NEC3 Engineering & Construction Contract

Between ESKOM HOLDINGS SOC Ltd
(Reg No. 2002/015527/30)

and
(Reg No. _____)

for The design, supply and implementation of an AMI system (MDMS and HES), decentralized and centralized SMOC and integration with third party systems for the Distribution division for a period of 2 years.

Contents:

Tender Number: E2136DXLP

Part C1: Agreements & Contract Data

Contents:

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:

The design, supply and implementation of an AMI system (MDMS and HES), decentralized and centralized SMOC and integration with third party systems for the Distribution division for a period of 2 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 A	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) **R**	

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.*

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

Clause	Statement	Data
1	**General**	
	The *conditions of contract* are the core clauses and the clauses for main Option	
		A: Priced contract with activity schedule
	dispute resolution Option	**W1: Dispute resolution procedure**
	and secondary Options	
		X1: Price adjustment for inflation
		X2 Changes in the law
		X3: Multiple currencies
		X4: Parent company guarantee
		X5: Sectional Completion
		X7: Delay damages
		X13: Performance Bond
		X15: Limitation of *Contractor's* liability for design to reasonable skill and care
		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 *Employer* is (Name):	**Eskom Holdings SOC Ltd (reg no: 2002/015527/30), a state-owned company incorporated in terms of the company laws of the Republic of South Africa**
	Address	**Registered office at Megawatt Park, Maxwell Drive, Sandton, Johannesburg**
10.1	The *Project Manager* is: (Name)	**To be advised**
	Address	

	Tel	**To be advised**
	Fax	**To be advised**
	e-mail	**To be advised**
10.1	The *Supervisor* is: (Name)	**To be advised**
	Address	**To be advised**
	Tel No.	**To be advised**
	Fax No.	**To be advised**
	e-mail	**To be advised**
11.2(13)	The *works* are	**The design, supply and implementation of an AMI system (MDMS and HES), decentralized and centralized SMOC and integration with third party systems for the Distribution division for a period of 2 years.**
11.2(14)	The following matters will be included in the Risk Register	**1. Resistance from Consumers** **2. External Security Threats** **3. Theft and vandalism** **4. Technological Failures**
11.2(15)	The *boundaries of the site* are	**All projects to be executed in terms of this contract will be executed at various sites across the Distribution Division.**
11.2(16)	The Site Information is in	**Part 4: Site Information**
11.2(19)	The Works Information is in	**Part 3: Scope of Work and all documents and drawings to which it makes reference.**
12.2	The *law of the contract* is the law of	**the Republic of South Africa**
13.1	The *language of this contract* is	**English**
13.3	The *period for reply* is	**One [1] week**
2	**The *Contractor's* main responsibilities**	**Data required by this section of the core clauses is provided by the *Contractor* in Part 2 and terms in italics used in this section are identified elsewhere in this Contract Data.**
3	**Time**	
11.2(3)	The *completion date* for the whole of the *works* is	**2 Year period with an escape clause.**
11.2(9)	The *key date*s and the *condition*s to be met are:	***Condition* to be met** / ***key date***
		1 **Any key date and conditions will be specified in the Project Specific Agreement for any project executed in**

		terms of this contract	
30.1	The *access dates* are:	**Part of the Site**	**Date**
		1 Access dates will be specified in the Project Specific Agreement for any project executed in terms of this contract	
31.1	The *Contractor* is to submit a first programme for acceptance within	**One [1] week of the Contract Date.**	
31.2	The *starting date* is	**To be advised**	
32.2	The *Contractor* submits revised programmes at intervals no longer than	**[4] weeks.**	
35.1	The *Employer* is not willing to take over the *works* before the Completion Date.		
4	**Testing and Defects**		
42.2	The *defects date* is	**52 weeks after Completion of the whole of the *works*.**	
43.2	The *defect correction period* is	**Within one week upon notification of defect**	
5	**Payment**		
50.1	The *assessment interval* is	**between the 15th and 20th day of each successive month.**	
51.1	The *currency of this contract* is the	**South African Rand.**	
51.2	The period within which payments are made is	**For contracts valued below R50 000 000 (Fifty Million Rand) including VAT, Eskom is committed to paying Suppliers within 30 days of submission of a tax compliant invoice with a GR number to Eskom Financial Shared Services.** **For contracts valued above R50 000 000 (Fifty Million Rand) including VAT, Eskom is committed to paying suppliers within 60 days of submission of a tax compliant invoice with a GR number to Eskom Financial Shared Services.**	
51.4	The *interest rate* is	**the publicly quoted prime rate of interest (calculated on a 365-day year) charged from time to time by the Standard Bank of South Africa Limited (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands and**	
6	**Compensation events**		
60.1(13)	The place where weather is to be		

