

NEC3 Engineering & Construction Contract

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

and
(Reg No. _____)

for **Provision for small works maintenance of substation equipment, civil, electrical, and mechanical work in NTCSA North East Grid Mpumalanga for a period of five (5) years**

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CONTRACT No.

Part C1: Agreements & Contract Data

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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: Provision for small works maintenance of substation equipment, civil, electrical, and mechanical work in NTCSA North East Grid Mpumalanga for a period of five (5) years

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	[•]	[•]
3	[•]	[•]
4	[•]	[•]
5	[•]	[•]
6	[•]	[•]
7	[•]	[•]

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 <i>conditions of contract</i> 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
		X5: Sectional Completion
		X7: Delay damages
		X16: Retention
		X17: Low performance damages
		X18: Limitation of liability
		Z: Additional conditions of contract
	of the NEC3 Engineering and Construction Contract, April 2013 (ECC3)	
10.1	The <i>Employer</i> is (Name):	National Transmission Company South Africa 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 <i>Project Manager</i> is: (Name)	Marks Mathelele
	Address	Cnr Watermeyer and Jelico street, Eskom Park Witbank
	Tel	+27 13 693 4615
	e-mail	mathelp@ntcsa.co.za
10.1	The <i>Supervisor</i> is: (Name)	Thulasizwe Sikhondze
	Address	Cnr Watermeyer and Jelico street, Eskom Park Witbank

Tel No. **+27 13 693 2972**

e-mail **sikhont@ntcsa.co.za**

11.2(13)	The <i>works</i> are	Electrical work (replacement of cables and equipment in HV yards) Civil work (modification of transformer plinth and equipment foundations).
11.2(14)	The following matters will be included in the Risk Register	<p>Possibility of falling from height, as a results of not wearing a Fall Arrest System (FAS).</p> <ul style="list-style-type: none"> • High weather conditions • Poisonous reptiles • Theft and other criminal activities • Possibility of electrical shock (live yard) because of live cables, fires, mechanical related injuries such as tripping. Entanglements, accidents, etc. • Roads around substation (slippery during rainy season) • Community riots • Biological risks such as general infections, contaminated water, air and waste. • Risk of asbestosis due to incorrect handling and disposal of asbestos. <p>The above will be included</p>
11.2(15)	The <i>boundaries of the site</i> are	National Transmission Company of South Africa North East Grid Substations
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 <i>law of the contract</i> is the law of	the Republic of South Africa
13.1	The <i>language of this contract</i> is	English
13.3	The <i>period for reply</i> is	Two weeks, except for health and safety matters which require immediate intervention
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 <i>completion date</i> for the whole of the <i>works</i> is	Three years
11.2(9)	The <i>key dates</i> and the <i>conditions</i> to be met are:	<i>Not Applicable: As and When contract</i>
30.1	The <i>access dates</i> are:	As per purchase order

31.1	The <i>Contractor</i> is to submit a first programme for acceptance within	one weeks after Approved Purchase order
31.2	The <i>starting date</i> is	
32.2	The <i>Contractor</i> submits revised programmes at intervals no longer than	One weeks if project longer than a week
35.1	The <i>Employer</i> is not willing to take over the <i>works</i> before the Completion Date.	[No data needed if this statement is included]
4	Testing and Defects	
42.2	The <i>defects date</i> is	52 weeks after Completion of the whole of the <i>works</i>
43.2	The <i>defect correction period</i> is	2 weeks is the response time within which the <i>Contractor</i> will assess the defect and submit a defect correction plan inclusive of schedule for access purpose
	except that the <i>defect correction period</i> for	<ul style="list-style-type: none">• Emergency occupations/permit to work for critical defects impacting operations All defects that may require <i>Employer's</i> planned and forced outages
	and the <i>defect correction period</i> for	Any other defects shall be remedied within 1 week, unless evidence can be provided by the <i>Contractor</i> substantiating why a particular defect cannot be remedied within a week, upon which the parties will endeavour to agree an alternative defects period for such defects.
5	Payment	
50.1	The <i>assessment interval</i> is	between the 25th day of each successive month.
51.1	The <i>currency of this contract</i> is the	South African Rand.
51.2	The period within which payments are made is	four weeks.
51.4	The <i>interest rate</i> is	<p>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</p> <p>(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</p>

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) Assumed values for the ten year return *weather data* for each *weather measurement* for each calendar month are:

One-in-ten-year-return *weather data* obtained from SA Weather Services

If any one of these *weather measurements* recorded within the *Contract Period* is more adverse than the amount stated below then the *Contractor* may claim compensation. The *Contractor* must prove that the *weather measurement* recorded was more adverse than the amount stated below.

Weather measurement		
Month	Cumulative rainfall (mm)	Number of days with rain more than 10mm
January	202	7
February	158	7
March	122	5
April	115	4
May	43	3
June	29	2
July	36	2
August	36	2
September	64	3
October	148	6
November	167	8
December	177	7

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

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	N/A
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 <i>method of measurement</i> is	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.
11	Data for Option W1	
W1.1	The <i>Adjudicator</i> is	the person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the Party intending to refer a dispute to him. (see www.ice-sa.org.za). If the Parties do not agree on an Adjudicator the Adjudicator will be appointed by the Arbitration Foundation of Southern Africa (AFSA).
	Address	[•]
	Tel No.	[•]
	Fax No.	[•]
	e-mail	[•]
W1.2(3)	The <i>Adjudicator nominating body</i> 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 <i>tribunal</i> is:	arbitration.
W1.4(5)	The <i>arbitration procedure</i> 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	[•] 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 <i>base date</i> for indices is		[•].	
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		
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 <i>works</i> are		R700 per day for works not executed with specified time and or start time	
X16	Retention (not used with Option F)			
X16.1	The <i>retention free amount</i> is		R0.	
	The <i>retention percentage</i> is		5%	
X17	Low performance damages			
X17.1	The amounts for low performance damages are:	percentage	Performance level	
		5% per work instruction	Work not executed as per scope of work and instruction	
X18	Limitation of liability			

