Eskom
National Transmission Company South Africa ™

NEC3 Engineering & Construction Contract

Between **NTCSA SOC Ltd**
(Reg No. 2021/539129/30)

and **[Insert at award stage]**
(Reg No. _____)

for **[Muldersvlei 11kV Switchgear Supply, Install, Termination, Commissioning & Handover]**

Contents: **No of pages**

Part C1 **Agreements & Contract Data**

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Documentation prepared by

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Part C1: Agreements & Contract Data

Contents: **No of pages**

C1.1 Form of Offer and Acceptance

[to be inserted from Returnable Documents at award stage]

C1.2a Contract Data provided by the *Employer*

C1.2b Contract Data provided by the *Contractor*

[to be inserted from Returnable Documents at award stage]

C1.3 Proforma Guarantees

C1.1 Form of Offer & Acceptance

Offer

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:

Muldersvlei Refurbishment: Muldersvlei 11kV Switchgear Supply, Install, Termination, Commissioning & Handover

The tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto and by submitting this Offer has accepted the Conditions of Tender.

By the representative of the tenderer, deemed to be duly authorised, signing this part of this Form of Offer and Acceptance the tenderer offers to perform all of the obligations and liabilities of the *Contractor* under the contract including compliance with all its terms and conditions according to their true intent and meaning for an amount to be determined in accordance with the *conditions of contract* identified in the Contract Data.

Options B	The offered total of the Prices exclusive of VAT is	**R**
	Sub total	**R**
	Value Added Tax @ 15% is	**R**
	The offered total of the amount due inclusive of VAT is[1]	**R**
	(in words) **[●]**	

This Offer may be accepted by the Employer by signing the Acceptance part of this Form of Offer and Acceptance and returning one copy of this document including the Schedule of Deviations (if any) to the tenderer before the end of the period of validity stated in the Tender Data, or other period as agreed, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

Signature(s) .....

Name(s) .....

Capacity .....

For the tenderer: .....

(Insert name and address of organisation)

Name & signature of witness ..... Date .....

Tenderer's CIDB registration number (if applicable) .....

[1] This total is required by the *Employer* for budgeting purposes only. Actual amounts due will be assessed in terms of the *conditions of contract*.

Acceptance

By signing this part of this Form of Offer and Acceptance, the Employer identified below accepts the tenderer's Offer. In consideration thereof, the Employer shall pay the Contractor the amount due in accordance with the *conditions of contract* identified in the Contract Data. Acceptance of the tenderer's Offer shall form an agreement between the Employer and the tenderer upon the terms and conditions contained in this agreement and in the contract that is the subject of this agreement.

The terms of the contract, are contained in:

Part C1	Agreements and Contract Data, (which includes this Form of Offer and Acceptance)
Part C2	Pricing Data
Part C3	Scope of Work: Works Information
Part C4	Site Information

and drawings and documents (or parts thereof), which may be incorporated by reference into the above listed Parts.

Deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Returnable Schedules as well as any changes to the terms of the Offer agreed by the tenderer and the Employer during this process of offer and acceptance, are contained in the Schedule of Deviations attached to and forming part of this Form of Offer and Acceptance. No amendments to or deviations from said documents are valid unless contained in this Schedule.

The tenderer shall within two weeks of receiving a completed copy of this agreement, including the Schedule of Deviations (if any), contact the Employer's agent (whose details are given in the Contract Data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the *conditions of contract* identified in the Contract Data at, or just after, the date this agreement comes into effect. Failure to fulfil any of these obligations in accordance with those terms shall constitute a repudiation of this agreement.

Notwithstanding anything contained herein, this agreement comes into effect on the date when the tenderer receives one fully completed original copy signed between them of this document, including the Schedule of Deviations (if any).

Unless the tenderer (now *Contractor*) within five working days of the date of such receipt notifies the Employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the Parties.

Signature(s) .....

Name(s) .....

Capacity .....

for the Employer

.....

(Insert name and address of organisation)

Name & signature of witness .....

Date .....

Note: If a tenderer wishes to submit alternative tenders, use another copy of this Form of Offer and Acceptance.

Schedule of Deviations to be completed by the *Employer* prior to contract award

Note:

1. This part of the Offer & Acceptance would not be required if the contract has been developed by negotiation between the Parties and is not the result of a process of competitive tendering.
2. The extent of deviations from the tender documents issued by the Employer prior to the tender closing date is limited to those permitted in terms of the Conditions of Tender.
3. A tenderer's covering letter must not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid be the subject of agreement reached during the process of Offer and Acceptance, the outcome of such agreement shall be recorded here and the final draft of the contract documents shall be revised to incorporate the effect of it.

No.	Subject	Details
1		
2		

By the duly authorised representatives signing this Schedule of Deviations below, the Employer and the tenderer agree to and accept this Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and any addenda thereto listed in the Tender Schedules, as well as any confirmation, clarification or changes to the terms of the Offer agreed by the tenderer and the Employer during this process of Offer and Acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender documents and the receipt by the tenderer of a completed signed copy of this Form shall have any meaning or effect in the contract between the parties arising from this Agreement.

	For the tenderer:	**For the Employer**
Signature	.....	.....
Name	.....	.....
Capacity	.....	.....
On behalf of	..... *(Insert name and address of organisation)*	..... *(Insert name and address of organisation)*
Name & signature of witness	.....	.....
Date	.....	.....

C1.2 ECC3 Contract Data

Part one - Data provided by the *Employer*

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option	
		B: Priced contract with bill of quantities
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X1 Price adjustment for inflation
		X2 Changes in the law
		X7: Delay damages
		X13 Performance bond
		X16: Retention
		X18: Limitation of liability
		Z: *Additional conditions of contract*
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The *Employer* is (Name):	**NTCSA SOC Ltd (reg no: 2021/539129/30), a state owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
10.1	The *Project Manager* is: (Name)	**Bulelwa Dziba**
	Address	**ESKOM TRANSMISSION 60 VOORTREKKER ROAD BELLVILLE 7560**
	Tel	**021 915 2445**
	Fax	**N/A**
	e-mail	**dzibab@ntcsa.co.za**
10.1	The *Supervisor* is: (Name)	Peter Clifton-Smith
	Address	**ESKOM TRANSMISSION 60 VOORTREKKER ROAD BELLVILLE**

		7560
	Tel No.	**079 835 0774**
	Fax No.	**N/A**
	e-mail	pjcliftonsmith@gmail.com
11.2(13)	The *works* are	**Muldersvlei 11kV Switchgear Supply, Install, Termination, Commissioning & Handover (Refer Part 3: Scope of Work).**
11.2(14)	The following matters will be included in the Risk Register	**Non-availability of outages and commissioning resources, Natural Disaster Fire and Explosion Impact by aircraft or other aerial device**
11.2(15)	The *boundaries of the site* are	**Within the perimeter of Muldersvlei Substation**
11.2(16)	The Site Information is in	**Part 4: Site Information**
11.2(19)	The Works Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**Two (2) weeks**
2	**The *Contractor's* main responsibilities**	**Data required by this section of the core clauses is provided by the *Contractor* in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.**
3	**Time**	
11.2(3)	The *completion date* for the whole of the *works* is	**30 January 2027**
11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met** / ***key date***
		1 **[●]** **[●]**
		2 **[●]** **[●]**
		3 **[●]** **[●]**
30.1	The *access dates* are:	**Part of the Site** / **Date**
		1 **66kV Yard and control room** **01 July 2026**
		2 **132kV Yard and control room** **01 July 2026**
31.1	The *Contractor* is to submit a first programme for acceptance within	**Two (2) weeks of the Contract Date.**