	recorded is:	**The established site**
	The *weather measurements* to be recorded for each calendar month are,	**the cumulative rainfall (mm)** **the number of days with rainfall more than 10 mm** **the number of days with minimum air temperature less than 0 degrees Celsius** **the number of days with snow lying at 09:00 hours South African Time** **and these measurements:**
	The *weather measurements* are supplied by	**The nearest weather station of the South African Weather Service to the site**
	The *weather data* are the records of past *weather measurements* for each calendar month which were recorded at:	**The nearest weather station of the South African Weather Service to the site**
	and which are available from:	**the South African Weather Bureau and included in Annexure A to this Contract Data provided by the *Employer***
7	**Title**	**As per the terms and conditions of the NEC3 Engineering and Construction Contract, April 2013 (ECC3.**
8	**Risks and insurance**	
80.1	These are additional *Employer*'s risks	**None**
9	**Termination**	**In an event that the appointed successful Manufacturer (s) /service providers/supplier (s) is unable to meet the scope of work/ Employer's Works Information; the Employer shall implement the following remedy:** **Procure from an alternative contractor/service providers/supplier (s) at the offered prices and claim the difference from the contractor /service providers/supplier (s). This shall be dealt with under the NEC3 (ECC) conditions in terms of Secondary Option X18.1.** **In the event that this will occur the Employer may terminate the contract with the contracted manufacturer in terms of clause 91.2; reason for termination (R11) Substantially failed to comply with his obligations.** **The applicable procedure for termination will be P1, P2 and P3.** **The amount due on termination will be as per A1 and A2 excluding A4.**

10	**Data for main Option clause**	
A	**Priced contract with activity schedule**	
11	**Data for Option W1**	
W1.1	The *Adjudicator* 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).**
W1.2(3)	The *Adjudicator nominating body* is:	**the Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering and the London Institution of Civil Engineers. (See www.ice-sa.org.za) or its successor body.**
W1.4(2)	The *tribunal* is:	**arbitration.**
W1.4(5)	The *arbitration procedure* is	**the latest edition of Rules for the Conduct of Arbitrations published by The Association of Arbitrators (Southern Africa) or its successor body.**
	The place where arbitration is to be held is	**[Sandton] South Africa**
	The person or organisation who will choose an arbitrator - if the Parties cannot agree a choice or - if the arbitration procedure does not state who selects an arbitrator, is	**the Chairman for the time being or his nominee of the Association of Arbitrators (Southern Africa) or its successor body.**
12	**Data for secondary Option clauses**	
X1	**Price adjustment for inflation**	
X1.1(a)	The *base date* for indices is	**One month prior to tender closing date.**
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**

	CPA will be negotiated with the supplier's prior contract award, to ensure alignment to Eskom CPA guideline.			
X2	**Changes in the law**	**Change in the law of the country in which the Site is located is a compensation event if it occurs after the Contract Date. The Project Manager may notify the Contractor of a compensation event for a change in the law and instruct him to submit quotations. If the effect of a compensation event which is a change in the law is to reduce the total Defined Cost, the Prices are reduced.**		
X3	**Multiple currencies**			
X3.1	The *Employer* will pay for these items or activities in the currencies stated	**Items & activities**	**Other currency**	**Maximum payment in other currency**
	To be provided by the Tenderer, if any.	**[●]**	**[●]**	**[●]**
		[●]	**[●]**	**[●]**
		[●]	**[●]**	**[●]**
		[●]	**[●]**	**[●]**
X3.1	The *exchange rates* are those published in	**[●] on [●] (date)**		
		The items & activities will be paid in the other currency **- to a foreign Bank account nominated by the *Contractor*** **- to a valid SARB approved CFC account in South Africa** **- in accordance with an alternative payment method agreed with the *Employer* before the Contract Date.**		
	Note:	**It should be noted that all commodities and foreign currencies exposure in this contract will be hedged in line with the Eskom Foreign exchange Policy and procedure via Eskom Treasury.**		
X4	**Parent company guarantee**	**This will only be applicable should the Financial Analysis report recommend that the parent company guarantee be obtained.** **If a parent company owns the Contractor, the Contractor gives to the Employer a guarantee by the parent company of the Contractor's performance in the form set out in the Works Information. If the guarantee was not given by the Contract Date, it is given to the Employer within four weeks of the Contract Date.**		
X5	**Sectional Completion**			