X18.1	The <i>Contractor's</i> liability to the <i>Employer</i> for indirect or consequential loss is limited to:	R0.0 (zero Rand)
X18.2	For any one event, the <i>Contractor's</i> liability to the <i>Employer</i> for loss of or damage to the <i>Employer's</i> property is limited to:	the amount of the deductibles relevant to the event
X18.3	The <i>Contractor's</i> liability for Defects due to his design which are not listed on the Defects Certificate is limited to	The greater of <ul style="list-style-type: none"> • the total of the Prices at the Contract Date and • the amounts excluded and unrecoverable from the <i>Employer's</i> 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 <i>Contractor's</i> total liability to the <i>Employer</i> for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	<p>the total of the Prices other than for the additional excluded matters.</p> <p>The <i>Contractor's</i> total liability for the additional excluded matters is not limited.</p> <p>The additional excluded matters are amounts for which the <i>Contractor</i> is liable under this contract for</p> <ul style="list-style-type: none"> • 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 <i>works</i>, Plant and Materials), • death of or injury to a person and • infringement of an intellectual property right.
X18.5	The <i>end of liability date</i> is	<p>(i) 2 years after the <i>defects date</i> for latent Defects and</p> <p>(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.</p> <p>A latent Defect is a Defect which would not have been discovered on reasonable inspection by the <i>Employer</i> or the <i>Supervisor</i> before the <i>defects date</i>, without requiring any inspection not ordinarily carried out by the <i>Employer</i> or the <i>Supervisor</i> during that period. If the <i>Employer</i> or the <i>Supervisor</i> do undertake any inspection over and above the reasonable inspection, this does not place a greater responsibility on the <i>Employer</i> or the <i>Supervisor</i> to have discovered the Defect.</p>

**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** means any unlawfully or illegally intentional act or omission that misleads, or attempts to

- Action** 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 minimum limit of indemnity
Loss of or damage to the <i>works</i> , Plant and Materials	The replacement cost where not covered by the <i>Employer's</i> insurance The <i>Employer's</i> policy deductible, as Contract Date, where covered by the <i>Employer's</i> insurance
Loss of or damage to Equipment	The replacement cost
Liability for loss of or damage to property (except the <i>works</i> , Plant and	<u>Loss of or damage to property</u> <u>Employer's property</u>

Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the <i>Contractor</i>) caused by activity in connection with this contract	<p>The replacement cost where not covered by the <i>Employer's</i> insurance</p> <p>The <i>Employer's</i> policy deductible, as at Contract Date, where covered by the <i>Employer's</i> insurance</p> <p><u>Other property</u> The replacement cost</p> <p><u>Bodily injury to or death of a person</u> The amount required by applicable law</p>
Liability for death of or bodily injury to employees of the <i>Contractor</i> arising out of and in the course of their employment in connection with this contract	The amount required by the applicable 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 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 <i>Employer's</i> 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.

	<i>Weather measurement</i>				
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*

[Instructions to the contract compiler: (delete this notes before issue to tenderers with an enquiry)

Whenever a cell is shaded in the left hand column it denotes this data is optional. If not required select and delete the whole row, otherwise insert the required Data.]

Notes to a tendering contractor:

1. Please read both the NEC3 Engineering and Construction Contract (April 2013) and the relevant parts of its Guidance Notes (ECC3-GN)¹ in order to understand the implications of this Data which the tenderer is required to complete. An example of the completed Data is provided on pages 156 to 158 of the ECC3 (April 2013) Guidance Notes.
2. The number of the clause which requires the data is shown in the left hand column for each statement however other clauses may also use the same data
3. Where a form field like this [] appears, data is required to be inserted relevant to the option selected. Click on the form field **once** and type in the data. Otherwise complete by hand and in ink.

Completion of the data in full, according to Options chosen, is essential to create a complete contract.

Clause	Statement	Data
10.1	The <i>Contractor</i> is (Name): Address Tel No. Fax No.	
11.2(8)	The <i>direct fee percentage</i> is The <i>subcontracted fee percentage</i> is	% %
11.2(18)	The <i>working areas</i> are the Site and	
24.1	The <i>Contractor's</i> key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	

¹ Available from Engineering Contract Strategies Tel 011 803 3008, Fax 011 803 3009 or see www.ecs.co.za

		CV's (and further key persons data including CVs) are appended to Tender Schedule entitled _____.	
11.2(3)	The <i>completion date</i> 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 <i>Contractor's</i> design is in:		
31.1	The programme identified in the Contract Data is		
A	Priced contract with activity schedule		
11.2(20)	The <i>activity schedule</i> is in		
11.2(30)	The tendered total of the Prices is	(in figures) (in words), excluding VAT	
B	Priced contract with bill of quantities		
11.2(21)	The <i>bill of quantities</i> is in		
11.2(31)	The tendered total of the Prices is	(in figures) (in words), excluding VAT	
C	Target contract with activity schedule		
11.2(20)	The <i>activity schedule</i> is in		
11.2(30)	The tendered total of the Prices is	(in figures) (in words), excluding VAT	
D	Target contract with bill of quantities		
11.2(21)	The <i>bill of quantities</i> is in		
11.2(31)	The tendered total of the Prices is	(in figures) (in words), excluding VAT	
F	Management contract		
20.2	Work which the <i>Contractor's</i> will do himself is	Activity	price (lump sum or rate)
	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).	

A	Priced contract with activity schedule	Data for the Shorter Schedule of Cost Components		
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:			
	If Option C, D or E is used	Data for Schedule of Cost Components		
23 in SCC	The listed items of Equipment purchased for work on this contract, with an on cost charge, are:	Equipment	Time related charge	Per (time period)
24 in SCC	The rates of special Equipment are:	Equipment	Size or capacity	Rate

44 in SCC	The percentage for Working Areas overheads is:	: %	
51 in SCC	<p>The hourly rates for Defined Cost of manufacture or fabrication outside the Working Areas are</p> <p>Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates</p> <p>Please insert another schedule if foreign resources may also be used</p>	Category of employee	Hourly rate
52 in SCC	The percentage for manufacture and fabrication overheads is		
	If Option C, D, or E is used	Data for both schedules of cost components	
61 in SCC & SSCC	<p>The hourly rates for Defined Cost of design outside the Working Areas are</p> <p>Note: Hourly rates are estimated 'cost to company of the employee' and not selling rates.</p> <p>Please insert another schedule if foreign resources may also be used</p>	Category of employee	Hourly rate
62 in SCC & SSCC	The percentage for design overheads is		
63 in SCC & SSCC	The categories of design employees whose travelling expenses to and from the Working Areas are included as a cost of design of the <i>works</i> and Equipment done outside the Working Areas are:		
	If Option C, D or E is used	Data for the Shorter Schedule of Cost Components	
41 in SSCC	The percentage for people overheads is:	%	
21 in SSCC	<p>The published list of Equipment is the last edition of the list published by</p> <p>The percentage for adjustment for Equipment in the published list is</p>	%	