31.2	The *starting date* is	**01 July 2026**
32.2	The *Contractor* submits revised programmes at intervals no longer than	**Two (2) weeks.**
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.	N/A
4	**Testing and Defects**	
42.2	The *defects date* is	**Fifty Two (52) weeks after Completion of the whole of the *works*.**
43.2	The *defect correction period* is	**[Two (02) weeks**
	except that the *defect correction period* for	**Defects which the *Supervisor* notifies may jeopardise the performance of the works in use is the shortest possible time starting immediately after notification of the defect** **Defects which the Supervisor notifies require urgent attention is 48 (forty-eight) hours starting immediately after notification of the Defect, unless the parties, acting in good faith, agree otherwise.** **.**
5	**Payment**	
50.1	The *assessment interval* is	**between the 20 and the 25 day of each successive month.**
51.1	The *currency of this contract* is the	**South African Rand.**
51.2	The period within which payments are made is	**As per contractor payment terms on Eskom Vendor Management Department.**
51.4	The *interest rate* is	**the publicly quoted prime rate of interest (calculated on a 365 day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and** **(ii) the LIBOR rate applicable at the time for amounts due in other currencies. LIBOR is the 6 month London Interbank Offered Rate quoted under the caption "Money Rates" in The Wall Street Journal for the applicable currency or if no rate is quoted for the currency in question then the rate for United States Dollars, and if no such rate appears in The Wall Street Journal then the rate as quoted by the Reuters Monitor Money Rates Service (or such service as may replace the Reuters Monitor Money Rates Service) on the due date for the payment in question, adjusted *mutatis mutandis* every 6 months thereafter and as certified, in the event of any dispute, by any manager employed in**

		the foreign exchange department of The Standard Bank of South Africa Limited, whose appointment it shall not be necessary to prove.
6	**Compensation events**	
60.1(13)	The place where weather is to be recorded is:	**Cape Town International Airport**
	The *weather measurements* to be recorded for each calendar month are,	**the cumulative rainfall (mm)** **the number of days with rainfall more than 10 mm** **the number of days with minimum air temperature less than 0 degrees Celsius** **the number of days with snow lying at 09:00 hours South African Time** **and these measurements:**
	The *weather measurements* are supplied by	**Cape Town International Airport**
	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	**Cape Town International Airport**
	and which are available from:	**the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer***
7	**Title**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**Not Applicable**
9	**Termination**	**There is no reference to Contract Data in this section of the core clauses and terms in italics used in this section are identified elsewhere in this Contract Data.**
10	**Data for main Option clause**	
B	**Priced contract with bill of quantities**	
60.6	The *method of measurement* is	**Standard System Measurement published by ASAQS and amended as stated in Part C2.1, Pricing Assumptions.**
11	**Data for Option W1**	
W1.1	The *Adjudicator* is	**Andrew Baird**

	Address	**Gauteng**
	Tel No.	**011 803 3008**
	Fax No.	**011 803 3008**
	e-mail	**andrewbaird@ecsconsult.co.za**
W1.2(3)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.**
W1.4(2)	The *tribunal* is:	**arbitration.**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**Johannesburg, South Africa**
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**

12 Data for secondary Option clauses

X1 Price adjustment for inflation

X1.1(a) The *base date* for indices is **.One (1) week before tender closing.**

X1.1(c) The proportions used to calculate the Price Adjustment Factor are:

	proportion	linked to index for	Index prepared by
	0. [•]	**[•]**	**[•]**
	0. [•]	**[•]**	**[•]**
	0. [•]	**[•]**	**[•]**
	0. [•]	**[•]**	**[•]**
	0. [•]	**[•]**	**[•]**
	[•]	**non-adjustable**	
Total	**1.00**		

Contract Price Adjustment (CPA) will be applicable at anniversary of the contract. Prices will be fixed for the first 12 month of the contract. NB This contract will be less than a year

X2 Changes in the law **There is no reference to Contract Data in this**

		Option and terms in italics are identified elsewhere in this Contract Data.
X7	**Delay damages (but not if Option X5 is also used)**	
X7.1	Delay damages for Completion of the whole of the *works* are	**0.1% per day up to a limit of 10% of the total value of the contract**
X13	**Performance Bond**	
X13.1	**The amount of the performance bond is**	**5 % of the contract value**
X16	**Retention (not used with Option F)**	
X16.1	The *retention free amount* is	**R0**
	The *retention percentage* is	**2.5% of the total of the Prices** **0% of the retention is payable when the whole of the works is taken over on Completion and the remainder is paid on the expiry of the defects period which is 156 weeks after the works has been taken over.**
	The SDL&I and Stability and CSI retention percentage is	**2.5% of the total of the Prices** **(refer to C3 Works Information).**
X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**R0.0 (zero Rand)**
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to:	**the amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is limited to	**The greater of** • **the total of the Prices at the Contract Date and** • **the amounts excluded and unrecoverable from the *Employer*'s assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.**
X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	**the total of the Prices other than for the additional excluded matters.** **The *Contractor's* total liability for the additional excluded matters is not limited.** **The additional excluded matters are amounts for which the *Contractor* is liable under this contract for** • **Defects due to his design which arise before the Defects Certificate is issued,**

		• **Defects due to manufacture and fabrication outside the Site,** • **loss of or damage to property (other than the *works*, Plant and Materials),** • **death of or injury to a person and** • **infringement of an intellectual property right.**
X18.5	The *end of liability date* is	**(i) Seven years after the *defects date* for latent Defects and** **(ii) the date on which the liability in question prescribes in accordance with the Prescription Act No. 68 of 1969 (as amended or in terms of any replacement legislation) for any other matter.** **A latent Defect is a Defect which would not have been discovered on reasonable inspection by the *Employer* or the *Supervisor* before the *defects date*, without requiring any inspection not ordinarily carried out by the *Employer* or the *Supervisor* during that period. If the *Employer* or the *Supervisor* do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the *Employer* or the *Supervisor* to have discovered the Defect.**
Z	**The *Additional conditions of contract* are**	**Z1 to Z15 always apply.**

Z1 Cession delegation and assignment

Z1.1 The *Contractor* does not cede, delegate or assign any of its rights or obligations to any person without the written consent of the *Employer.*

Z1.2 Notwithstanding the above, the *Employer* may on written notice to the *Contractor* cede and delegate its rights and obligations under this contract to any of its subsidiaries or any of its present divisions or operations which may be converted into separate legal entities as a result of the restructuring of the Electricity Supply Industry.

Z2 Joint ventures

Z2.1 If the *Contractor* constitutes a joint venture, consortium or other unincorporated grouping of two or more persons or organisations then these persons or organisations are deemed to be jointly and severally liable to the *Employer* for the performance of this contract.

Z2.2 Unless already notified to the *Employer*, the persons or organisations notify the *Project Manager* within two weeks of the Contract Date of the key person who has the authority to bind the *Contractor* on their behalf.

Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

Z3 Change of Broad Based Black Economic Empowerment (B-BBEE) status

Z3.1 Where a change in the *Contractor's* legal status, ownership or any other change to his business composition or business dealings results in a change to the *Contractor*'s B-BBEE status, the *Contractor* notifies the *Employer* within seven days of the change.

Z3.2 The *Contractor* is required to submit an updated verification certificate and necessary supporting documentation confirming the change in his B-BBEE status to the *Project Manager* within thirty days of the notification or as otherwise instructed by the *Project Manager*.

Z3.3 Where, as a result, the *Contractor's* B-BBEE status has decreased since the Contract Date the *Employer* may either re-negotiate this contract or alternatively, terminate the *Contractor*'s obligation to Provide the Works.

Z3.4 Failure by the *Contractor* to notify the *Employer* of a change in its B-BBEE status may constitute a reason for termination. If the *Employer* terminates in terms of this clause, the procedures on termination are P1, P2 and P3 as stated in clause 92, and the amount due is A1 and A3 as stated in clause 93.

Z4 Confidentiality

Z4.1 The *Contractor* does not disclose or make any information arising from or in connection with this contract available to Others. This undertaking does not, however, apply to information which at the time of disclosure or thereafter, without default on the part of the *Contractor*, enters the public domain or to information which was already in the possession of the *Contractor* at the time of disclosure (evidenced by written records in existence at that time). Should the *Contractor* disclose information to Others in terms of clause 25.1, the *Contractor* ensures that the provisions of this clause are complied with by the recipient.

Z4.2 If the *Contractor* is uncertain about whether any such information is confidential, it is to be regarded as such until notified otherwise by the *Project Manager*.

Z4.3 In the event that the *Contractor* is, at any time, required by law to disclose any such information which is required to be kept confidential, the *Contractor*, to the extent permitted by law prior to disclosure, notifies the *Employer* so that an appropriate protection order and/or any other action can be taken if possible, prior to any disclosure. In the event that such protective order is not, or cannot, be obtained, then the *Contractor* may disclose that portion of the information which it is required to be disclosed by law and uses reasonable efforts to obtain assurances that confidential treatment will be afforded to the information so disclosed.