X5.1	The *completion date* for each *section* of the *works* is:	***Section***	**Description** **The completion date for each section of the work will be specified in the Project Specific Agreement for any project executed in terms of this contract.**	***Completion date***
X5 & X7	**Sectional Completion and delay damages used together**			
X7.1 X5.1	Delay damages for late Completion of the *section*s of the *works* are:	**The delay damage for each section of the work will be specified in the Project Specific Agreement for any project executed in terms of this contract and will be relevant to the specific project being executed.**		
X13	**Performance bond**			
X13.1	The amount of the performance bond is	**To be advised at contract award stage** **This will only be applicable should the Financial Analysis report recommend that the Performance bond be obtained.**		
X15	**Limitation of the *Contractor*'s liability for his design to reasonable skill & care**	**The Contractor is not liable for Defects in the works due to his design so far as he proves that he used reasonable skill and care to ensure that his design complied with the Works Information.** **If the Contractor corrects a Defect for which he is not liable under this contract it is a compensation event.**		
X16	**Retention (not used with Option F)**			
X16.1	The *retention free amount* is	**Items where no retention will be held includes material purchases by Contractors, transport costs, and preliminaries and generals.**		
	The *retention percentage* is	**5% (Only applicable for Labour Purchase Order)**		
X17	**Low performance damages**			
X17.1	The amounts for low performance damages are:	**Amount** **R2000/Incident**	**Performance level** **Measurement Accuracy and Precision:** **Real and reactive power measurement accuracy to within specified tolerances.** **Precision across a wide load range**	

		and varying power factors)
	R2000/Incident	**Data Transmission and Communication Reliability:** **Robust connectivity using PLC, RF, cellular or hybrid networks. High uptime and low packet-loss rates to ensure consistent meter reading delivery.**
	R1000/Incident	**Latency and Real-Time Data** **Processing (Minimal end-to-end delay for near-instant alerts and dynamic pricing updates. Edge-computing capabilities for on-site data aggregation before transmission)**
	R4000/Incident	**Data Security and Privacy** **(Encryption (e.g., TLS/DTLS) and mutual authentication between meter and head-end systems. Secure key-management for firmware updates and data integrity checks).**
	R3000/Incident	**Interoperability and Scalability:** **Standards-based protocols (e.g., DLMS/COSEM, IDIS Package 2 & 3) for seamless integration with MDMS and utility IT systems. Modular architecture to support gradual rollouts and millions of endpoints without performance degradation**
	R4000/Incident	**Tamper Detection and Anti-Theft:** **Built-in sensors for magnetic, mechanical or electrical tampering events.** **Real-time alarms and automated cut-off logic to prevent energy theft or meter bypassing.**
	R3000/Incident	**Dynamic Pricing and Demand Response Support:** **Two-way communications to push tariff changes and receive consumption feedback.** **Local algorithms for time-of-use calculations and peak-shaving signals to customers.**
	R1500/Incident	**Power Consumption and Lifecycle Management:** **Ultra-low standby power to extend battery-backed meters' operational life.**

			Predictive maintenance analytics to schedule field visits and avoid unexpected failures.
		R2000/Incident	**Environmental and Electromagnetic Compatibility:** **Conformance to temperature, humidity and ingress-protection standards (e.g., IP54).** **EMI/EMC resilience to prevent measurement drift in high interference zones.**
		R2000/Incident	**Firmware Management and Over-The-Air Updates:** **Secure OTA update mechanism with rollback features.** **Version control and differential patching to minimize network load and meter downtime.**
		R2000/Incident	**Failure:** **The failure rate of installed smart meters shall be <1% of the installed base. If the failure rate exceeds 1%, the product shall be deemed non-performing, and the supplier shall be held responsible for to correct the defects in the field.**

X18	**Limitation of liability**	
X18.1	The *Contractor*'s liability to the *Employer* for indirect or consequential loss is limited to:	**R0.0 (zero Rand)**
X18.2	For any one event, the *Contractor*'s liability to the *Employer* for loss of or damage to the *Employer*'s property is limited to:	**the amount of the deductibles relevant to the event**
X18.3	The *Contractor*'s liability for Defects due to his design which are not listed on the Defects Certificate is limited to	**The greater of** • **the total of the Prices at the Contract Date and** • **the amounts excluded and unrecoverable from the *Employer*'s assets policy for correcting the Defect (other than the resulting physical damage which is not excluded) plus the applicable deductible as at contract date.**
X18.4	The *Contractor*'s total liability to the *Employer* for all matters arising under or in connection with this contract, other than excluded matters, is limited to:	**the total of the Prices other than for the additional excluded matters.** **The *Contractor's* total liability for the additional excluded matters is not limited.** **The additional excluded matters are amounts**

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

Z1 Cession delegation and assignment

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

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

Z2 Joint ventures

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

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

Z2.3 The *Contractor* does not alter the composition of the joint venture, consortium or other

unincorporated grouping of two or more persons without the consent of the *Employer* having been given to the *Contractor* in writing.