22 in SSCC	The rates of other Equipment are:	Equipment	Size or capacity	Rate

PART 2: PRICING DATA

ECC3 Option B

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option B	
C2.2	The <i>bill of quantities</i>	

C2.1 Pricing assumptions: Option B

1. 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 <i>bill of quantities</i> 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 <ul style="list-style-type: none"> the quantity of the work which the <i>Contractor</i> 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 <i>Contractor</i> has completed. <p>Completed work is work without Defects which would either delay or be covered by immediately following work.</p>
		(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.

2. 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.

3. 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.

4. Measurement and payment

4.1. 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)

4.2. General assumptions

- 4.2.1. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 4.2.2. 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.
- 4.2.3. An item against which no Price is entered will be treated as covered by other Prices or rates in the *bill of quantities*.
- 4.2.4. 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.
- 4.2.5. 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.

4.3. Departures from the *method of measurement*

4.3.1.

4.4. 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.

4.4.1.

C2.2 the *bill of quantities*

The *bill of quantities* is attached.

Document reference	Title	No of pages
	This cover page	1
C3.1	<i>Employer's Works Information</i>	
C3.2	<i>Contractor's Works Information</i>	
	Total number of pages	

C3.1: EMPLOYER'S WORKS INFORMATION

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1 Description of the works

1.1 Executive overview

The work covers General Small Work Services at Transmission North East Grid Substations situated throughout Mpumalanga Province. The Employer plans to maintain, repair, dismantle and erect plant and structures, maintain and repair all fences for security systems installations and substation infra-structure during the contract period. (Under normal and emergency conditions)

1.2 Employer's objectives and purpose of the works

The installed equipment in HV yards has reached end of life and that poses risk to system. Condition monitoring and replacement of high-risk equipment is needed to ensure sustained system minutes performance. The following scope of work is proposed:

Electrical work (replacement of cables and equipment in HV yards)

Civil work (modification of transformer plinth and equipment foundations).

1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	Meaning given to the abbreviation
CT	Current transformer
VT	Voltage Transformer
AC	Alternating Current
JB	Junction box
HV	High Voltage
SOW	Scope of Work
SMS	Short Message Services
SHE	Safety Health and Environment
FAS	Fall Arrest System
NTCSA	National Transmission Company South Africa
PM	Project Manager
RP	Responsible Person
ORHVS	Operating Regulations for High Voltage Systems
EMP	Environmental Management Plan

2 Management and start up.

2.1 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:
Adhoc / Monthly / Quarterly	When the order has been issued for specific scope	Substations premises	<i>Employer, Contractor, Agents and Others as required</i>
Risk register and compensation events	TBC	TBC	<i>Employer, Project Manager, Supervisor, and Contractor</i>
Overall contract progress and feedback	TBC	TBC	<i>Employer, Project Manager, Supervisor, and Contractor</i>
Quarterly meeting	Quarterly	TBC	<i>Employer, Project Manager, Supervisor, and Contractor</i>

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. 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. Confirmation of contract communications during operational meetings will, however, be considered as formal acknowledgement of receipt of a contract communication.

2.2 Documentation control

All contractual Documentation must have relevant contract number and Purchase Order Number as reference as per Eskom Holdings SOC Limited Standards. Contractual communications will be in the form of properly compiled letters on official Company letter heads, letters attached to emails, emails, NEC3 template and urgent contractor meetings can be in the form of SMS. The use of SMS's, emails does not override the use of applicable and relevant NEC3 standard templates, forms, and Eskom Holdings SOC Limited procedures.

The use of standard ECC3 forms, letters, templates must be used when issuing official communication

2.3 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements contained in **(Safety, Health & Environment (SHE))** to this Works Information and all the other documents the specification refers to. All

SHE & Security and Authorisations to work in the HV yard will be subject to the relevant Transmission Grid overall Requirements.

Termination due to Non Compliance.

Eskom reserves the right to terminate the contract in the event that the contractor is found to be consistently non-compliant to any SHEQ related issue.

The *Contractor* shall comply with the health and safety requirements contained in this Works Information.

- The *Contractor* complies with the SHE specification for the NTCSA North East Grid.
- The *Contractor* implements a Safety Management Plan (SMP) that complies with the Health and Safety specifications and further uses the OHS Act as a guideline, subject to the *Project Manager's* acceptance.

The *Contractor* as an Employer in his own right has duty of care and obligation to ensure that he provides a safe working environment in line to his employees.

No work on site will be allowed to commence before all the access permits and the relevant health and safety files are in place – according to the Eskom standard SHE Requirements 32-726 and 32-727: (Occupational Health and Safety Requirements to be met by National Transmission Company South Africa Employees, Contractors and Sub-Contractors during maintenance and construction work.)

The *Contractor* is to compile the complete Safety File according to Annexure 1 – Audit form in the Eskom Standard SHE Requirements 32-726 and 32-727 Document and submit to NTCSA Services Risk and Safety Department. PLEASE NOTE that only once approval for the Safety File has been granted by NTCSA Services Risk and Safety Department will arrangements for an Inaugural Meeting will be made to start Construction work on Site.

The *Contractor* must have an Eskom Certified and Authorized ORHVS person (Valid as requested by ESKOM) available on site at all times in accordance with National Transmission Company South Africa Standard TST0015 - Training, Assessment and Authorisation of persons for the operation and maintenance of the power system. The authorization procedure for a permit to work shall be done before the *Contractor* commences work on site. The *Contractor's* Responsible person has to be Interviewed and Authorised by the Central Grid personnel before any work can commence on Site.

The *Contractor* is responsible for setting out the works as shown on the drawings. Before any excavation is commenced, it will be the responsibility of the *Contractor* to ascertain from the "Engineering Assistant" 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.