Z4.4 The taking of images (whether photographs, video footage or otherwise) of the *works* or any portion thereof, in the course of Providing the Works and after Completion, requires the prior written consent of the *Project Manager*. All rights in and to all such images vests exclusively in the *Employer*.

Z4.5 The *Contractor* ensures that all his subcontractors abide by the undertakings in this clause.

Z5 Waiver and estoppel: Add to core clause 12.3:

Z5.1 Any extension, concession, waiver or relaxation of any action stated in this contract by the Parties, the *Project Manager*, the *Supervisor*, or the *Adjudicator* does not constitute a waiver of rights, and does not give rise to an estoppel unless the Parties agree otherwise and confirm such agreement in writing.

Z6 Health, safety and the environment: Add to core clause 27.4

Z6.1 The *Contractor* undertakes to take all reasonable precautions to maintain the health and safety of persons in and about the execution of the *works*. Without limitation the *Contractor*:

- accepts that the *Employer* may appoint him as the "Principal Contractor" (as defined and provided for under the Construction Regulations 2014 (promulgated under the Occupational Health & Safety Act 85 of 1993) ("the Construction Regulations") for the Site;
- warrants that the total of the Prices as at the Contract Date includes a sufficient amount for proper compliance with the Construction Regulations, all applicable health & safety laws and regulations and the health and safety rules, guidelines and procedures provided for in this contract and generally for the proper maintenance of health & safety in and about the execution of *works*; and
- undertakes, in and about the execution of the *works*, to comply with the Construction Regulations and with all applicable health & safety laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z6.2 The *Contractor*, in and about the execution of the *works*, complies with all applicable environmental laws and regulations and rules, guidelines and procedures otherwise provided for under this contract and ensures that his Subcontractors, employees and others under the *Contractor's* direction and control, likewise observe and comply with the foregoing.

Z7 Provision of a Tax Invoice and interest. Add to core clause 51

Z7.1 Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice in accordance with the *Employer*'s procedures stated in the Works Information, showing the amount due for payment equal to that stated in the payment certificate.

Z7.2 If the *Contractor* does not provide a tax invoice in the form and by the time required by this contract, the time by when the *Employer* is to make a payment is extended by a period equal in time to the delayed submission of the correct tax invoice. Interest due by the *Employer* in terms of core clause 51.2 is then calculated from the delayed date by when payment is to be made.

Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer*'s VAT number 4710303126 on each invoice he submits for payment.

Z8 Notifying compensation events

Z8.1 Delete from the last sentence in core clause 61.3, "unless the *Project Manager* should have notified the event to the *Contractor* but did not".

Z9 *Employer's* limitation of liability

Z9.1 The *Employer's* liability to the *Contractor* for the *Contractor's* indirect or consequential loss is limited to R0.00 (zero Rand)

Z9.2 The *Contractor*'s entitlement under the indemnity in 83.1 is provided for in 60.1(14) and the *Employer*'s liability under the indemnity is limited.

Z10 Termination: Add to core clause 91.1, at the second main bullet point, fourth sub-bullet point, after the words "against it":

Z10.1 or had a business rescue order granted against it.

Z11 Addition to secondary Option X7 Delay damages (if applicable in this contract)

Z11.1 If the amount due for the *Contractor*'s payment of delay damages reaches the limits stated in this Contract Data for Option X7 or Options X5 and X7 used together, the *Employer* may terminate the *Contractor*'s obligation to Provide the Works using the same procedures and payment on termination as those applied for reasons R1 to R15 or R18 stated in the Termination Table.

Z12 Ethics

For the purposes of this Z-clause, the following definitions apply:

Affected Party means, as the context requires, any party, irrespective of whether it is the *Contractor* or a third party, such party's employees, agents, or Subcontractors or Subcontractor's employees, or any one or more of all of these parties' relatives or friends,

Coercive Action means to harm or threaten to harm, directly or indirectly, an Affected Party or the property of an Affected Party, or to otherwise influence or attempt to influence an Affected Party to act unlawfully or illegally,

Collusive Action means where two or more parties co-operate to achieve an unlawful or illegal purpose, including to influence an Affected Party to act unlawfully or illegally,

Committing Party means, as the context requires, the *Contractor*, or any member thereof in the case of a joint venture, or its employees, agents, or Subcontractor or the Subcontractor's employees,

Corrupt Action means the offering, giving, taking, or soliciting, directly or indirectly, of a good or service to unlawfully or illegally influence the actions of an Affected Party,

Fraudulent Action means any unlawfully or illegally intentional act or omission that misleads, or attempts to mislead, an Affected Party, in order to obtain a financial or other benefit or to avoid an obligation or incurring an obligation,

Obstructive Action means a Committing Party unlawfully or illegally destroying, falsifying, altering or concealing information or making false statements to materially impede an investigation into allegations of Prohibited Action, and

Prohibited Action means any one or more of a Coercive Action, Collusive Action Corrupt Action, Fraudulent Action or Obstructive Action.

Z12.1 A Committing Party may not take any Prohibited Action during the course of the procurement of this contract or in execution thereof.

Z12.2 The *Employer* may terminate the *Contractor*'s obligation to Provide the Services if a Committing Party has taken such Prohibited Action and the *Contractor* did not take timely and appropriate action to prevent or remedy the situation, without limiting any other rights or remedies the *Employer* has. It is not required that the Committing Party had to have been found guilty, in court or in any other similar process, of such Prohibited Action before the *Employer* can terminate the *Contractor*'s obligation to Provide the Services for this reason.

Z12.3 If the *Employer* terminates the *Contractor*'s obligation to Provide the Services for this reason, the amounts due on termination are those intended in core clauses 92.1 and 92.2.

Z12.4 A Committing Party co-operates fully with any investigation pursuant to alleged Prohibited Action. Where the *Employer* does not have a contractual bond with the Committing Party, the *Contractor* ensures that the Committing Party co-operates fully with an investigation.

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover **84**

84.1 When requested by a Party, the other Party provides certificates from his insurer or broker stating that the insurances required by this contract are in force.

84.2 The *Contractor* provides the insurances stated in the Insurance Table A.

84.3 The insurances provide cover for events which are at the *Contractor*'s risk from the *starting date* until the earlier of Completion and the date of the termination certificate.

INSURANCE TABLE A

Insurance against	Minimum amount of cover or minim limit of indemnity
Loss of or damage to the *works*, Plant and Materials	The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible, as Contract Date, where covered by the *Employer*'s insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the *works*, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the *Contractor*) caused by activity in connection with this contract	Loss of or damage to property *Employer*'s property The replacement cost where not covered by the *Employer*'s insurance The *Employer*'s policy deductible, as Contract Date, where covered by the *Employer*'s insurance Other property The replacement cost Bodily injury to or death of a person The amount required by applicable l
Liability for death of or bodily injury to employees of the *Contractor* arising out of and in the course of their employment in connection with this contract	The amount required by the applicat law

Z 13.2 **Replace core clause 87 with the following:**
The *Employer* provides the insurances stated in the Insurance Table B.

INSURANCE TABLE B

Insurance against or name of policy	Minimum amount of cover or minimum l of indemnity

Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

Z14 Nuclear Liability

Z14.1 The *Employer* is the operator of the Koeberg Nuclear Power Station (KNPS), a nuclear installation, as designated by the National Nuclear Regulator of the Republic of South Africa, and is the holder of a nuclear licence in respect of the KNPS.

Z14.2 The *Employer* is solely responsible for and indemnifies the *Contractor* or any other person against any and all liabilities which the *Contractor* or any person may incur arising out of or resulting from nuclear damage, as defined in Act 47 of 1999, save to the extent that any liabilities are incurred due to the unlawful intent of the *Contractor* or any other person or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z14.3 Subject to clause Z14.4 below, the *Employer* waives all rights of recourse, arising from the aforesaid, save to the extent that any claims arise or liability is incurred due or attributable to the unlawful intent of the *Contractor* or any other person, or the presence of the *Contractor* or that person or any property of the *Contractor* or such person at or in the KNPS or on the KNPS site, without the permission of the *Employer* or of a person acting on behalf of the *Employer*.

Z14.4 The *Employer* does not waive its rights provided for in section 30 (7) of Act 47 of 1999, or any replacement section dealing with the same subject matter.

Z14.5 The protection afforded by the provisions hereof shall be in effect until the KNPS is decommissioned.

