transformer 1 and Transformer 2	2	each			
1.03	Steelwork, Busbar and cabling							
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete			



TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUB TOTAL (1)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (1.5m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 800kVA transformers incl. terminations	50	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (2)	

TOTAL FOR DBN Canal Sub (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
Millwright Sub	7,3 x 5,1 x 3,7	6.6kV	Differential Protection	Buchholz & Oil Temp	CT Ratio						
CB/Panel number + Designation	kWh Meter	Voltmeter			Protection CT Ratio	Metering CT Ratio	+IDMT	Intertripping	Transformer		
F31 Pietermaritzburg Sub		X								500/5	500/5
F33 Transformer No.1 (400kVA)				X	40/5	40/5	Intertripping	Transformer			
F34 Transformer No.2 (400kVA)				X	40/5	40/5	Intertripping	Transformer			
F35 Transformer No.3 (400kVA)				X	40/5	40/5	Intertripping	Transformer			
F36 Transformer No.4 (400kVA)				X	40/5	40/5	Intertripping	Transformer			
F37 Compressor House		X			500/5	500/5	+IDMT	Ring Cable			
									SUB TOTAL (1)		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUBSTATION LOW VOLTAGE PANELS: PMB MILLWRIGHT SUB								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 800 Amps MCCB	Transformer 1, Transformer 2, Transformer 3, Transformer 4 and PMB recycle	5	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Gym, Signals, Hazmat Building, 60 Mayors Walk, Lighting panel, Faundry LV and 2 x non designated	8	each			
		3 phase, 300 Amps MCCB	Non designated	1	each			
	Low Voltage Distribution box							
	Design, supply, install and commission 230V low Voltage DB comprising of the following:							
	1 phase, 30 Amps MCB		Sub Lighting	1	each			
	2 phase, 30 Amps ELCB		Earth Leakage	1	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

	1 phase, 30 Amps MCB	Plugs	1	each			
	1 phase, 15 Amps MCB	Reactor Room Light, Auxilliary fan and non designated	3	each			
	1 phase, 16 Amps socket outlet	Socket outlet	1	each			
	1 phase, 5 Amps MCB	2 x lights and bypass switch	3	each			
	1 phase, 30 Amps Contactor	Contactor 1	1	each			
1.02	Indicating instruments						
	Meter type	Technical Description	Designation				
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Transformer 1, Transformer 2, Transformer 3, Transformer 4 and PMB recycle	15	each		
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Transformer 1, Transformer 2, Transformer 3, Transformer 4 and PMB recycle	5	each		
	Killowatt Hour Meters:	Supply and install Killowatthour meters (with their respective CTs of 400/5A)		3	each		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.03	Steelwork, Busbar and cabling						
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits	1	complete			
						SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.4m ² / panel)	10	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the four 400kVA transformers incl. terminations	70	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR PMB MILLWRIGHT SUB (1+2+3)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
			Differential Protection	Buchholz & Oil Temp	CT Ratio						
CB/Panel number + Designation	kWh Meter	Voltmeter			Protection CT Ratio	Metering CT Ratio					
PMB Train Lighting Sub	4,2 x 3,6 x 3,5	6.6kV									
F47 Pietermaritzburg Yard Sub	X	X			150/5	150/5	+IDMT	Radial Cable			
F46 Transformer No.1 (1MVA)				X	100/5	100/5	Intertripping	Transformer			
									SUB TOTAL (1)		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Health, Safety and Enviromental costs	1	complete			
1.04	Supply and install checker plates (0.4m ² / panel)	10	complete			
1.05	Design and supply remote control pendant	1	complete			
1.06	Supply and install substation earthing (Complete/sub)	1	complete			
1.07	Supply and Install Battery and charger	1	complete			
1.08	Supply and install Killowatthour meters (to be installed on Ring panel)	1	each			
1.09	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for MV panels	1	complete			
1.10	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for MV panels	1	complete			
1.11	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for MV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.12	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for MV panels	1	complete			
					SUB TOTAL (2)	