The *Contractor* shall make his own arrangements for the provision of accommodation for his employees. No accommodation or camping will be allowed on site.

The *Contractor* shall control his activities and processes in accordance with the Occupational Health & Safety Act No. 85 of 1993, and Eskom's Safety Standard TST41-61: Occupational Health and Safety Requirements to be met by National Transmission Company South Africa Employees, *Contractors* and Sub-Contractors during maintenance and construction work. Safety meetings are to be held regularly and copies of the minutes must be maintained and submitted to National Transmission Company South Africa at the monthly progress meetings when requested.

2.4 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints contained in **(Safety, Health & Environment (SHE))** and all the other documents the specification refers to.

The *Contractor* shall comply with the environmental criteria and constraints stated in this Works Information.

- General:
 - The *Contractor* complies with the SHE Specification for NTCSA North East Grid.
 - In case of uncertainty or discrepancies between various standards and specifications, the *Contractor* shall consult with the *Project Manager* for clarity.

The *Contractor* shall control his activities and processes in accordance with National Transmission Company South Africa Environmental Policies, TST41-120 Rev2 and National Transmission Company South Africa SHE Requirements 32-726 The EMP will provide the Aspects and Impacts that will require management and must be followed strictly. The *Contractor* shall prepare a separate mitigation plan for all environmental concerns raised through the EMP and in any other relevant forum.

The *Contractor* shall establish a refuse control system. All waste is to be collected and disposed of as required by Eskom's Environmental Policies and the Local Authority. All Hazardous waste to be stored separately and all waste must be disposed of at registered waste sites and certificates confirming type and amount to be submitted to National Transmission Company South Africa Separate bins must be provided on site for general and hazardous waste and must be clearly marked.

Environmental meetings between National Transmission Company of South Africa and the *Contractor* may be held regularly and copies of the minutes may be submitted to National Transmission Company South Africa on request. The *Contractor* is to provide monthly environmental reports and to send a flash report for any environmental incidences on site as soon as possible or within 24 hours to the Site *Supervisor* and *Project Manager* of any impact to the environment. Supply And Application of RTV Silicone Rubber Re Coating (Including Shed Extenders When Required) on Porcelain Surfaced Equipment at Central Grid Olympus Substation

2.5 Quality assurance requirements

The *Contractor* shall comply with the Quality criteria and constraints stated in the *Employer's* specification QM58, ISO 9001 and Works Information.

- The *Contractor* complies with the *Employer's* specification QM58.
- The *Contractor's* Quality Management System conforms to International Standard ISO 9001.
- The *Contractor* submits his Quality Management System documents to the *Project Manager* for acceptance as part of the programme to include details of the:
 - Quality Plan for the *Works*;
 - Quality policy;
 - Index of procedures to be used;
 - Document register; and,
 - Schedule of internal and external audits for the *Works*.
- The *Contractor* submits in detail his proposed test and inspection plan to the *Supervisor* for acceptance before manufacturing and installation start. The *Contractor's* test and inspection plan includes detailed trenching records, witness points and hold points for critical activities.
- Tolerances are covered in the specifications.
- The *Contractor* develops and maintains a comprehensive register of documents that are generated on the contract including all quality related documents. The *Project Manager* indicates those documents to be submitted for information, review or acceptance and the *Contractor* indicates such requirements within his register of documents. The register indicates the dates of issue of the documents with the *Project Manager* responding to documents submitted by the *Contractor* for review or acceptance within the period for reply (except where stated otherwise) prior to such documents being used by the *Contractor*.
- The Quality Plan means the *Contractor's* statement, which outlines strategy, methodology, resources allocation, quality assurance and quality control co-ordination activities to ensure that the *Works* meet the standards stated in the Works Information. It includes a description of the *Contractor's* test and inspection activities, and check/test sheets. The *Employer's* specification QM58 contains the minimum requirements for the Quality Plan.

2.6 Programming constraints

The *Contractor* must allow for 5 days of rain above the average rain fall (and the effects of rain) on the critical path of erection activities. Lastly, allow a further 5 days for rain above the average rain fall (and the effects of rain) on the critical path of all other construction activities.

The programme is to be submitted for acceptance in accordance with Core Clause 31 in the Engineering and Construction Contract, in terms of which resources to complete each activity must be clearly identified. The programme is to be submitted within two weeks of the *starting date*. It is suggested that Gantt or bar chart formats be used for project planning, while progress graphs/schedules be submitted at bi-weekly project meetings to monitor progress.

The programme is to include all the requirements of clause 31.2 of the Engineering and Construction Contract.

The following dates shall be clearly reflected on the programme:

Site inaugural date, starting and completion date for all activities as well as relevant key dates for hold or witness points. All relevant significant activities shall be shown in order to monitor the progress on site. The programme shall also reflect a 2 week period for inspection and correcting of Defects before the completion date.

Updated programmes must be available at all progress meetings reflecting progress to date.

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 certificate, which must be produced two- weeks before site establishment.

The *Contractor* is to have a North East Grid certified and authorised ORHVS person available in each area where work is being performed at all times in accordance with National Transmission Company South Africa standard TST41-61 Contractor safety in a High Voltage environment

Site Progress

The *Contractor* monitors progress weekly in conjunction with the *Supervisor*. A **weekly** progress report is to be submitted to the *Project Manager* every Friday.

The *Contractor* submits his record of Work Done to Date (verified by the *Supervisor*) to the *Project Manager* on the 20th of each month. (The application is to have the same format as the relevant Bill of Quantities or Activity Schedule, and show present, previous and total quantities to date).

2.7 Contractor's management, supervision and key people

The Contractor is to have an organogram on file clearly indicating all site-specific key personnel, such as RP, Health and safety & Environmental reps, Site Foreman etc.

The *Contractor* shall submit an organizational structure showing his human resources and their lines of authority/communication.

The *Contractor* shall provide experienced and competent personnel in the following key positions:

- **Contracts Manager/s**
Competency level: National Diploma Electrical/Civil Engineering/Construction Management/Surveying/Quantity Surveying.