Z15 Asbestos

For the purposes of this Z-clause, the following definitions apply:

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

AL means action level, i.e. a level of 50% of the OEL, i.e. 0.1 regulated asbestos fibres per ml of air measured over a 4 hour period. The value at which proactive actions is required in order to control asbestos exposure to prevent exceeding the OEL.

Ambient Air means breathable air in area of work with specific reference to breathing zone, which is defined to be a virtual area within a radius of approximately 30cm from the nose inlet.

Compliance Monitoring means compliance sampling used to assess whether or not the personal exposure of workers to regulated asbestos fibres is in compliance with the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

OEL means occupational exposure limit.

Parallel Measurements means measurements performed in parallel, yet separately, to existing measurements to verify validity of results.

Safe Levels means airborne asbestos exposure levels conforming to the Standard's requirements for safe processing, handling, storing, disposal and phase-out of asbestos and asbestos containing material, equipment and articles.

Standard means the *Employer*'s Asbestos Standard 32-303: Requirements for Safe Processing, Handling, Storing, Disposal and Phase-out of Asbestos and Asbestos Containing Material, Equipment and Articles.

SANAS means the South African National Accreditation System.

TWA means the average exposure, within a given workplace, to airborne asbestos fibres, normalised to the baseline of a 4 hour continuous period, also applicable to short term exposures, i.e. 10-minute TWA.

Z15.1 The *Employer* ensures that the Ambient Air in the area where the *Contractor* will Provide the Services conforms to the acceptable prescribed South African standard for asbestos, as per the regulations published in GNR 155 of 10 February 2002, under the Occupational Health and Safety Act, 1993 (Act 85 of 1993) ("Asbestos Regulations"). The OEL for asbestos is 0.2 regulated asbestos fibres per millilitre of air as a 4-hour TWA, averaged over any continuous period of four hours, and the short term exposure limit of 0.6 regulated asbestos fibres per millilitre of air as a 10-minute TWA, averaged over any 10 minutes, measured in accordance with HSG248 and monitored according to HSG173 and OESSM.

Z15.2 Upon written request by the *Contractor*, the *Employer* certifies that these conditions prevail. All measurements and reporting are effected by an independent, competent, and certified occupational hygiene inspection body, i.e. a SANAS accredited and Department of Employment and Labour approved AAIA. The *Contractor* may perform Parallel Measurements and related control measures at the *Contractor*'s expense. For the purposes of compliance the results generated from Parallel Measurements are evaluated only against South African statutory limits as detailed in clause Z15.1. Control measures conform to the requirements stipulated in the AAIA-approved asbestos work plan.

Z15.3 The *Employer* manages asbestos and ACM according to the Standard.

Z15.4 In the event that any asbestos is identified while Providing the Services, a risk assessment is conducted and if so required, with reference to possible exposure to an airborne concentration of above the AL for asbestos, immediate control measures are implemented and relevant air monitoring conducted in order to declare the area safe.

Z15.5 The *Contractor*'s personnel are entitled to stop working and leave the contaminated area forthwith until such time that the area of concern is declared safe by either Compliance Monitoring or an AAIA approved control measure intervention, for example, per the emergency asbestos work plan, if applicable.

Z15.6 The *Contractor* continues to Provide the Services, without additional control measures presented, on presentation of Safe Levels. The contractually agreed dates to Provide the Services, including the Completion Date, are adjusted accordingly. The contractually agreed dates are extended by the notification periods required by regulations 3 and 21 of the

Asbestos Regulations, 2001.

Z15.7 Any removal and disposal of asbestos, asbestos containing materials and waste, is done by a registered asbestos contractor, instructed by the *Employer* at the *Employer*'s expense, and conducted in line with South African legislation.

Annexure A: One-in-ten-year-return *weather data* obtained from SA Weather Bureau for [weather station]

If any one of these *weather measurements* recorded within a calendar month, before the Completion Date for the whole of the *works* and at the place stated in this Contract Data is shown to be more adverse than the amount stated below then the *Contractor* may notify a compensation event.

	Weather measurement				
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm	Number of days with min air temp < 0 deg.C	Number of days with snow lying at 08:00 CAT	[Other measurements if applicable]
January					
February					
March					
April					
May					
June					
July					
August					
September					
October					
November					
December					

Only the difference between the more adverse recorded weather and the equivalent measurement given above is taken into account in assessing a compensation event.

C1.2 Contract Data

Part two - Data provided by the *Contractor*

Clause	Statement	Data
10.1	The *Contractor* is (Name): Address Tel No. Fax No.	
11.2(8)	The *direct fee percentage* is The *subcontracted fee percentage* is	**10%** **10%**
11.2(18)	The *working areas* are the Site and	**Muldersvlei Substation**
24.1	The *Contractor's* key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	**CV's (and further key persons data including CVs) are appended to Tender Schedule entitled.**
11.2(3)	The *completion date* for the whole of the *works* is	
11.2(14)	The following matters will be included in the Risk Register	
11.2(19)	The Works Information for the *Contractor*'s design is in:	
31.1	The programme identified in the Contract Data is	
B	**Priced contract with bill of quantities**	
11.2(21)	The *bill of quantities* is in	

11.2(31)	The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**		
	Data for Schedules of Cost Components	*Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).*		
B	**Priced contract with bill of quantities**	**Data for the Shorter Schedule of Cost Components**		
41 in SSCC	The percentage for people overheads is:	**%**		
21 in SSCC	The published list of Equipment is the last edition of the list published by The percentage for adjustment for Equipment in the published list is	 **Minus %**		
22 in SSCC	The rates of other Equipment are:	**Equipment**	**Size or capacity**	**Rate**
61 in SSCC	The hourly rates for Defined Cost of design outside the Working Areas are **Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.** **Please insert another schedule if foreign resources may also be used**	**Category of employee**		**Hourly rate**
62 in SSCC	The percentage for design overheads is	**%**		
63 in SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included in Defined Cost are:			

PART 2: PRICING DATA

ECC3 Option B

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option B	
C2.2	The *bill of quantities*	

C2.1 Pricing assumptions: Option B

How work is priced and assessed for payment

Clause 11 in NEC3 Engineering and Construction Contract (ECC3) Option B states:

Identified and defined terms 11 11.2

(21) The Bill of Quantities is the *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

(28) The Price for Work Done to Date is the total of

- the quantity of the work which the *Contractor* has completed for each item in the Bill of Quantities multiplied by the rate and
- a proportion of each lump sum which is the proportion of the work covered by the item which the *Contractor* has completed.

Completed work is work without Defects which would either delay or be covered by immediately following work.

(31) The Prices are the lump sums and the amounts obtained by multiplying the rates by the quantities for the items in the Bill of Quantities.

This confirms that Option B is a re-measurement contract and the bill comprises only items measured using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.

Function of the Bill of Quantities

Clause 55.1 in Option B states, “Information in the Bill of Quantities is not Works Information or Site Information”. This confirms that specifications and descriptions of the work or any constraints on how it is to be done are not included in the Bill, but in the Works Information. This is further confirmed by Clause 20.1 which states, “The *Contractor* Provides the Works in accordance with the Works Information”. Hence the *Contractor* does **not** Provide the Works in accordance with the Bill of Quantities. The Bill of Quantities is only a pricing document.

Guidance before pricing and measuring

Employers preparing tenders or contract documents, and tendering contractors are advised to consult the sections dealing with the bill of quantities in the NEC3 Engineering and Construction Contract Guidance Notes before preparing the *bill of quantities* or before entering rates and lump sums into the *bill*.

There is no general provision in Option B for payment for materials on Site before incorporation into the *works*. If secondary Option X14 Advanced payment has not been used then the tendering contractor may obtain the same effect by inserting appropriate items in the method related charges where the *method of measurement* allows, or alternatively making allowance in the rates of the *bill of quantities* for the financing of Plant and Materials until they are incorporated in the *works.*

When compensation events arise, the default position is that the Bill of Quantities is not used to calculate the cost effect of the event. Defined Cost and the resulting Fee is used and Defined Cost includes all components of cost which the *Contractor* is likely to incur, including so called P & G items. Rates and lump sums from the Bill of Quantities, or from any other source, may be used instead of Defined Cost and the Fee only if the *Contractor* and *Project Manager* agree. If they are unable to agree, then Defined Cost plus Fee is used.