TOTAL FOR Pietermaritzburg Train Lighting Sub (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK							Equipment rate	Labour rate	Total
			CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio				
Protection CT Ratio	Metering CT Ratio											
Pietermaritzburg Yard	6,1 x 5,8 x 3,3	6.6kV										
F38 Pietermaritzburg Sub		X	Translay 400/5			300/5	400/5	+IDMT	Ring Cable			
F40 Transformer No.1 (500kVA)	X			X		50/5	50/5	Intertripping	Transformer			
F41 Bus Coupler									Bus Coupler			
F42 Transformer No.2 (500kVA)	X			X		50/5	50/5	Intertripping	Transformer			
F43 Train Lighting		X	Solkor 300/5			200/5	200/5	+IDMT	Radial Cable			
										SUB TOTAL (1)		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUBSTATION LOW VOLTAGE PANELS: PIETERMARITZBURG YARD SUB								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 800 Amps MCCB	Transformer 1 and Transformer 2	2	each			
	Bus coupler:	3 phase, 800 Amps MCCB	Buscoupler	1	each			
	Outgoing Feeders:	3 phase, 600 Amps MCCB	Signal Cabin and SDE office	2	each			
		3 phase, 200 Amps MCCB	Relay Room and non designated	2	each			
		3 phase, 100 Amps MCCB	Comms Buliding, Admin building, Signal mini sub, Signal cabin, Transtel workshop, Aux SDE office and non designated	7	each			
		3 phase, 80 Amps MCB	Non designated	1	each			
		3 phase, 60 Amps MCB	3 x Non designated	3	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

		3 phase, 30 Amps MCB	6 x Non designated	6	each			
		1 phase, 15 Amps MCB	7 x Non designated	7	each			
		1 phase, 5 Amps MCB	Bypass switch, Coil and Photocell supply	3	each			
1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
	Killowatt Hour Meters:	Supply and install Killowatthour meters (to be installed on Transformer panels)		2	each			
1.03	Steelwork, Busbar and cabling							
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete			
							SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.7m ² / panel)	3	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 500kVA transformers incl. terminations	40	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR Pietermaritzburg Yard Sub (1+2+3)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK								
PMB Compressor House Sub	6,1 x 5,7 x 3,3	6,6kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
F18 Millwright Sub		X			500/5	500/5	+IDMT	Ring Cable			
Spare (Alternative supply)		x			500/5	500/5	+IDMT	Ring Cable			
F27 Transformer No.6 (400kVA)				X	40/5	40/5	Intertripping	Transformer			
										SUB TOTAL (1)	

SUBSTATION LOW VOLTAGE PANELS: PMB COMPRESSOR HOUSE SUB								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 800 Amps MCCB	Transformer 6	1	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Non designated, Main DB and Marksman	3	each			
		3 phase, 200 Amps MCCB	Marksman 1	1	each			
		3 phase, 100 Amps MCCB	Marksman #2, #3 and #4	3	each			
	Low Voltage Distribution box							
	Design, supply, install and commission 230V low Voltage DB comprising of the following:							
	1 phase, 30 Amps MCB		Sub Lighting	1	each			
	2 phase, 30 Amps ELCB		Earth Leakage	1	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

	1 phase, 10 Amps MCB	Lights	2	each			
	1 phase, 16 Amps socket outlet	Socket outlet	1	each			
	1 phase, 5 Amps MCB	Fan	1	each			
	1 phase, 5 Amps MCB	KWH meter CTs	18	each			
1.02	Indicating instruments						
	Meter type	Technical Description	Designation				
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Transformer 3, Transformer 4, Transformer 5, Transformer 6, Trotech 1 and Trotech 2	18	each		
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Transformer 3, Transformer 4, Transformer 5, Transformer 6, Trotech 1 and Trotech 2	6	each		
	Killowatt Hour Meters:	Supply and install Killowatthour meters (with their respective CTs)		7	each		
1.03	Steelwork, Busbar and cabling						
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits	1	complete			



TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUB TOTAL (2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	10	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the four 400kVA transformers incl. terminations	100	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR PMB Compressor House Sub (1+2+3)	
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MAIN SUMMARY (Durban Depot)		
ITEM	TRACTION SUBSTATION	AMOUNT
1	DBN Container Sub	
2	Pietermaritzburg 11kV/6.6kV	
3	Cato Ridge	
4	Canal Sub 6.6kV	
5	Millwright Shop (PMB) 6.6kV	
6	Train Lighting (PMB) 6.6 kV	
7	PMB Yard 6.6 kV	
8	Compressor House (PMB) 6.6kV	
TOTAL (EXCL. VAT)		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUMMARY OF BILL OF QUANTITIES

for

Contract No.

Item	Description	Amount
1	Total for Durban Depot	
2	Training for Durban Depot (2 Training Sesion)	
Total of tender carried forward to summary of BoQ		Subtotal

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
			Differential Protection	Buchholz & Oil Temp	CT Ratio						
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	Protection CT Ratio	Metering CT Ratio	Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
Sentrarand Main Intake	17 x 8 x 4	11kV									
10 Substation Secondary Sorting		X	Solkor 400/5		200/5	200/5	+IDMT	Ring Cable			
11 Substation DRS		X	Solkor 400/5		350/5	350/5	+IDMT	Ring Cable			
12 Substation No1 (Hostel)		X	Solkor 400/5		250/5	250/5	+IDMT	Ring Cable			
13 Substation Electrical Maintenance		X	Solkor 400/5		300/5	300/5	+IDMT	Ring Cable			
14 Incoming Supply no 1		X	Biased Diff 1000/5		1000/5	1000/5		Incomer			
15 Substation ETS-A		X	Solkor 400/5		300/5	300/5	+IDMT	Ring Cable			
16 Substation Hump Yard		X	Solkor 400/5		300/5	300/5	+IDMT	Ring Cable			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

17 11/3.3kV Compressor Transformer 1				X	125/5	125/5	Intertripping	Transformer				
18 11kV /400V Local Transformer 1 (315kVA)				X	30/5	30/5	Intertripping	Transformer				
19 Front Bus Coupler								Bus Coupler				
20 Rear Busbar								Bus Coupler				
21 11kV /400V Local Transformer 2 (315kVA)				X	30/5	30/5	Intertripping	Transformer				
22 11/3.3kV Compressor Transformer 2				X	125/5	125/5	Intertripping	Transformer				
23 11/3.3kV Compressor Transformer 3				X	125/5	125/5	Intertripping	Transformer				
24 Substation Hump Yard		X	Solkor 400/5		300/5	300/5	+IDMT	Ring Cable				

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

25 Incoming Supply no 2		X	Biased Diff 1000/5		1000/5	1000/5		Incomer			
26 Substation ETS-B		X	Solkor 400/5		300/5	300/5	+IDMT	Ring Cable			
27 Substation Administration Building		X	Solkor 400/5		300/5	300/5	+IDMT	Ring Cable			
28 Substation No4 (Hostel)		X	Solkor 400/5		250/5	250/5	+IDMT	Ring Cable			
29 Substation Carriage and Wagon		X	Solkor 400/5		350/5	350/5	+IDMT	Ring Cable			
30 Substation Classification Yard South		X	Solkor 400/5		200/5	200/5	+IDMT	Ring Cable			
										SUB TOTAL (1)	