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

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

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

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

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

Z4 Confidentiality

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

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

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

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

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

Z5 Waiver and estoppel: Add to core clause 12.3:

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

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

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

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

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

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

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

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

Z7.3 The *Contractor* (if registered in South Africa in terms of the companies Act) is required to comply with the requirements of the Value Added Tax Act, no 89 of 1991 (as amended) and to include the *Employer*'s VAT number 4740101508 on each invoice he submits for payment.

Z8 Notifying compensation events

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

Z9 *Employer's* limitation of liability

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

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

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

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

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

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

Z12 Ethics

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

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

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

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

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

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

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

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

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

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

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

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

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

ensures that the Committing Party co-operates fully with an investigation.

Z13 Insurance

Z 13.1 Replace core clause 84 with the following:

Insurance cover 84

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

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

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

INSURANCE TABLE A

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

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

INSURANCE TABLE B

Insurance against or name of policy	**Minimum amount of cover or minimum l of indemnity**
Assets All Risk	Per the insurance policy document
Contract Works insurance	Per the insurance policy document
Environmental Liability	Per the insurance policy document
General and Public Liability	Per the insurance policy document
Transportation (Marine)	Per the insurance policy document
Motor Fleet and Mobile Plant	Per the insurance policy document
Terrorism	Per the insurance policy document
Cyber Liability	Per the insurance policy document
Nuclear Material Damage and Business Interruption	Per the insurance policy document
Nuclear Material Damage Terrorism	Per the insurance policy document

Z14 Nuclear Liability

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

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

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

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

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

Z15 Asbestos

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

AAIA means approved asbestos inspection authority.

ACM means asbestos containing materials.

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

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

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

OEL means occupational exposure limit.

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

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

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

SANAS means the South African National Accreditation System.

TWA means the average exposure, within a given workplace, to airborne asbestos fibres, normalized 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 affected 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.

Z16 Intellectual Property – OEM owning Intellectual Property

"Intellectual Property" means (a) patents, trade marks, service marks, rights in designs, trade names, trade secrets, know how, copyrights and topography rights, in each case whether registered or not; (b) applications for registration of any of them; (c) rights under licences and consents in relation to any of them; (d) all forms of protection of a similar nature or having equivalent or similar effect to any of them which may subsist anywhere in the world.

Z16.1 All Intellectual Property rights, contained in any developed materials which are created by the [*Contractor / Consultant / Supplier*] or on behalf of the [*Contractor / Consultant / Supplier*], for the purposes of and in support of the provision of the [*works / services / goods*] vests with the [*Contractor / Consultant / Supplier*]. The [*Contractor / Consultant / Supplier*] retains the Intellectual Property rights in and to the [*Contractor / Consultant / Supplier*]'s Intellectual Property made by or on behalf of the [*Contractor / Consultant / Supplier*] as part of the [*works / services / goods*].

Z16.2 Any data or any other information relating to [*Employer / Client / Purchaser*]*'s* proprietary information generated from the use of the [*Contractor / Consultant / Supplier*]*'s* Background Intellectual Property, the copyright therein shall be owned by the [*Employer / Client / Purchaser*] ("[*Employer / Client / Purchaser*] IP").

Z16.3 The [*Contractor / Consultant / Supplier*] ensures that a copyright notice is incorporated or embossed or labelled on the [*Employer / Client / Purchaser*] IP, where the [*Employer / Client / Purchaser*] is reflected as the owner of the [*Employer / Client / Purchaser*] IP.

Z16.4 The [*Contractor / Consultant / Supplier*] is obliged to provide [*Employer / Client / Purchaser*] IP manufacturing documents, designs, processes and/or specifications to the [*Employer / Client / Purchaser*] before/on the [*completion date / defect state*].

Z16.5 The [*Contractor / Consultant / Supplier*] grants to the [*Employer / Client / Purchaser*] and its subsidiaries, with effect from the starting date or, in the case of documents or other matters not yet in existence, with effect from the creation thereof (and notwithstanding the Completion or termination of this contract), an irrevocable, perpetual, royalty-free non-exclusive licence to use all of the IP documents provided (including, but not limited to calculations, computer programmes and other software, drawings, manuals, models and other documents of a technical nature), for any purpose whatsoever in connection with the [*works / services / goods*], including for the purpose of operating, repairing, maintaining, dismantling, re-assembling, refurbishing and making adjustments to all parts of the [*works / services / goods*] (the "Purposes").

Z16.6 The [*Contractor / Consultant / Supplier*] procures that each sub-[*Contractor / Consultant / Supplier*] executes all and any further documents and takes all and any other actions as

may be required in order to give effect to this licence.