Measurement and payment

Symbols

The units of measurement described in the Bill of Quantities are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m^2	square metre
m^2-pass	square metre pass
m^3	cubic metre
m^3-km	cubic metre-kilometre
MN	meganewton
MN.m	meganewton-metre
MPa	megapascal
No.	number
sum	Lump sum
t	tonne (1000kg)

General assumptions

Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.

The Prices and rates stated for each item in the Bill of Quantities shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the *Contractor* in carrying out or providing that item.

An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.

The quantities contained in the Bill of Quantities may not be final and do not necessarily represent the actual amount of work to be done. The quantities of work assessed and certified for payment by the *Project Manager* at each assessment date will be used for determining payments due.

The short descriptions of the items of payment given in the *bill of quantities* are only for the purposes of identifying the items. Detail regarding the extent of the work entailed under each item is provided in the Works Information.

Departures from the *method of measurement*

Amplification of or assumptions about measurement items

The following is provided to assist in the interpretation of descriptions given in the *method of measurement*. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in this section shall be used.

C2.2 the *bill of quantities*

Use this page as a summary page or as a cover page to the *bill of quantities*.

PART 3: SCOPE OF WORK

C3.1: EMPLOYER'S WORKS INFORMATION

Description of the *works*
Executive overview

Muldersvlei Substation is situated in the Western Grid and all Eskom rules and regulations shall be adhered to when working in this area. This station is National Key Point station and must be treated as such.

Scope of Work for the project: Please refer to **Document Identifier: 240- 185000522**

Scope of Project

1. **Farmers 1, 11 kV feeder**

Supply and install 11 kV XLPE outdoor cable termination to terminate the installed11 kV, 185mm2, 3 core, XLPE cable to the existing 11 kV overhead feeder. The 11 kV, 3 core, XLPE outdoor termination shall be in accordance with SAP number 0184239 of DDT 8006.

2. **Farmers 2, 11 kV feeder**

Supply and install 11 kV XLPE outdoor cable termination to terminate the installed 11 kV, 185mm2, 3 core, XLPE cable to the existing 11 kV overhead feeder. The 11 kV, 3 core, XLPE outdoor termination shall be in accordance with SAP number 0184239 of DDT 8006.

3. **Farmers 3, 11 kV feeder**

Currently there are 2X 11kV, 185mm2, 3 core, copper, PILC cables installed in this feeder. These feeders are
currently supplied via the old oil filled indoor switchgear which will be decommissioned once the newly installed
fixed pattern indoor switchgear is commissioned and energised. The cables will have to be cut transitioned from PILC (2 X11kV, 185mm2, 3 core, copper, PILC) to XLPE and then trifurcated to (2 X11kV, 185mm2, 1 core, copper, XLPE).
Supply and install transition trifurcating joint kits to transition and trifurcate the two 11 kV, 185mm2, 3 core, copper, PILC cables to 2 X11kV, 185mm2, 1 core, copper, XLPE. Use SAP number 0580863 of DDT 8021.
 These 2 X11kV, 185mm2, 1 core, copper, XLPE will have to be terminated in the Farm 3 feeder panel (kindly see scope included in clause 3.6 of this document).

. **4. Farmers 4, 11 kV feeder**

Currently there is an existing 11 kV, 185mm2, 3 core XLPE cable installed but was not terminated. Below is the scope of work
 Trace the existing 11 kV, 185mm2, 3 core XLPE cable route and then terminate the 11 kV, 185mm2, 3 core, XLPE cable to the existing 11 kV overhead feeder by using 11 kV, 3 core, XLPE outdoor termination in accordance with SAP number 0184239 of DDT 8006.

5. **11 kV cable termination to transformer number 8**

Currently there are 6X11 kV, 630mm2, 1 core, XLPE cables installed and are to be terminated to transformer number 8, two cables per phase to be installed. Below is the scope of work:
 Disconnect old 6X11kV, 630mm2, PILC cables from the sealing end structure of the transformer number 8.
 Supply and install outdoor cable terminations to terminate the already installed 6X11 kV, 630mm2, 1 core, XLPE cables in accordance with SAP nr 0635341 of DDT 8006.
Note: there is cable sealing end structure already installed.

6. 11 kV cable termination to fixed pattern indoor switchgear

Currently there are 12X11 kV, 630mm2, 1 core, XLPE cables installed and are to be terminated to two incomer
panels. Two single core cables per phase. And 21 x 11kV, 185mm², 1 core, XLPE cables to be terminated to 6 feeder panels. Below is the scope of work

 Incomer 1

o Supply and install 6 x 630mm2 SSC for terminating 6 x 1C core cables into incomer 1, thus two cables per phase. Install the extensible screened separable connectors in accordance with SAP 0580431 of DDT 8017.

 Incomer 2

o Supply and install 6 x 630mm2 SSC for terminating 6 x 1C core cables into incomer 2, thus two cables per phase. Install the extensible screened separable connectors in accordance with SAP 0580431 of DDT 8017.

 Supply and install 185mm2 SSC with surge arrestors for terminating 6 x 1C core cables (Farmers 3), 2X 1 core cables per phase hence 6 cables, this to be done in accordance with SAP 0580435 of DDT 8017.

 Supply and install Surge Arrestors for all other cable feeders (5X feeder panels, excluding farmers 3), this to be done in accordance with SAP of DDT 8010.

Note: The five feeder cables (Farm 1, Farm s, Farm 4 and 2 internal reticulation feeders) have been terminated, SSC already installed but surge arrestors have not been installed.

7. Arc sensors for protection

Arc sensors are positioned in the switchgear to detect failures of the screen separable MV cable connectors used for terminations in the switchgear cable and busbar compartments. The arc sensors consist of a mono-filament fibre optic cable with a lens and mounting bracket on one end, and a push-in connector for installation into a protection relay on the other end. It is imperative that the fibre optic cable is not damaged or bent beyond a 100mm bending radius.

Currently there are cable chamber arc sensors installed in the eight feeder panels. Cable chamber arc sensors are missing from the incomer panels. Busbar arc sensors are missing from the feeder panels, incomer panels and from the bus section panel. Below is the scope of work:

 Route the eight already installed arc sensors from the feeder panels of the indoor switchgear to the protection panels. Arc sensor leads are to be routed in “sprag” tubing or like provide mechanical protection when outside of the switchgear, to be supplied by the Contractor.

 Install 14 arc sensors which are to be free-issued by the Purchaser in the incomer panel cable chambers (2 sensors), and the busbar chambers of all panels (12 sensors) and route these to the protection panels. Arc sensor leads are to be routed in “sprag” tubing or like provide mechanical protection when outside of the switchgear, to be supplied by the Contractor. Arc sensors/leads are to be installed using existing holes/studs in the switchgear compartments and shall be routed without the need to drill holes in the switchgear (affecting its internal arc rating). Arc sensor leads are to be braced so as not to interfere with moving parts inside the switchgear, or to suffer abrasion damage.

 The cable- and busbar chamber arc sensors from each switchgear panel are to be routed to the corresponding protection Intelligent Electronic Device (IED) in its off-board protection panel. The bus section panel’s arc sensors are to be routed to the bus section panel protection scheme.

 Each arc sensor lead is to be labelled at the IED end using the slip-in ferrule holder provided on the cable. The Supplier shall provide suitable slip-in label, preferably black lettering on a white background. Each lead shall be identified according to the switchgear panel number (e.g. P08) and the sensor location C = cable chamber and B = busbar chamber. The bus section busbar chamber sensors shall be labelled P06L (Left = Q1 side) and P06R (Right = Q10 side).

8. The cable system after installation testing

The Contractor shall provide proposals for after installation tests. These proposals, inclusive of method statements with pass/fail criteria shall be provided with the tender. Cable systems after installation test shall be done in accordance with SANS 10189-13, and commissioning tests for the switchgear shall be done in

accordance with SANS/IEC 62271-1.

a) DC voltage test of the over sheath.
b) AC voltage test with PD test may be proposed. AC voltage method, PD test methods, detection systems as well as pass/fail criteria to be provided, and all other commissioning tests as stated in SANS 10198-13 and SANS/IEC 62271-1.
Eskom reserves the right to support any proposal with any alternative testing method. All test and measurement data and results performed during and after installation shall be provided to Eskom in a final report.