SUBSTATION LOW VOLTAGE PANELS: SENTRARAND MAIN INTAKE								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 500 Amps MCCB	Transformer 1 and Transformer 2	2	each			
	Bus coupler:	3 phase, 500 Amps MCCB	Buscoupler	1	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Kiosk No 6	1	each			
		3 phase, 200 Amps MCCB	Feeder to MCCBs	1	each			
		3 phase, 100 Amps MCCB	Two Feeder to MCCBs, TCP, Compressor K4 and N/W Mess Ablution K6	5	each			
		3 phase, 60 Amps MCB	Undesignated, Mess & Ablution K18, High Mast 47&50, High Mast 46&49 and Substation DB	5	each			
		3 phase, 50 Amps MCB	High Mast 45;48;51	1	each			
		3 phase, 40 Amps MCB	Undesignated	2	each			
		3 phase, 30 Amps MCB	High Mast 43;42;41,Four Undesignated,Shelter K7,Controllers Cabin K15	7	each			
		1 phase, 60 Amps MCB	Undesignated	1	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

		1 phase, 30 Amps MCB	Batery Room 33kV, Two Test	3	each		
		1 phase, 15 Amps MCB	Undesignated X 2, Telecontrol, Batery Water 11kV (Kamer), Batery Water 33kV (Kamer), 33kV HS Panel and 11kV HS Panel	6	each		
		1 phase, 5 Amps MCB	Photo Cell	2	each		
		1 phase, 2 Amps MCB	Voltmeter Supply	3	each		
	Indicating instruments						
1.02	Meter type	Technical Description	Designation				
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each		
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each		
	Steelwork, Busbar and cabling						
1.03	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		1	complete		
						SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.08	Supply and install 11kV XLPE cable for the two 315kVA transformers incl. terminations	40	metres			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			



TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR ISANDO Sentrand Main IntakeSub (1+2+3)	
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MAIN SUMMARY (Isando Depot)		
ITEM	TRACTION SUBSTATION	AMOUNT
1	11kV Main Sentrand Intake	
TOTAL (EXCL. VAT)		

SUMMARY OF BILL OF QUANTITIES		
for		
Contract No.		
Item	Description	Amount
1	Total for Isando Depot	
2	Training for Isando Depot (2 Training Sesion)	
Total of tender carried forward to summary of BoQ		Subtotal

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space:	System Voltage:	Clearance OK				Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio	CT Ratio					
Mooi River Sub	4,2 x 3,7 x 3,3	11kV			Protection CT Ratio	Metering CT Ratio					
E13 Lidgeton	X	X			100/5	100/5		Transmission line			
E14 Incomer	X	X	Yes	Yes	200/5	200/5	Restricted Earth Fault and Primary intertripping	Incomer			
E15 Frere	X	X			100/5	100/5		Transmission line			
									SUB TOTAL (1)		

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Health, Safety and Enviromental costs	1	complete			
1.04	Design and supply remote control pendant	1	complete			
1.05	Supply and install substation earthing (Complete/sub)	1	complete			
1,06	Supply and install Killowatthour meters (to be installed on Incomer panel)	1	each			
1,07	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for MV panels	1	complete			
1,08	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copiesfor MV panels	1	complete			
1,09	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for MV panels	1	complete			
1,10	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for MV panels	1	complete			
					SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

TOTAL FOR Mooi River Sub (1+2)	
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MAIN SUMMARY (Mooi River)		
ITEM	TRACTION SUBSTATION	AMOUNT
1	Mooiriver	
TOTAL (EXCL. VAT)		

SUMMARY OF BILL OF QUANTITIES		
for		
Contract No.		
Item	Description	Amount
1	Total for Mooi River Depot	
2	Training for Mooi River Depot (2 Training Sesion)	
Total of tender carried forward to summary of BoQ		Subtotal

SUBSTATION LOW VOLTAGE PANELS: PE FC STURROCK PARK SUB								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type	Technical Description	Designation					
	Incomer:	3 phase, 1600 Amps MCCB	Incomer 1	1	each			
	Outgoing Feeders:	3 phase, 600 Amps MCCB	Harbour Restaurant switchboard	1	each			
		3 phase, 400 Amps MCCB	Airways building	1	each			
		3 phase, 100 Amps MCCB	Basement Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	Gound Floor Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	First Floor Feeder (DB North, DB East, DB West and non designated)	4	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