Z16.7 The [*Employer / Client / Purchaser*] keeps confidential and does not disclose to any third party any information relating to the IP documents or use copy, or communicate to a third party, save as for the Purposes, or required by law or with the prior written consent of the [*Contractor / Consultant / Supplier*] which consent will not be unreasonably withheld.

Z16.8 The [*Employer / Client / Purchaser*] agrees to keep all such information confidential and to disclose it only to its officers, directors, employees, sub-contractors, consultants, suppliers, tenderers and professional advisors who are employed in the maintenance or operation of the [*works / services / goods*] or for the Purposes and who:

- Have a need to know (an then only to the extent that such person has a need to know);
- Are aware that the confidential information should be kept confidential;
- Are aware of the [*Employer / Client / Purchaser*]'s undertaking in relation to such information in terms of this contract; and
- Have been directed by the [*Employer / Client / Purchaser*] to keep the information confidential and have undertaken to keep the information confidential.

Z16.9 The [*Employer / Client / Purchaser*] retains all Intellectual Property rights in all documents made by or on behalf of the [*Employer / Client / Purchaser*] including all documents and requirements provided prior to or during the execution of the [*works / services / goods*] by the [*Employer / Client / Purchaser*] to the [*Contractor / Consultant / Supplier*]. The [*Contractor / Consultant / Supplier*] does not, without the written consent, of the [*Employer / Client / Purchaser*], copy, use or issue to a third party any of these document and requirements except for the purposes of executing the [*works / services / goods*].

Z16.10 Either party procures that a third party executes confidentiality undertakings not to disclose to any other third parties, any of the [*Employer / Client / Purchaser*]'s documents and requirements at all, in respect of the [*Employer / Client / Purchaser*], or the IP Documents, in respect of the [*Contractor / Consultant / Supplier*] and undertake to only use the IP Documents for the Purposes.

Z16.11 Third Party Claims

Z16.11.1 In the event of any claims being made or actions brought against the [*Employer / Client / Purchaser*], on the ground that the [*Contractor / Consultant / Supplier*] infringed any patent, trade mark, designs or copyright, the [*Contractor / Consultant / Supplier*] is notified thereof and at its own expense, conducts all negotiations in consultation with the [*Employer / Client / Purchaser*] for the settlement of the claim and litigation that may arise from such alleged infringement provided the [*Employer / Client / Purchaser*] does not bear any financial burden or losses.

Z16.11.2 Save where the [*Contractor / Consultant / Supplier*] fails to take over the conduct of the negotiation or litigation within a reasonable time of the notification of the alleged infringement, the [*Employer / Client / Purchaser*] does not make any admission which might be prejudicial to the [*Contractor / Consultant / Supplier*]'s position. The [*Employer / Client / Purchaser*], at the request and the cost of the [*Contractor / Consultant / Supplier*] affords it all reasonable technical assistance that the [*Employer / Client / Purchaser*] is able to provide for the purpose of contesting any such claim or action.

Z16.11.3 Should it be held in any such action that any such protected rights have been infringed, as definitely stated by a judgment of the court before which the action is brought, the [*Contractor / Consultant / Supplier*], at its own expense and in consultation with the [*Employer / Client / Purchaser*], either:

- procures for [*Employer / Client / Purchaser*] the right to continue to use the affected item or design, or
- replaces the said affected item or design with a non-infringing item, or
- provides a design of equivalent quality or modify such affected item or design so as to make it non-infringing without affecting the quality.

Z16.11.4 Notwithstanding anything contained in this contract, the foregoing sets forth the entire responsibility of [*Contractor / Consultant / Supplier*] with respect to claims relating to infringement.

Z16.11.5 Where it is alleged that the [*Employer / Client / Purchaser*] has committed an infringement as intended vis-à-vis the [*Contractor / Consultant / Supplier*] as set out in the third party intellectual property infringement clause, the [*Employer / Client / Purchaser*] has the same rights and obligations as the [*Contractor / Consultant / Supplier*], mutatis mutandis, as regards such alleged infringement.

Z16.11.6 The [*Contractor / Consultant / Supplier*] herewith indemnifies the [*Employer / Client / Purchaser*] and undertakes to keep the [*Employer / Client / Purchaser*] indemnified against all claims of whatsoever nature, real or imagined, which may be made against the [*Employer / Client / Purchaser*] arising from the infringement of any third party intellectual property rights.

Z17. Key deliverables for technical - Within 3 months the base platform should be in place and be functional.

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

If weather measurements recorded within a calendar month, before the Completion Date for the Task Order and at the place stated in this Contract Data is shown to be more adverse than the normal weather amounts recorded by the South African weather services then the Contractor may notify a compensation event.