- **Site Manager/s**
Competency level: National Diploma Electrical Engineering/Construction Management/Surveying/Quantity Surveying or a minimum of 10 years relevant civil construction experience for the approval of the Project Manager.
- **Supervisors**
Competency level: As specified
- **Required SHE personnel**
Competency level: As specified

2.8 Invoicing and payment

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

The *Supplier* shall address the tax invoice to *Purchaser* 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 goods provided for each item invoiced based on the Price List;
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT;

Details on how to submit invoices and additional information:

- Ensure that the NTCSA **Order Number and GR Number** is clearly indicated on your invoice together with the line number on the order you are billing for.
- All Electronic invoices must be sent in PDF format only.
- Each PDF file should contain one invoice; or one debit note; or one credit note only as NTCSA's SAP system does not support more than one PDF being linked into workflow at a time.
- Your E-mail may contain more than one PDF file (e.g. 2 invoices on 2 separate PDF files in one e-mail)
- Send all invoices in PDF to Accounts Payable Department: Invoiceslocal@ntcsa.co.za and copy the Project Manager

Follow-up with Finance Shared Services (FSS):

All queries and follow-up on invoice payments should be made by contacting the FSS Contact Centre at **+27 11 800 5060 or email fss@eskom.co.za**

Procedure for invoice payment:

Work done is assessed by the *Contractor* and *Employer* Quantity Surveyor (QS), after which the *Employer's* QS and the *Contractor*, agree on the assessment and the amount to be invoiced. The *Employer* QS will then generate a payment certificate signed by both the *Employer's* QS and *Employer's* PM. The *Contractor* submits an invoice to the PM. A service entry/GR would be then generated for the jointly signed payment certificate by the *Employer* on SAP system. There is no need for the *Contractor* to append a GR on their invoice like in the past, the *Contractor* is only required to submit a correct soft copy of their invoice to invoicesntcsalocal@ntcsa.co.za and it will be processed and paid.

2.9 Insurance provided by the *Employer*

First read ECC3 Core Clause 87.1 and then add anything necessary for the management of insurance related issues such as a cross reference to where procedures for making claims can be found. Also provide contact details for persons capable of being able to answer any insurance related queries the *Contractor* may have, as well as to whom the information required by Marine Insurance may be addressed.

2.10 Contract change management

For any changes to the contract the NEC processes should be followed according to core clause 6,

2.11 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.

2.12 Records of Defined Cost, payments & assessments of compensation events to be kept by the *Contractor*

Not Applicable

The *Contractor* is to keep proof such as invoices of all costs incurred for a compensation event and submit them to the *Project Manager* if requested.

2.13 Training workshops and technology transfer

Not Applicable

3 Engineering and the *Contractor's* design

The content of this section will depend on whether the contract is for construction only with most of the design done by (or for) the *Employer* or whether it is a 'design and construct' contract. ECC provides for design by either Party in any proportion, which proportion done by the *Contractor* must be stated in this part of the Works Information.

3.1 *Employer's* design

Where the order requires change in design, the project manager will provide a signed design from Engineering department in Eskom.

3.2 Parts of the *works* which the *Contractor* is to design

Not Applicable

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

Not Applicable

3.4 Other requirements of the *Contractor's* design

Not Applicable

3.5 Use of *Contractor's* design

Not Applicable

3.6 Design of Equipment

Not Applicable

3.7 Equipment required to be included in the *works*

N/A

3.8 As-built drawings, operating manuals and maintenance schedules

The *Project Manager* will inform the *Contractor* should the need arise in requiring to obtaining operating manuals and maintenance schedules before Completion of the whole of the *works*.

4 Procurement

There is a cross reference from the definition of Disallowed Cost in Options C D and E to the Works Information regarding procurement procedures. This part of the Works Information MUST include any such procedures to be able to administer this procedure. Options A & B may also require constraints on procurement procedures.

4.1 People

4.1.1 Minimum requirements of people employed on the Site

People employed on site shall have all relevant documents as required by law for employment within the country, i.e. relevant work permits and identifications.

All staff must be vetted through the Grid Security Manager's office according to the Substation standard operating procedure.

All workers will be subject to Ad Hoc breathalyser tests at all times when on duty

All workers must wear seat belts at all times when travelling while on National Transmission Company South Africa (NTCSA) business.

4.1.2 BBEE and preferencing scheme

Specify constraints which *Contractor* must comply with after contract award in regard to any Broad Based Black Economic Empowerment (B-BBEE) or preferencing scheme measures.

Clause Z3 under the Additional conditions of contract in Part one – Contract Data of the Contract document provided by the Employer refers.

4.1.3 Accelerated Shared Growth Initiative – South Africa (ASGI-SA)

If the ASGI-SA requirements are to be included in this contract specify constraints which *Contractor* must comply with after contract award in regard to any ASGI-SA requirements. The ASGI-SA Compliance Schedule completed in the returnable tender schedules is reproduced here. If ASGI-SA does not apply, delete this paragraph.

The *Contractor* complies with and fulfils the *Contractor's* obligations in respect of the Accelerated and Shared Growth Initiative - South Africa in accordance with and as provided for in the *Contractor's* ASGI-SA Compliance Schedule stated below

[Insert the agreed ASGI-SA Compliance Schedule here]

The *Contractor* shall keep accurate records and provide the *Project Manager* with reports on the *Contractor's* actual delivery against the above stated ASGI-SA criteria. [Elaborate on access to and format of records and frequency of submission etc.]

The *Contractor's* failure to comply with his ASGI-SA obligations constitutes substantial failure on the part of the *Contractor* to comply with his obligations under this contract.

4.2 Subcontracting

4.2.1 Preferred subcontractors

The *Contractor* to appoint own subcontractors and ensure they comply with all National Transmission Company of South Africa SHEQ requirements.

4.2.2 Subcontract documentation, and assessment of subcontract tenders

The use of the **NEC suite of Contracts** is recommended for subcontracting in order to enable a similar sub-contractor management.

4.2.3 Limitations on subcontracting

The *Sub-Contractors* will also be required to conform to the *Employer's* SHEQ requirements.