		3 phase, 100 Amps MCCB	Second Floor Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	Third Floor Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	Fourth Floor Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	Fifth Floor Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	Sixth Floor Feeder (DB North, DB East, DB West and non designated)	4	each			
		3 phase, 100 Amps MCCB	Whites building, Payne's building and 4 x non designated	6	each			

EMERGENCY LOW VOLTAGE PANELS: PE FC STURROCK PARK SUB

1.01	Low Voltage Emergency panel							
	Design, supply, install and commission 400V Low Voltage emergency supply panel comprising of the following:							
	Incomer:	3 phase, 1600 Amps MCCB	Incomer 2	1	each			
	Bus Coupler	3 phase, 1600 Amps MCCB	Bus coupler	1	each			
		3 phase, 200 Amps MCCB	Lift A, Lift B, Lift C and Third floor CTC	4	each			
		3 phase, 100 Amps MCCB	Third floor west riser, Third floor east riser, DB lift cab lights, Lift D, Standby plant DB, Outside flood lights, Third floor north riser, Generator pulse supply isolator and Changeover MCB	9	each			
1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 1600/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1 and #2	6	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1 and #2	2	each			
	Killowatt Hour Meters:	Supply and install Killowatthour meter	4 x LV Board and 2 x Emergency LV Board	6	each			
1.03	Steelwork, Busbar and cabling							
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits		2	complete			
							SUB TOTAL (1)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.03	Health, Safety and Enviromental costs	1	complete			
1.04	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.05	Supply and install substation earthing (Complete/sub)	1	complete			
1.06	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for LV panels	1	complete			
1.07	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for LV panels	1	complete			
1.08	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for LV panels	1	complete			
1.09	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for LV panels	1	complete			
					SUB TOTAL (2)	

TOTAL FOR PE FC Sturrock Park Sub (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space: current	System Voltage:	Clearance Not OK								
Visrivier		11kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
S14 Visrivier		X			Class B	25/5	FL + IDMT	Transmission line			
										SUB TOTAL (1)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panel and Housing (Container))	1	complete			
1.03	Construct a new brick building (5x 5 x 4.5m)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.06	Design and supply remote control pendant	1	complete			
1.07	Supply and install substation earthing (Complete/sub)	1	complete			
1.09	Supply and Install Battery and charger	1	complete			
1.10	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for MV panel	1	complete			
1.11	Provision of One Set "As-Built" Drawings in Electronic Format (in ACAD Version 2013 or better) and three (3) sets of copies for MV panel	1	complete			
1.12	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for MV panel	1	complete			
1.13	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for MV panel	1	complete			
					SUB TOTAL (2)	

TOTAL FOR VISRIVIER (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

MAIN SUMMARY (Port Elizabeth)

ITEM	TRACTION SUBSTATION	AMOUNT
1	FC Sturrock Building	
2	Vis rivier	
TOTAL (EXCL. VAT)		

SUMMARY OF BILL OF QUANTITIES

for

Contract No.

Item	Description	Amount
1	Total for Port Elizabeth Depot	
2	Training for Port Elizabeth Depot (2 Training Sesion)	
Total of tender carried forward to summary of BoQ		Subtotal