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

Only the difference between the more adverse recorded weather and the equivalent measurement given by the South African weather services will be taken into account in assessing a compensation event.

C1.2 Contract Data

Part two - Data provided by the *Contractor.*

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)[2] 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 *Contractor* is (Name): Address Tel No. Fax No.	
11.2(8)	The *direct fee percentage* is The *subcontracted fee percentage* is	**%** **%**
11.2(18)	The *working areas* are the Site and	
24.1	The *Contractor's* key persons are: 1 Name: Job: Responsibilities: Qualifications: Experience: 2 Name: Job Responsibilities: Qualifications: Experience:	

[2] 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 *completion date* for the whole of the *works* is			
11.2(14)	The following matters will be included in the Risk Register			
11.2(19)	The Works Information for the *Contractor*'s design is in:			
31.1	The programme identified in the Contract Data is			
A	**Priced contract with activity schedule**			
11.2(20) 11.2(30)	The *activity schedule* is in The tendered total of the Prices is	**(in figures)** **(in words), excluding VAT**		
	Data for Schedules of Cost Components	*Note "SCC" means Schedule of Cost Components starting on page 60, and "SSCC" means Shorter Schedule of Cost Components starting on page 63 of ECC3 (April 2013).*		
A	**Priced contract with activity schedule**	**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:	

C1.3 Forms of Securities

Pro formas for Bonds & Guarantees

For use with the NEC3 Engineering & Construction Contract

The *conditions of contract* stated in the Contract Data Part 1 include the following Secondary Options:

Option X4: Parent company guarantee
Option X13: Performance Bond

Each of these secondary Options requires a bond or guarantee “in the form set out in the Works Information”. Pro forma documents for these bonds and guarantees are provided here for convenience but are to be treated as part of the Works Information.

The organisation providing the bond / guarantee does so by copying the pro forma document onto his letterhead without any change to the text or format and completing the required details. The completed document is then given to the *Employer* within the time stated in the contract.

Pro forma Parent Company Guarantee (for use with Option X4)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg Date:

Dear Sirs,

Parent Company Guarantee for Contract No

With reference to the above numbered contract made or to be made between

Eskom Holdings SOC Ltd (the *Employer*) and

{Insert registered name and address of the *Contractor*} (the *Contractor*), for

{Insert details of the *works* from the Contract Data} (the *works*).

I/We the undersigned .....

on behalf of the *Contractor*'s parent company .....

of physical address .....

and duly authorised thereto do hereby unconditionally guarantee to the *Employer* that the *Contractor* shall Provide the Works in accordance with the above numbered Contract.

1. If for any reason the *Contractor* fails to Provide the Works, we hereby agree to cause to Provide the Works at no additional cost to the *Employer*.

2. If we fail to comply with the terms of this Deed of Guarantee, the *Employer* may itself procure such performance (whether or not the Agreement be formally determined). The *Employer* is to notify us and we shall indemnify the *Employer* for any additional cost or expense it incurs.

3. Our liability shall be as primary obligor and not merely as surety and shall not be impaired or discharged by reason of any arrangement or change in relationship made between the *Contractor* and the *Employer* and/or between us and *Contractor*; nor any alteration in the obligations undertaken by the *Contractor* or in the terms of the Agreement; nor any indulgence, failure, delay by you as to any matter; nor any dissolution or liquidation or such other analogous event of the *Contractor*.

4. The *Employer* shall not be obliged before taking steps to enforce the terms of this Deed of Guarantee to obtain judgement against the *Contractor* in any court or other tribunal, to make or file any claim in liquidation (or analogous proceedings) or to seek any remedy or proceed first against the *Contractor*.

5. This Deed of Guarantee shall be governed by and construed in accordance with the laws of the Republic of South Africa and we hereby submit to the non-exclusive jurisdiction of the High Court of South Africa.

Signed at _____ on this _____ day of _____ 200_

Signature(s)		
Name(s) (printed)		
Position in parent company		
Signature of Witness(s)		
Name(s) (printed)		

Pro forma Performance Bond – Demand Guarantee (for use with Option X13)

(to be reproduced exactly as shown below on the letterhead of the Contractor's Parent Company)

Eskom Holdings SOC Ltd
Megawatt Park
Maxwell Drive
Sandton
Johannesburg Date:

Dear Sirs

Reference No. **[●]** *[Drafting Note: Bank reference number to be inserted]*

Performance Bond – Demand Guarantee: *[Drafting Note: Name of Contractor to be inserted]*

Project [ ] Contract Reference: …… *[Drafting Note: Contractor contract reference number to be inserted]*

1. In this Guarantee the following words and expressions shall have the following meanings:-

1.1 "Bank" - means [●], [●] Branch, (Registration No. [●]); [Drafting Note: Name of Bank to be inserted]