Employer's objectives and purpose of the *works*

Muldersvlei Substation, located within the NTCSA Transmission network, has been in operation for several decades. Over time, a significant portion of its primary and secondary plant equipment has reached the end of its service life. Additionally, certain technologies currently in use have become obsolete or increasingly difficult to maintain, resulting in operational inefficiencies and heightened risk of equipment failure.

Muldesrsvlei is equipped with an aged 11kV oil filled indoor switchgear board that was planned for replacement between 2020 and 2023. A new 11kV fixed pattern indoor switchgear was installed as replacement solution for the oil filles indoor switchgear in accordance with WMul08P01-SE-D87-A. However, the project was not completed due to business challenges.

Ultimately, the project's purpose is to:

- Restore and enhance operational reliability of the high-voltage yards.
- Ensure compliance with NTCSA standards and grid code requirements.
- Improve maintainability and reduce operational risks associated with aging equipment.
- Support NTCSA's strategic goal of sustainable energy delivery for the Western Grid and beyond.

Please refer to Scope of work document with Unique Identifier: 240-185000522

Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
AFC	Approved for construction
OBL	Outside battery limits
NTCSA	National Transmission Company South Africa
MTS	Main Transmission Substation
CLN	Customer Load Network
URS	User Requirement Specification
ORHVS	Occupational Regulation for High Voltage System
JB	Junction Box
SED	Station Electric Diagram

SA	Surge Arrester
BoQ	Bill of Quantities
B/B	Busbar
B/C	Bus Coupler
B/S	Bus Section

Management and start up.
Management meetings

Regular meetings of a general nature may be convened and chaired by the *Project Manager* as follows:

Title and purpose	Approximate time & interval	Location	Attendance by:
Safety file audit	2 weeks before work commence	NTCSA Premises or MS Teams	Employer, Contractor, Environmental and Safety, Quality
Overall contract progress and feedback	Bi-weekly or as and when required	NTCSA Premises or MS Teams	Employer, Contractor, Supervisor, safety, Grid, Environmental and Quality
Inaugural Meeting	2 weeks before work commence	NTCSA Premises or MS Teams	Employer, Contractor, Site Supervisor, safety, Quality, Environmental and Grid Rep
Site Induction	1st day of work	NTCSA Premises or MS Teams	Contractor, Safety and Substation EA, Environmental

Meetings of a specialist nature may be convened as specified elsewhere in this Works Information or if not so specified by persons and at times and locations to suit the Parties, the nature and the progress of the *works*. Records of these meetings shall be submitted to the *Project Manager* by the person convening the meeting within five days of the meeting.

All meetings shall be recorded using minutes or a register prepared and circulated by the person who convened the meeting. Such minutes or register shall not be used for the purpose of confirming actions or instructions under the contract as these shall be done separately by the person identified in the *conditions of contract* to carry out such actions or instructions.

Documentation control

All the correspondences are to be addressed to the Project Manager with a sequential numbering system. This includes and not limited to the following.

- Design Documents
- Programmes
- Method Statements
- Payment Certificate and Test reports
- Early Warnings and Compensation Event Documents
- PM or Site Supervisor Instructions/Communications
- As-built records

Site Records:

Contractor site diary signed daily by the *Employer* and *Contractor*'s Supervisors/ site managers.

Contractor Daily Site Diary (Minimum *Employer* requirements on *Contractor* Daily Site Diary are);

- Contract Number.
- Date.
- Work Hours – Start, Finish and Overtime.
- Rainfall (mm).
- o Temperature.
- o Wind Speed.
- o Visitors to site.
- o Contractor employees on site and description (Site Agent, Foreman, Skilled, etc.).
- o List of Plant and Equipment.
- o Brief description of the day's activities.
- o Toolbox talk topic.
- o Diary signed daily by Employer - Site Manager/Supervisor and Contractor – Contract Manager/Site Agent.
- o Daily Contractor attendance register to be attached to the Daily Site Diary.
- o Site instructions issued by the Supervisor.
- o Site Memorandums addressed to the Supervisor

Summary of the documentation required from the *Contractor* before and during construction includes the following:

DOCUMENT	Before	During
Programme	X	X
Resource Schedule	X	X
Health and Safety Plan	X	
Quality Assurance Plan	X	
Method Statements	X	
Materials Inventory		X
Drawing Register		X
Progress Schedule		X
Application for Payment		X
Weather Data (All site activities)		X
Monthly Safety Report		X
Inventory list of all materials		X
Construction progress photographs		X

Communication

- • All correspondence from the *Contractor* is signed by the *Contractor's* authorised representative.
- • Correspondence from the *Project Manager* is issued and signed in the name of the *Project Manager* or his authorised representative.
- • All formal correspondence from the *Contractor* is addressed to the *Project Manager* or his authorised representative and delivered to the *Project Manager* or his authorised representative.
- • Emails and other forms of electronic communication (collectively referred to herein as *emails*) between the *Contractor* and the *Project Manager* are for the expedient transfer of preliminary technical data and non-contractual information only.

- • The *Contractor* provides all contractually required submittals, notifications and the like by means of official correspondence or formal document transmittal.
- • Emails or documentation included therein, sent from the *Project Manager* to the *Contractor* do not, in themselves, constitute either acceptance of a proposal from the *Contractor* or an instruction under the terms of the contract either of which may be or may result in a compensation event to the contract.
- • The *Contractor* does not act on any email that the *Contractor* believes results in a compensation event to the contract whether or not the email by the *Project Manager* stated that it constituted a compensation event. The *Contractor* requests formal written confirmation of any instruction that may be or may result in a compensation event and receives this confirmation through formal correspondence, document transmittal, and *Project Manager's* instruction or compensation event, before acting on such an instruction.
- • Signature authorities o The *Contractor* provides, a "Signature Authorization Form", the names and specimen signatures of those individuals within the *Contractor's* organization authorized to sign documents on behalf of the *Contractor*. The *Contractor* also specifies the financial or other limits of authority for each individual.
- o The *Contractor* delegate's authority within its organization to home office and field office personnel as required for effective performance of the work.
- o The *Contractor's* Contract Signatory signs the "Signature Authorization Form".
-
-

Health and safety risk management

The *Contractor* shall comply with the health and safety

Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints

Quality assurance requirements

The *Contractor* shall comply with the Quality requirements.

Programming constraints

Kindly note that NTCSA uses the Microsoft Project and Primavera P6 for project planning and the contractor is encouraged to use either one of the tools.
The contractor should note that the cabling and stringing will be done as per project execution plan that will be finalised after the contract award.
Also, the sequence of the planned plant outages will not take place immediately, as the Grid commissioning team must first complete the pre-commissioning tests and commission the plant before the next planned outage. When the contractor submit the programme for acceptance, they must include all the information necessary for the project manager to properly assess the programme and that includes the following,

1. Starting date, access dates, key dates and completion dates
2. Planned completion of each activity and overall planned completion
3. The resources the contractor intended to use
4. Identified constraint
5. The Float

The *Contractor* shall submit the first programme to the *Project Manager* for acceptance within two (2) weeks of the *starting date* of the Package Order. The programme is to conform strictly to the requirements of core *clause* 31 and the Contract Data.

The *Contractor* revises the programme as required in accordance with core clause 32.

Each time the programme is revised, the *Contractor* submits a revised Forecast Rate of Payment..

Weather and its effect on the Accepted Programme.

The *Employer* will provide a weather data from SA weather services for Cape Town-Western Cape. The *Contractor* should familiarise themselves with the minimum and maximum temperatures, monthly average

rain fall, wind and snow fall around the area using the 10 (ten) year weather data from SA Weather Services and make provisional allowance in the pricing.

Only the difference between more adverse weather recorded and the equivalent measurement given above is taken into consideration when assessing a compensation event.

Outage constraints

The *Contractor* to plan the execution of the *Works* accordingly and make provisional allowance for any delays due to unavailability of outages.