4.2.4 Attendance on subcontractors

The *Sub-Contractors* will also be required to conform to the *Employer's* SHEQ requirements

4.3 Plant and Materials

4.3.1 Quality

Refer to quality documents (TST41-168 Quality Assurance for Procurement of Assets, Goods and Services)
The *Contractor* shall remain responsible for the quality of all the plant used and materials supplied. If the *Contractor's* supplier is used for the manufacturing and erection of any steel work the *Contractor* must ensure that the quality is in line with National Transmission Company of South Africa requirements. Any non-conformance must be rectified

4.3.2 Plant & Materials provided “free issue” by the *Employer*

All HV electrical equipment excluding consumables;
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4.3.3 *Contractor's* procurement of Plant and Materials

The *Contractor* shall comply to document “TST41-168 Quality Assurance for Procurement of Assets, Goods and Services” in works information during fabrication, supply and delivery of earthing copper and earthing devices.

4.3.4 Spares and consumables

Upon request by the *Project Manager*, the *Contractor* supplies a list of minimum recommended spares holding for the system he installs and indicate the life expectancy of each item, guarantees and warranties provided by them on the installed equipment and system.

4.4 Tests and inspections before delivery

All testing and inspection will be conducted by Eskom

4.5 Marking Plant and Materials outside the Working Areas

The *Contractor* shall mark all Equipment, Plant and Material which is destined for the works

Clause 71.1 Marking Equipment, Plant and Materials outside the Working Areas of the conditions of contract refers

For payment purposes, the *Contractor* marks each affected item of Plant and Materials outside the Working Areas with at least a unique serial number, the date, the contract number and identifying the *Employer* as the title holder. All items are marked permanently, and the method of marking conforms to the specifications.

The *Contractor* securely stores marked Plant and Materials in areas sealed off from the rest of their production run, e.g. using locked cages with controlled access. The *Contractor* maintains an auditable record of the whereabouts of marked Plant and Materials.

The *Contractor* provides accurate delivery notes showing serial numbers and other details and confirming the *Employer* as the title holder. The *Supervisor* signs those delivery notes to confirm acceptance of the affected Plant and Materials and the *Contractor* then submits the delivery notes to the *Project Manager*.

4.6 *Contractor's* Equipment (including temporary works).

Not applicable

4.7 Cataloguing requirements by the *Contractor*

Not Applicable

5 Construction

The *Contractor* shall comply with all the requirements of SHE specification, Environmental Management Plan (EMP) and all relevant statutory requirements.

5.1 Temporary works, Site services & construction constraints

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

Where work is required in an existing HV Yard the *Contractor* will have to adhere to Eskom's High Voltage regulations. Thus, the *Contractor* personnel will be expected to have completed the necessary High Voltage Regulations (ORHVS) modules in order to be issued with a permit to work in these yards. All SHE & Security and Authorisations to work in the HV yard will be subject to the relevant Transmission Grid overall Requirements.

The *Contractor* shall comply with all the requirements of SHE specification, Environmental Management Plan (EMP) and all relevant statutory requirements.

The security vetting of workers, safety and environmental training of workers and Induction courses will be done at the Substation and additional time should be provided to meet these requirements

NEG Sites

	CLN	Site Name	Address	Purpose
1	Witbank	Kendal	26° 5' 42" , 28° 58' 21"	Substation
2	Witbank	Kriel	26.25308, 29.17711	Substation
3	Witbank	Kruispunt		Substation
4	Witbank	Kusile	25.92113, 28.92057	Substation
5	Witbank	Matla	26.28097, 29.14165	Substation
6	Witbank	Vulcan	25.82959,29.1102	Substation
7	South	Alpha	-26.803752S 29.397264E	Substation
8	South	Camden	-26.618344S 30.090809E	Substation
9	South	Grootvlei	26.76944,28.49855	Substation
10	South	Majuba	-27.097594S 29.768529E	Substation
11	South	Normandie	-27.161169S 30.877614E	Substation
12	South	Sol	26.53911,29.11785	Substation
13	South	Tutuka	26° 46' 34" , 29° 21' 8"	Substation
14	South	Zeus	26° 41' 45" , 29° 5' 22"	Substation
15	South	Vunumoya		Substation
16	Lowveld	Gumeni	25° 45' 3",30° 13' 52	Substation
17	Lowveld	Khanyazwe	25.43369, 31.94479	Substation
18	Lowveld	Komatipoort	25.43369, 31.94479	Substation
19	Lowveld	Marathon	24.71117,81.0928	Substation
20	Lowveld	Prairie	25.71757, 30.22903	Substation
21	Lowveld	Simplon	25.23498, 30.05136	Substation
22	Lowveld	Barberton		Substation
23	Middleburg	Arnot	25.9433,29.78978	Substation
24	Middleburg	Duvha	25.96.28,29.34016	Substation
25	Middleburg	Hendrina	26.0334,29.60124	Substation
26	Middleburg	Komati	26.09002, 24.47251	Substation
27	Middleburg	Rockdale	25.8106, 29.50632	Substation

5.1.2 Restrictions to access on Site, roads, walkways and barricades

Although not anticipated, where the restrictions might be applicable the *Contractor* will be required to comply with these restrictions.

There will strictly be NO movement outside the barricaded area unless escorted by authorized HV Plant personnel.

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

Working hours are: 08h00 to 16h00 Monday to Friday excluding weekends and public holidays. Any extension of the working hours need to be requested in writing for acceptance and approval by the Project Manager..

Basic conditions of employment will be adhered to.

5.1.4 Health and safety facilities on Site

The *Contractor* shall comply with all the requirements of SHE specification and all relevant statutory requirements.

There are no Ablution facilities available on site. The *Contractor* is to provide his own ablution facilities (flushable) on site and ensure that these facilities are kept in a clean condition to National Transmission Company of South Africa satisfaction. No work on site will be allowed to commence before the toilet facilities are available on site. The *Contractor* shall comply with all the requirements of SHE specification and all relevant statutory requirements.

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

The *Contractor* shall comply with all the requirements of the EMP and all other statutory requirements

The *Contractor* shall comply with the environmental requirements as stipulated in TST 41-120 (Environmental Requirements for the Procurement of Assets, Goods and Services). The *Contractor* must also comply with the following environmental procedures:

- EPC32-727: Eskom SHEQ Policy
- ST32-726 - SHE Requirements for the National Transmission Company South Africa's Commercial Process for additional requirements or co-operate projects
- The *Contractor* must adhere to the attached Environmental Management Plan and draw up his method statements based on the attached Environmental Management Plan.

Waste generated during project must be disposed at a registered site and *Contractor* shall retain records of disposal.