1.2 "Bank's Address" - means [●]; [Drafting Note: Bank's physical address to be inserted]

1.3 "Contract" – means the written agreement relating to the Project, entered into between Eskom and the Contractor, on or about the [●] day of [●] 200[●] (Contract Reference No. [.]as amended, varied, restated, novated or substituted from time to time; [Drafting Note: Signature Date and Contract reference number to be inserted]

1.4 "Contractor" – means [●] a company registered in accordance with the laws of [●] under Registration Number [●]. [Drafting Note: Name and details of Contractor to be inserted]

1.5 "Eskom" - means Eskom Holdings SOC Ltd, a company registered in accordance with the laws of the Republic of South Africa under Registration Number 2002/015527/30].

1.6 "Expiry Date" - means the date on which the Defects Certificate is issued in terms of the Contract.

1.7 "Guaranteed Sum" - means the sum of R [●] ([●] Rand);

1.8 "Project" - means [insert if applicable.].

2. At the instance of the Contractor, we the undersigned _____ and _____, in our respective capacities as _____ and _____ of the Bank, and duly authorized thereto, confirm that we hold the Guaranteed Sum at the disposal of Eskom, as security for the proper performance by the Contractor of all of its obligations in terms of and arising from the Contract and hereby undertake to pay to Eskom, on written demand from Eskom received prior to the Expiry Date, any sum or sums not exceeding in total the Guaranteed Sum.

3. A demand for payment under this guarantee shall be made in writing at the Bank's address and shall:

3.1 be signed on behalf of Eskom by a Group Executive, Divisional Executive, Senior General Manager, General Manager or its delegate;

3.2 state the amount claimed ("the Demand Amount');

3.3 state that the Demand Amount is payable to Eskom in the circumstances contemplated in

the Contract.

4. Notwithstanding the reference herein to the Contract the liability of the Bank in terms hereof is as principal and not as surety and the Bank's obligation/s to make payment:

4.1 is and shall be absolute provided demand is made in terms of this bond in all circumstances; and

4.2 is not, and shall not be construed to be, accessory or collateral on any basis whatsoever.

5. The Bank's obligations in terms of this Guarantee:

5.1 shall be restricted to the payment of money only and shall be limited to the maximum of the Guaranteed Sum; and

5.2 shall not be discharged and compliance with any demand for payment received by the Bank in terms hereof shall not be delayed, by the fact that a dispute may exist between Eskom and the Contractor.

6. Eskom shall be entitled to arrange its affairs with the Contractor in any manner which it sees fit, without advising us and without affecting our liability under this Guarantee. This includes, without limitation, any extensions, indulgences, release or compromise granted to the Contractor or any variation under or to the Contract.

7. Should Eskom cede its rights against the Contractor to a third party where such cession is permitted under the Contract, then Eskom shall be entitled to cede to such third party the rights of Eskom under this Guarantee on written notification to the Bank of such cession.

8. This Guarantee:

8.1 shall expire on the Expiry Date until which time it is irrevocable;

8.2 is, save as provided for in 7 above, personal to Eskom and is neither negotiable nor transferable;

8.3 shall be returned to the Bank upon the earlier of payment of the full Guaranteed Sum or expiry hereof;

8.4 shall be regarded as a liquid document for the purpose of obtaining a court order; and

8.5 shall be governed by and construed in accordance with the law of the Republic of South Africa and shall be subject to the jurisdiction of the Courts of the Republic of South Africa.

8.6 Any claim which arises or demand for payment received after expiry date will be invalid and unenforceable.

9. The Bank chooses domicilium citandi et executandi for all purposes in connection with this Guarantee at the Bank's Address.

Signed at _____ Date _____

For and behalf of the Bank

Bank Signatory: _____ Bank Signatory: _____

Witness: _____ Witness: _____
Bank's seal or stamp

PART 2: PRICING DATA
ECC3 Option B

Document reference	Title	No of pages
C2.1	Pricing assumptions: Option B	3
C2.2	The *bill of quantities*	2

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 *bill of quantities* as changed in accordance with this contract to accommodate implemented compensation events and for accepted quotations for acceleration.

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

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

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

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

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

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*

PLEASE REFER TO ATTACHED PRICING SCHEDULE.