Contractor's management, supervision and key people

As stated on the construction regulation, the appointment of responsible persons will be done and copies to be kept inside the site safety file. The contact details of the key people should be available and be inside the site safety file. It is the responsibility of the contractor to provide the management and supervision necessary to carry out the works in accordance with the scope. Also to ensure that work is properly coordinated and maintain the resources stated in the accepted programme. It is the duty of the contractor to notify the project manager (PM) if they intend to replace the key people or change management arrangements

Invoicing and payment

Within one week of receiving a payment certificate from the *Project Manager* in terms of core clause 51.1, the *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

The *Contractor* shall address the tax invoice to NTCSA SOC Ltd and include on each invoice the following information:

- Name and address of the *Contractor* and the *Project Manager.*
- The contract number and title.
- *Contractor*'s VAT registration number.
- The *Employer*'s VAT registration number 4710303126.
- Description of service provided for each item invoiced based on the Price List.
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT.

Add procedures for invoice submission and payment (e. g. electronic payment instructions)
Procedures for invoice submission and payment

- On 22nd of every Month the contractor will submit payment certificate signed by both Eskom and Contractor Site Supervisors
- Eskom QS will verify the quantities with Eskom Site supervisor and final payment certificate will be sent back to Contractor to create the invoice.
- The invoice will be sent to both Project Manager and the QS for processing

Insurance provided by the *Employer*

Not applicable to this contract. The *Contractor* to conduct their own risk assessment and arrange their own insurance. *Employer* will not be providing any insurance cover.

Contract change management

The standard forms will be used when claiming for compensation event as per NEC (ECC3).

Provision of bonds and guarantees
The form in which a bond or guarantee required by the *conditions of contract* (if any) is to be provided by the *Contractor* is given in Part 1 Agreements and Contract Data, document C1.3, Sureties.

The *Employer* may withhold payment of amounts due to the *Contractor* until the bond or guarantee required in terms of this contract has been received and accepted by the person notified to the *Contractor* by the *Project Manager* to receive and accept such bond or guarantee. Such withholding of payment due to the *Contractor* does not affect the *Employer*'s right to termination stated in this contract.

Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor*
Not applicable to this contract

Training workshops and technology transfer
Not applicable to this contract

Engineering and the *Contractor*'s design

Employer's design
The standard NTCSA Scope of work document will be issued with the tender documents and the detailed that show the connections will be given to the successful tenderer.

Parts of the *works* which the *Contractor* is to design
Not applicable to this contract

Procedure for submission and acceptance of *Contractor*'s design

Not applicable o this contract

Other requirements of the *Contractor*'s design
Not applicable to this contract

Use of *Contractor*'s design
Not applicable to this contract

Design of Equipment
Not applicable to this contract

Equipment required to be included in the *works*
Not applicable to this contract

As-built drawings, operating manuals and maintenance schedules
Not applicable to this contract

Procurement

People

Minimum requirements of people employed on the Site

NTCSA Substations are National Key points therefore all the people working on NTCSA sites should be vetted before commencement of the work. Copy of the ID documents should be contained on site safety file. If the foreign national is employed by the contractor, a copy of the vetting form from their country of origin must be provided and must not be older than twelve (12) months.

BBBEE and preferencing scheme

Total points for Price and B-BBEE must not exceed 100

Failure on the part of a tenderer to fill in and/or to sign this form and submit a B-BBEE Verification Certificate from a Verification agency accredited by the South African Accreditation System (SANAS) or a Registered Auditor approved by the Independent Regulatory Board of Auditors (IRBA) or an Accounting Officer as contemplated in the Close Corporation Act (CCA) together with the tenderer, will be interpreted to mean that preference points for B-BBEE status level of contribution are not claimed.

The purchaser reserves the right to require of a tenderer, either before a tenderer is adjudicated or at any time subsequently, to substantiate any claim in regard to preferences, in any manner required by the purchaser.

Accelerated Shared Growth Initiative – South Africa (SD&L)

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Supplier and Development and Localisation in accordance with and as provided in the Contractor's SD&L Compliance Schedule

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Criteria	**Total Target (%)**
Local Content to South Africa	100
Skills type (occupation)	**Target no of Persons to be trained(local to South Africa)**
Cable jointer	2
Trainee Supervisor	1

Subcontracting

Preferred subcontractors

As per NTCSA procurement documents as amended.

Subcontract documentation, and assessment of subcontract tenders

As per NTCSA procurement documents/policies as amended

Limitations on subcontracting

As per NTCSA procurement documents/policies as amended

Attendance on subcontractors

As per NTCSA procurement documents/policies as amended

Plant and Materials

Quality

The Contractor shall comply with quality requirements"

Plant & Materials provided "free issue" by the *Employer*

Not applicable to this contract

The material that will be supplied or provided by the contractor for successful completion of the project is listed below,

Item/Material	Date by which it will be provided
Arc Sensors	Immediately After Site Establishment
Arc protection sensor mounting bracket	Immediately After Site Establishment
Trifurcating kits (3C 185mm2- 1C 185mm2)	Immediately After Site Establishment
Screened Connector Terminations for 1C 185 XLPE and for 1C PILC 630mm	Immediately After Site Establishment

Contractor's procurement of Plant and Materials

The Contractor will be required to create their own material storage yard on site that will be controlled solely by the Contractor. The Contractor is expected to safeguard their equipment and material during the execution of the project and reasonable steps should be taken to minimise theft on site. The Contractor will exercise good housekeeping on site all times during the project. The list of all inventories should be available and the copy to be provided and be on site safety file.

Spares and consumables

As mentioned, or specified on Health and safety file

Tests and inspections before delivery

The tests and inspections will be done as per QITP's provided and agreed upon by the parties at the beginning of the project.

Marking Plant and Materials outside the Working Areas

Not applicable to this contract

Contractor's Equipment (including temporary works).

Reference to be made to Quality requirements documents Annexure "C"

Cataloguing requirements by the *Contractor*

Not applicable to this contract

Construction

Temporary works, Site services & construction constraints

Employer's Site entry and security control, permits, and Site regulations

As explained/mentioned on Site information document, access to the substation should be pre-arranged with the Substation Engineering Assistant or CLN Supervisor and the contractor employees should always carry the ID documents with them. Once again, the contractor employees should be vetted before commencement of the works.
The Contractor is to have an NTCSA certified and authorized Operating Regulation for High Voltage Systems (ORHVS) person available on site in accordance with NTCSA Standard Occupational Health and Safety Requirements to be met by Contractors and Sub-contractors Employed by NTCSA.

The Contractor shall control his activities and processes in accordance with NTCSA's Occupational Health and Safety Requirements to be met by Contractors and Sub-contractors Employed by NTCSA.

The authorization procedure for a permit to work shall be done before the contractor commences work on site.

It is the Contractors responsibility to ensure that a permit to work is obtained before access to the work can be given.

The contractor must be in possession of current H.V. Regulations and is responsible to be authorised by Western Grid GMR 2.1 and the Grid Safety Advisor to work in the Region. Also, one of his workers must have a current first aid level 2 certificate. All workers must have police clearance (no criminal record)

The contractor's trucks must have a valid and current crane test certificate with the truck driver and crane operator's certificate. All slings, shackles and crimping tools must have valid and current test certificates, which must be produced on site establishment.

The contractor will only leave site once a written site instruction has been issued by an NTCSA site representative.

Proposed project schedule indicating man days must be attached. Dates to be confirmed on contract award.

Working hours will be from 08h00 to 16h45 during weekdays, weekend work to be carried out only on request from NTCSA .

The contractor is to provide an approved Quality Inspection and Test Plan for the design, manufacture, delivery and installation as stated in the Scope of Works.

The contractor is to provide within two weeks of contract awarding the requirements of outages for the works duration.

It is the Contractors responsibility to ensure that a permit to work is obtained before access to the site can be given. Arrangements can be made with NTCSA - Western Cape Grid, High Voltage Plant Manager, Mr. Stuart Van Diemen Tel. +27 21 941 5926/+27 62 151 6768 to arrange for an interview.

The Contractor will be required to have an NTCSA and authorized ORHVS person available in each area where work is being performed.

Restrictions to access on Site, roads, walkways and barricades

The working area will be barricaded according to NTCSA ORHVS, and the site supervisor will be on site to assist where possible

People restrictions on Site; hours of work, conduct and records

NTCSA working hours start from 8:00 to 16:45 and any work outside the normal hours should be pre-arranged with the Engineering Assistance or CLN Supervisor.

Health and safety facilities on Site

See section 2.3 above

Environmental controls, fauna & flora, dealing with objects of historical interest

See paragraph 2.4 above

Title to materials from demolition and excavation

NTCSA will provide the storage area for dismantled/removed material from HV Yards.