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space: m	System Voltage:	Clearance OK								
Leeuhof Main Intake Substation	6.1 X 5.8 X 3.2	11kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
61 Carriage and Wagon			Solkor 300/5		100/5	100/5	+IDMT	Ring cable			
62 Local Transformer (500kVA)				X	30/5	30/5	Intertripping	Transformer			
63 Municipal feeder	X	X			100/5	100/5		Incomer			
65 Yard Substation			Solkor 300/5		100/5	100/5	+IDMT	Ring cable			
										SUB TOTAL (1)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUBSTATION LOW VOLTAGE PANELS: Leeuhof Main Intake SUB								
ITEM	Description			Quantity	Unit	Equipment rate	Labour rate	Total
B	LOW VOLTAGE ELECTRICAL INSTALLATIONS							
1.01	Low Voltage panels							
	Design, supply, install and commission 400V Low Voltage panel comprising of the following:							
	Feeder type		Designation					
	Incomer:	3 phase, 800 Amps MCCB	Main Switch	1	each			
	Outgoing Feeders:	3 phase, 400 Amps MCCB	Kiosk No 1	1	each			
		3 phase, 100 Amps MCCB	Yard lights and Undesignated	2	each			
		3 phase, 100 Amps Contactor	Contactor	2	each			
		3 phase, 30 Amps MCB	Yard lights bypass	1	each			
		1 phase, 15 Amps MCB	Contactor coil and Bypass switch	2	each			
		1 phase, 5 Amps MCB	Coil	1	each			
1.02	Indicating instruments							
	Meter type	Technical Description	Designation					
	Ammeter:	Supply and install 800/5A Maximum Demand Ammeters per Incomer on all phases with their respective Current Transformers	Incomer #1	3	each			
	Voltmeter:	Supply and install 400V Voltmeters in accordance with clause 15 of CEE0082	Incomer #1	1	each			
	Killowatt Hour Meters:	Supply and install Killowatthour meter		1	each			

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

1.03	Steelwork, Busbar and cabling						
	Panel, Cabling and busbars	Design and supply full metal enclosure to house the above mentioned equipment in accordance with CEE0082, provide and install cabling and busbars for interconnection between various circuits	1	complete			
						SUB TOTAL (2)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Dismantling and Transporting old equipment (LV switchgear panels)	1	complete			
1.04	Health, Safety and Enviromental costs	1	complete			
1.05	Design and supply remote control pendant	1	complete			
1.06	Supply and install substation earthing (Complete/sub)	1	complete			
1.07	Supply and install 11kV XLPE cable for the 500kVA transomer incl. terminations	20	complete			
1.08	Supply and Install Battery and charger	1	complete			
1.09	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for both MV and LV panels	1	complete			
1.10	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for both MV and LV panels	1	complete			
1.11	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for both MV and LV panels	1	complete			
1.12	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for both MV and LV panels	1	complete			
					SUB TOTAL (3)	

TOTAL FOR Leeuhof Main Intake Sub (1+2+3)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

MAIN SUMMARY (Vereeniging Depot)		
ITEM	TRACTION SUBSTATION	AMOUNT
1	Leeuhof main intake	
TOTAL (EXCL. VAT)		

SUMMARY OF BILL OF QUANTITIES		
for Contract No.		
Item	Description	Amount
1	Total for Vereeniging Depot	
2	Training for Vereeniging Depot (2 Training Sesion)	
Total of tender carried forward to summary of BoQ		Subtotal

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space : m	System Voltage:	Clearance OK								
Bloemfontein Loco Substation	3 X 10 X 6	11kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
V01 Local Transformer (500kVA)				X	40/5	40/5	Intertripping	Transformer			
V02 DI Office		X	Solkor 300/5		100/5	100/5	+IDMT	Ring cable			
E03								Bus coupler			
V04 M-sub		X	Solkor 300/5		100/5	100/5	+IDMT	Ring cable			
V05 Local Transformer (500kVA)				X	40/5	40/5	Intertripping	Transformer			
SUB TOTAL (1)											

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1,03	Health, Safety and Enviromental costs	1	complete			
1,04	Design and supply remote control pendant	1	complete			
1,05	Supply and install substation earthing (Complete/sub)	1	complete			
1,06	Supply and install 11kV XLPE cable for both 500kVA transformers incl. terminations	20	metres			
1,07	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for MV panel	1	complete			
1,80	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for MV panels	1	complete			
1,90	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for MV panels	1	complete			
1,10	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for MV panels	1	complete			
					SUB TOTAL (2)	

TOTAL for Bloemfontein Loco Sub (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