The illegal transporting, handling, purchasing and selling, poaching and killing of fauna and flora will not be tolerated. Offenders will be prosecuted. All fauna kills as a result of the activities of the *Contractor* must be reported to the project leader /environmental advisor within 24 hours.

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.

The *Contractor* has no title to an object of value or of historical or other interest within the Site. The *Contractor* notifies the *Project Manager* when such an object is found, and the *Project Manager* instructs the *Contractor* how to deal with it. The *Contractor* does not move the object without instructions.

5.1.6 Title to materials from demolition and excavation

The *Contractor* shall make his own arrangements, to the approval of the *Supervisor* and the Local Authorities, for the disposal of all surplus material and construction waste resulting from the *works*. Disposal of all waste (Building, Hazardous and Domestic) must be in accordance with the CEMP.

All the materials from excavation and demolition must be disposed of by the *Contractor* except it's expressly stated by the PM or the relevant staff from Grid at the beginning of the contract.

Therefore, all copper and steel will be stored at a designated area by the EA. And all rubble and other materials must be classified, weighed and transported to the dumping site

5.1.7 Cooperating with and obtaining acceptance of Others

It will be the responsibility to work mutually with all other contractors and personnel sharing the working area at any one time during the construction Phase. The *Contractor* will be required to integrate with other contractors, as well as *the Employer's* personnel during construction. It is expected that cooperation will be given when this happens during construction. It is expected that cooperation will be given when this happens during the project construction.

5.1.8 Publicity and progress photographs

This **is not allowed** except with prior arrangement with the *Employer's Project Manager* and media department.

Cameras are completely prohibited from use at the Substation. Where there is need to take work progress photographs it will be the responsibility of the *Contractor* to seek the permission to use a camera on site

5.1.9 Contractor's Equipment

Records are to be kept of Equipment on Site including whether it is owned or hired. This includes any scaffolding, rigs, heavy lifts and cranes.

The *Contractor* shall inform the *Project Manager* prior to the removal of any equipment during the contract period from the Working Areas.

5.1.10 Equipment provided by the Employer

4 core 2.5mm² steel wire armoured cable

4 core 4mm² steel wire armoured cable

4 core 16mm² steel wire armoured cable

12/19 core 2.5 mm² steel wire armoured cable

37 core 2.5mm² steel wire armoured cable

7 core 2.5mm² steel wire armoured cable

4 core 70mm² steel wire armoured cable

4 core 90mm² steel wire armoured cable

4 core 120mm² steel wire armoured cable

10 pair comms armoured cable

25 pair comms armoured cable

50 pair comms armoured cable

Terminate cable

Supply and fit of cable glands No. 0,1,2,3,4

Bull conductor

Double Bull conductor

Triple Bull conductor

Centipede

Double Centipede conductor

insulated conductor (aux)

Clamping

Crimp join

CVT 765kV

CVT 400KV

CVT 275kV

CVT 220kV

CVT 132kV

CVT 66kV

CT/VT 765kV

CT/VT 400kV

CT/VT 275KV

CT/VT 220KV

VT &CT 132kV

CT/VT 66kV

CT/VT 33kV

CT/VT 22kV

Breaker 765 kV

Breaker 400kV

Breaker 275kV

Breaker 132kV

Breaker 44KV

Breaker 66KV

Breaker 22KV

Breaker 11KV

Breaker 765 kV Dead tank

Breaker 765 kV Live Tank

Breaker 33KV

Surge arrestor 765kV

Surge arrestor 400kV

Surge arrestor 275kV

Surge arrestor 132kV

Surge arrestor 66kV

Surge arrestor 33kV

Surge arrestor 22kV

Capacitor Cans

Auxiliary transformer

Reactors

Air core Reactors

Isolators 765kV

Isolators 400kV

Isolators 275kV

Isolators 132kV

Isolators 66kV

Isolators 33kV

Isolators 22kV

Line traps

Line traps 132kV

Line traps 220kV

Line traps 275kV

Line traps 400kV

Line traps 765kV

insulator string 132kV Composite

insulator string 220kV Composite

insulator string 275kV Composite

insulator string 400kV Composite

insulator string 765kV Composite

insulator string 132kV Glass

insulator string 220kV Glass

insulator string 275kV Glass

insulator string 400kV Glass

insulator string 765kV Glass

5.1.11 Site services and facilities

Power supply connection points will be made available on site. *Contractor* shall provide any necessary piping and cabling to connect to this facility. The *Contractor* must make their own provision for any water (drinking and construction) requirements on site.

A site for the *Contractor's* yard will be provided adjacent to the site of the works where possible. The *Contractor* shall not occupy any area on site other than what's allocated to him.

The *Contractor* shall supply all plant and materials to complete the works.

Water and electricity is normally available on site. The *Contractor* shall provide all connections, extensions and additional supply points necessary for the works. Adequate and/or continuous supply is not guaranteed and no claims for delay or standing time as a result of insufficiencies or failures will be considered. Any measures which the *Contractor* may require to maintain continuity and quality of supply shall be arranged by him at his own expense.

The *Contractor* will supply their own office equipment, including telephones and fax machines

5.1.12 Facilities provided by the *Contractor*

The *Contractor* is to provide the following items to facilitate the *Employer's* site *Supervisors* project administration within four weeks of contract award:

- a) As per instruction by the Project Manager for provision made in the Bill of Quantities.

The *Contractor* shall provide sanitary amenities, first aid and firefighting facilities as required by the Occupational Health and Safety Act.

The *Contractor* keeps records of the following and submits copies of these records to the *Supervisor* weekly:

- Number of personnel by category and/or trade on site on a daily basis.
- Detailed list of equipment by category on site on a daily basis with an indication of it's working condition i.e. working order, under repair, working but standing idle etc.
- Weather conditions as agreed with the *Supervisor* on a daily basis.

A risk register is to be kept by the *Contractor* in which all events are recorded. Records of events that could give rise to Compensation Events are to be kept up to date for inspection by the *Supervisor* and/or *Project Manager* at all times and this is to be kept in a risk register. This is not for inspection purposes but for management as per core clause 16.

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

The Work is to be carried out next to an existing HV yard and the *Contractor* is to take note of the surrounding foundations, equipment and buildings. Work will be undertaken in the existing live substation environment, and care needs to be taken by the *Contractor* for all these live condition at all times.