Cooperating with and obtaining acceptance of Others

The supplier should note that it will share the site with other appointed contractors and cooperation will be expected from all on site.

Publicity and progress photographs

As per NTCSA tender condition

***Contractor*'s Equipment**

The contractor equipment will be kept as per construction regulation, NTCSA tender condition, Health and safety and security requirements and the records to be kept on site safety file.

Equipment provided by the *Employer*

No equipment will be provided by the Employer during construction. The contractor should provide all the equipment necessary to do construction work.

See section 4.3.2 above for list of material to be used during execution of the project.

Site services and facilities

The contractor should provide the following, drinking water, ablution facility, waste disposal bins and organise own accommodation. The electricity is available on site, but it is not guaranteed, and the contractor should make provision for that on the Bill of Quantities.

Facilities provided by the *Contractor*

The contractor will be expected to provide own storage facility as the site do not have sufficient shelter or space for storage of equipment. The site will be allocated to the contractor to store tools during construction and upon completion, it will be the responsibility of the contractor to clean and restore the site to original state.

Existing premises, inspection of adjoining properties and checking work of Others

Not applicable to this contract

Survey control and setting out of the *works*

Not applicable to this contract

Excavations and associated water control

Not applicable to this contract

Underground services, other existing services, cable and pipe trenches and covers

Before any work commenced, it will be the responsibility of the Contractor to ascertain from the "Site Supervisor" the position of any existing services on site. Once these are indicated to the Contractor they shall be deemed “known”. Any costs incurred for repairs to any “known” services shall be for the Contractor’s account

Control of noise, dust, water and waste

As explained elsewhere on the document

Sequences of construction or installation

As explained in section 1.1 above, the scope of work mentioned, and the sequencing of activities or feeders will be completed after the contract award with the appointed supplier.

Giving notice of work to be covered up

The contractor will discuss the construction plan or weekly plan with the site supervisor and any deviation from the plan should be communicated to the supervisor. The two parties should agree on the plan to be undertaken by the contractor for the safety of everyone on site.

Hook ups to existing works

As stated elsewhere in the document, the contractor cannot access the existing works because it is alive and barricaded as per ORHVS. The contractor should work within the barricaded areas pointed to him/her by the responsible person. Existing Yards will be alive and barricaded such that it restricts access to contractor’s employees. The contractor will have access to demarcated areas on 400kV and 132kV Yards.

Completion, testing, commissioning and correction of Defects

Work to be done by the Completion Date

On or before the Completion Date the *Contractor* shall have done everything required to Provide the Works except for the work listed below which may be done after the Completion Date but in any case before the dates stated. The *Project Manager* cannot certify Completion until all the work except that listed below has been done and is also free of Defects which would have, in his opinion, prevented the *Employer* from using the *works* and Others from doing their work.

Use of the *works* before Completion has been certified

As tabled below under section 5.2.4, each section of the works should be completed/handed over on delivery date. The contract caters for that as indicated elsewhere in the NEC.

Materials facilities and samples for tests and inspections

Not applicable to this contract

Commissioning

NTCSA personnel will do the commissioning of the bays after the completion of the work. The commissioning procedure will be drawn upon completion of the works and will be forwarded to National Control Centre for approval.

Start-up procedures required to put the *works* into operation

Not applicable to this contract

Take over procedures

Standard NTCSA template (Takeover Certificate) will be used to take over the work from the contractor after work has been completed

Access given by the *Employer* for correction of Defects

The Project Manager will arrange the date and access to site for the contractor to correct the defects should the NCR be raised against faulty plant. The contractor will be expected to update the site safety file and the records contained inside as per construction regulation.

Performance tests after Completion

Not applicable to this contract

Training and technology transfer

Not applicable to this contract

Operational maintenance after Completion

Not applicable to this contract

Plant and Materials standards and workmanship

Investigation, survey and Site clearance
Not applicable to this contract

Building works
Not applicable to this contract

Civil engineering and structural works
TERMINATING AND COMMISSIONING OF 11 KVCABLE SYSTEMS TO A NEWLY INSTALLED 11 KV FIXED PATTERN INDOOR SWITCHGEAR AT MULDERSVLEI SUBSTATION with Unique Identifier: 240-185000522

Electrical & mechanical engineering works

Specifications	Rev
TERMINATING AND COMMISSIONING OF 11 KVCABLE SYSTEMS TO A NEWLY INSTALLED 11 KV FIXED PATTERN INDOOR SWITCHGEAR AT MULDERSVLEI SUBSTATION with Unique Identifier: 240-185000522	Latest revision
Construction Safety, Health and Environmental Management 32-136	Latest revision
Eskom Life saving rules 32-421	Latest revision
Safety, Health and Environmental (SHE) Policy 32-94	Latest revision
Smoking Procedure 32-36	Latest revision
Vehicle and Driver Safety Management 32-93	Latest revision
Eskom Vehicle Safety 32-345	Latest revision
TST0015 Training, assessment and authorization of persons for the operation & maintenance of the Power System Contractor Safety in a High Voltage Environment	Latest revision
Working at Heights 32-418	Latest revision
TST41-120 (Revision 2) Environmental Requirements for the Procurement of Assets, Goods and Services.	Latest revision
TST41-168 Quality Assurance Requirements for Procurement of Assets, Goods and Services	Latest revision

Process control and IT works
Not applicable to this contract

Other [as required]

List of drawings

Drawings issued by the *Employer*

This is the list of drawings issued by the *Employer* at or before the Contract Date and which apply to this contract.

• Note: Some drawings may contain both Works Information and Site Information.• The list contained in this document may not be deemed complete. The *Contractor* is encouraged to consult all the technical documents supplied in the tender pack and may request for additional documents for clarification if required.

Drawing number	Revision	Title
Unique Identifier: 240-185000522	**0**	TERMINATING AND COMMISSIONING OF 11 KVCABLE SYSTEMS TO A NEWLY INSTALLED 11 KV FIXED PATTERN INDOOR SWITCHGEAR AT MULDERSVLEI SUBSTATION
8006	0	SPEC SHEET
8010	0	SPEC SHEET
8017	0	SPEC SHEET
8021	0	SPEC SHEET

PART 4: SITE INFORMATION

PART 4: SITE INFORMATION

General description

Muldersvlei Substation is situated in the Western Grid and all Eskom rules and regulations shall be adhered to when working in this area. This station is National Key Point station and must be treated as such.

1. The *Contractor* to ensure that he becomes fully aware of site conditions as well as access conditions such as soil/subsurface/ground water levels conditions prior to submitting a tender.
2. The *Contractor* is required to work in close proximity of the community and traffic
3. Access control to be monitored by the contractor to avoid the public and animals from entering the premises during and after working hours.

For example: If an existing barrier fence is removed, it must be replaced the same day

4. The Contractor is deemed to execute Safety Procedures to ensure the safety of his staff, Sub-contractors and community during the Contract Period.
5. The safety of the Contractors employees, Subcontractors and community takes preference over the scope of the works.
6. Caution to be implemented when works commences. Damage to farmers/adjacent owner's property will be to the contractors account.
7. The Contractor should take all reasonable steps to become fully aware of existing services.
8. No fires are allowed on site (to fully comply as per EMP).
9. The *Contractor* to refer to the Locality Plan to provide an overview of the work, actual portions of the network and equipment which requires erecting/dismantling will be indicated on site to the *Contractor* by the Eskom Representative or his delegate.

Normal working hours 7:30 to 16:00 will always have access but working on weekends and after normal working hours can only be done upon request

Existing buildings, structures, and plant & machinery on the Site

Muldersvlei is an existing substation. A station key plan drawing is provided to assist with the identification of the general substation layout. In addition to this, the Engineering Assistant will assist with the identification of all cables (as a separate requirement, the contractor must perform cable detection), water pipelines and other concealed services at the commencement of each task and once this is done, the services will be deemed as known. The contractor will be liable for any damages thereafter.

Subsoil information
Not Applicable

Hidden services
There are hidden services that the contractor may find physically on site. The contractor must ask about the existence of such services from Meagan James (JagersM@ntcsa.co.za) (High Voltage Plant Supervisor, +27 76 035 1351) and should they strike the services it is the contractor`s fault, who should notify the relevant Engineering Assistant, Site Supervisor (this will be known at site inauguration) or Meagan James immediately for instance:

Other reports and publicly available information

Not Applicable