Substation Name:	Space: m	System Voltage:	Clearance OK								
Bloemfontein Station Sub	5 X 7.6 X 4.5	11kV									
CB/Panel number + Designation	kWh Meter	Voltmeter	Differential Protection	Buchholz & Oil Temp	CT Ratio		Other Protection Requirements	Functions (refer to clause 7.9.2 of BBC6467)	Equipment rate	Labour rate	Total
					Protection CT Ratio	Metering CT Ratio					
V01 Laundry sub		X			100/5	100/5	+IDMT	Ring cable			
V02 Local transformer (500kVA)				X	40/5	40/5	Intertipping	Transformer			
V03 Transtel mini sub		X			100/5	100/5	+IDMT	Ring cable			
Note: Ring without Differential Protection.										SUB TOTAL (1)	

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

ITEM	Description	Quantity	Unit	Equipment rate	Labour rate	Total
C	OTHER SERVICES					
1.01	Preliminary and General (Site establishment, accomodation, travelling etc.)	1	complete			
1.02	Dismantling and Transporting old equipment (MV switchgear panels)	1	complete			
1.03	Health, Safety and Enviromental costs	1	complete			
1.04	Supply and install checker plates (0.5m ² / panel)	5	complete			
1.05	Design and supply remote control pendant	1	complete			
1.06	Supply and install substation earthing (Complete/sub)	1	complete			
1.07	Supply and install XLPE cable for the two 500kVA transomer incl. terminations	25	metres			
1.08	Supply and Install Battery and charger	1	complete			
1.09	Testing and Certification of the complete Electrical Installations covered by the Scope of this Tender for MV panels	1	complete			
1.10	Provision of One Set "As-Built" Drawings in Electronic Format (drawing software to be used shall be viewable and accept amendments to be done on Micro station V8i) and three (3) sets of copies for MV panels	1	complete			
1.11	Provision of FULL Documentation and Technical Literature covering ALL Electrical Services Installations for MV panels	1	complete			
1.12	Provision of Durable Labels and labelling on all items of equipment and fix connecting schedules etc.. Designations to match those on 'As-Built' Drawings for MV panels	1	complete			
					SUB TOTAL (2)	

TOTAL for Bloemfontein Station Sub (1+2)	
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TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

MAIN SUMMARY (Durban Depot)		
ITEM	TRACTION SUBSTATION	AMOUNT
1	Bloemfontein - Station	
2	Bloemfontein - Loco BFX	
TOTAL (EXCL. VAT)		

SUMMARY OF BILL OF QUANTITIES		
For		
Contract No.		
Item	Description	Amount
1	Total for Bloemfontein Depot	
2	Training for Bloemfontein Depot (2 Training Session)	
Total of tender carried forward to summary of BoQ		Subtotal

TRANSNET FREIGHT RAIL

ENQUIRY: SIE24011CIDB/ HOAC-HO-48307

DESCRIPTION OF THE SERVICES: REPLACEMENT OF OLD MV AND LV SWITCHGEARS PANELS AND VARIOUS EQUIPMENT AT 6.6/11 KV DISTRIBUTION SUBSTATIONS UNDER BLOEMFONTEIN, DURBAN, ISANDO, KIMBERLY SOUTH, LADYSMITH, PORT ELIZABETH AND VEREENIGING DEPOTS.

SUMMARY OF BILL OF QUANTITIES		
Item	Description	Amount
1	De Aar depot	R
2	Durban depot	R
3	Isando depot	R
4	Ladysmith depot	R
5	Port Elizabeth depot	R
6	Vereeniging depot	R
7	Bloemfontein Depot	R
8	Minimum Contract Skills Development Goal (CSDG) sum = EP (0.25%) x Subtotal of the tender amount	R
Total amount Excluding VAT		R
VAT (15%)		R
Total Incl. VAT carried to C1.1 FORM OF OFFER		R

Fully completion of BOQ: Tenderers are required to fully complete and price all items in the Price List. Failure to complete the price list fully may result in bid being disqualified and the tenderer will not proceed to the next stage of evaluation.