5.1.14 Survey control and setting out of the *works*

All known services will be pointed out to the *Contractor* after which extreme care will be required while working in that area. Any damage of known pipes, cables or other services must be reported to the Site *Supervisor* and the damaged service must be restored at the cost of the *Contractor* under the supervision of either the EA or SS.

The *Contractor* is responsible for setting out the works.

5.1.15 Excavations and associated water control

Excavations shall only be done using machinery after careful assessment of the existing underground services and with the consensus of the EA and SS.

All necessary precautions shall be taken to ensure that deep excavations are safe and that the sides are stable, if not they shall be battered. All excavations are to be properly barricaded at all times. Refer to the SHE specification, EMP and any other statutory requirements.

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

Should there be any underground services that may require relocating; this should be discussed with the Site Supervisor who will discuss it with the *Project Manager* and the designers. All known services will be pointed out to the *Contractor* after which extreme care will be required while working in that area. Any damage of known pipes, cables or other services must be reported to the Site Supervisor and the damaged service must be restored at the cost of the *Contractor* under the supervision of either the EA or SS

5.1.17 Control of noise, dust, water and waste

Refer to the SHE specification, EMP and any other statutory requirements

5.1.18 Sequences of construction or installation

This will be determined by the *Contractor* and the Site Supervisor and is task specific, and approved by the Project Manager.

5.1.19 Giving notice of work to be covered up

After construction the *Contractor* is to rehabilitate any damage caused to the environment to the satisfaction of the Supervisor. The remedial works are to be "signed-off" by both parties before acceptance.

5.1.20 Hook ups to existing works

The *Contractor* will work in the existing yards. Installing equipment as per the specifications

5.2 Completion, testing, commissioning and correction of Defects

5.2.1 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.

	Item of work	To be completed by
	Any outstanding work as listed in the Completion & Handing Over Certificates.	Within 2 weeks after Completion or as indicated in the Completion certificate.

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5.2.2 Use of the *works* before Completion has been certified

To be allowed for and provided by the *Contractor*. Clause 35.2 in ECC3 provides that the *Employer* may use any part of the works before Completion has been certified but if he does so he takes over the part of the works except if the use is for a reason stated in the Works Information. State the reason here if this applies.

5.2.3 Materials facilities and samples for tests and inspections

Take-over of The Works will be in accordance NEC procedures in conjunction with Eskom Transmission standard for substation inspection TST 41-638. The *Contractor* advises the *Supervisor* when the *Works* is available for final inspection, and provides assistance.

5.2.4 Commissioning

Not Applicable.

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

Not Applicable.

5.2.6 Take over procedures

. Take-over of The Works will be in accordance with NEC procedures in conjunction with National Transmission Company of South Africa standard for substation inspection TST 41-638. The Contractor advises the Supervisor when the Works is available for final inspection and provides assistance. The Take Over will be done after all the works have been completed. After all the outstanding work has been completed the PM will organize for a Take Over certificate to be signed with the Contractor

5.2.7 Access given by the *Employer* for correction of Defects

Clause 43.4 of the NEC will apply as well as normal ORHVS procedures for getting permits. The *Project Manager* will arrange for the HV Plant to allow the *Contractor* access to part of the works which has been taken over if needed to correct a Defect. After the works have been put into operation, the HV Plant may require the *Contractor* to undertake certain procedures before such access can be granted

5.2.8 Performance tests after Completion

Not Applicable

5.2.9 Training and technology transfer

This to be in compliance with the SD&L requirements and commitments

5.2.10 Operational maintenance after Completion

Not Applicable.

6 Plant and Materials standards and workmanship

6.1 Investigation, survey and Site clearance

Not Applicable.

6.2 Building works

Not Applicable.

6.3 Civil engineering and structural works

As per specification

6.4 Electrical & mechanical engineering works

As per specification

6.5 Process control and IT works

Not Applicable

6.6 Other [as required]

7 List of drawings

7.1 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.

Drawing number	Revision	Title

C3.2 *CONTRACTOR'S* WORKS INFORMATION

This section of the Works Information will always be contract specific depending on the nature of the *works*. It is most likely to be required for design and construct contracts where the tendering contractor will have proposed specifications and schedules for items of Plant and Materials and workmanship, which once accepted by the *Employer* prior to award of contract now become obligations of the *Contractor* per core clause 20.1.

Typical sub headings could be

- a) *Contractor's* design
- b) Plant and Materials specifications and schedules
- c) Other

This section could also be compiled as a separate file.

PART 4: SITE INFORMATION

Document reference	Title	No of pages
C4	This cover page Site Information	1
	Total number of pages	

PART 4: SITE INFORMATION

Core clause 11.2(16) states

“Site Information is information which

- describes the Site and its surroundings and
- is in the documents which the Contract Data states it is in.”

In Contract Data, reference has been made to this Part 4 of the contract for the location of Site Information.

1. General description

NTCSA North East Grid

All Site Regulations of NTCSA North East Grid Substations are to be adhered to.

Site Regulations are to be adhered to and the following are just minimum requirements:

- Security Access Control Measures Site Regulations are applicable for areas within the specified Working Areas. The *Contractor* must provide approved security access control measures and guarding of the work environment.
- The *Employer* allows access to Site, on request, after:
 - The *Contractor* requests access from the *Project Manager*;
 - The *Contractor* submits copies of the agreement between the *Contractor* as *Employer* and his employees as envisaged by Section 37(2) of Act 85 of 1993;
 - The *Project Manager* accepts the *Contractor's* SMP and Environmental Method Statement;
 - The *Contractor* has made all safety, health, environment and quality appointment required to proceed with Site activities;
 - The *Contractor* provides the safety case between the Parties and it is signed by the Parties; and,
 - The *Project Manager* issues a Site access certificate.
- The *Contractor* is given access to the various equipment sites and such entry permits and keys are considered necessary by the *Project Manager*.
- The *Contractor* complies with the following requirements of the *Employer*:
 - Reporting of faults and failures;
 - Occupation requirements;
 - Safety risk management; and,
 - Environmental constraints and management.

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

N/A

3. Subsoil information

N/A

4. Hidden services

Info will be provided at scope clarification meeting

5. Other reports and publicly available information

N/A