PART 3: SCOPE OF WORK

Document reference	Title	
	This cover page	
C3.1	*Employer*'s Works Information	
C3.2	*Contractor*'s Works Information	

C3.1: EMPLOYER'S WORKS INFORMATION

1 Description of the *works*

1.1 Executive overview

Eskom Distribution faces significant strategic, operational, and financial challenges that necessitate the deployment of a comprehensive Advanced Metering Infrastructure (AMI). Our current manual meter reading processes are labour-intensive, costly, and provide limited data visibility, hindering operational efficiency and customer service. The lack of granular, interval consumption data prevents accurate demand forecasting, efficient asset utilization, and the offering of modern rate structures, leaving potential revenue unrealized and limiting our strategic agility. Furthermore, our inability to rapidly detect, locate, and respond to outages results in prolonged customer interruptions and higher operational costs.

The implementation of the AMI platform—comprising smart meters, a Head-End System (HES), a Meter Data Management System (MDMS), and a Smart Meter Operating Centre (SMOC)—is critical to overcoming these challenges. However, this initiative itself presents substantial business risks that must be mitigated. These include the management of a complex, cross-functional integration with legacy systems, the need for significant organizational change management to address workforce transformation and siloed operations, and the imperative to secure a massive capital investment while demonstrating a clear return. The solution must also be designed to handle the ensuing "data tsunami," transforming raw interval data into actionable business intelligence while ensuring robust cybersecurity across the entire ecosystem. Successfully addressing these challenges will transition the organization from a reactive utility to a data-driven, efficient, and customer-centric grid operator.

The implementation of the Meter Data Management System (MDMS) is fundamentally hindered by the inability of legacy billing and customer systems to process high-volume interval data, creating a direct risk to revenue cycle integrity. A core challenge is the absence of defined business rules for data validation and estimation (VEE), which is essential for accurate billing and regulatory reporting. Furthermore, the organization currently lacks the analytical frameworks and tools to transform this data deluge into actionable intelligence for grid optimization, such as transformer load management and loss analysis, threatening the return on investment.

The Head-End System (HES) faces significant operational risks related to network reliability and security. Persistent communication "last gap" issues will leave a portion of meters unread, requiring a proactive management and hybrid network strategy to ensure comprehensive coverage. The HES must also manage the complex lifecycle of a multi-vendor meter fleet and execute secure, large-scale firmware updates without causing widespread field failures. Critically, the HES expands the organization's cyber-attack surface, necessitating robust security protocols for the entire field area network that currently do not exist. The HES must manage all Smart meters and metering infrastructure and a replacement of the current MV90 is also urgent to make this upgrade

The effectiveness of the Smart Meter Operating Center (SMOC) is jeopardized by potential workflow and organizational silos. Without intelligent alarm filtering and correlation, operators will face severe alert fatigue, impairing their ability to respond to genuine emergencies. The value of the SMOC is nullified if it cannot be integrated with existing outage and dispatch systems to enable a coordinated response. Success is contingent on overcoming a significant skills gap, as current

staff require training to interpret low-voltage AMI data and leverage new visualization tools for true situational awareness.

The National Prepayment strategy plans to deploy approximately 6.2 million electricity smart meters within a period of 3 years in total will have a capacity of 8 Million including existing systems. The Smart Meter Operational Centre (SMOC) is a critical enabler and base infrastructure that is required to manage and visualise the large volumes of metering data. Eskom thus requires an integrated solution to satisfy the monitoring of smart meters, improve meter reading processes as well as cater for present and future Smart Metering requirements, as well as the inclusion of Distribution energy resources (DER), PV,EV, BESS, other microgrids on the transformer feeder. This project is required to deliver the SMOC solution that will support and manage meter data, network alarms, event and aggregation of DER.

Smart Meter Operational Centre is centralized hub that is used to monitor, track, control and manage of smart metes and DER within the distribution business. This data consists primarily of usage data and events that are imported from the head-end servers managing the data collection in advanced metering infrastructure (AMI) and automatic meter reading (AMR) systems. It renders the complexity of different head-ends and acquisition technologies invisible to the enterprise applications.

Ultimately, the most significant challenge is cross-functional and procedural. The entire AMI rollout will fail to deliver value if the business continues to operate with legacy processes, such as dispatching crews for issues that can be resolved remotely. Therefore, the solution must force a re-engineering of core operational workflows. Clear governance and ownership for the data and systems must be established across IT, Operations, and Customer Service to prevent operational gaps and ensure the platform is leveraged to track and demonstrate a clear return on investment through measurable KPIs.

1.2 *Employer*'s requirements for the *service*

The provision of support and maintenance of AMI system for distribution division.

2. Project scope:

The Advanced Metering Infrastructure (AMI) Programme is a strategic initiative designed to modernize South Africa's utility metering ecosystem through the deployment of smart meters, robust communication networks, and advanced data management systems. By enabling two-way communication between utilities and customers, AMI enhances operational efficiency, improves customer service, and ensures accurate billing and energy management.

Beyond operational improvements, the AMI Programme plays a critical role in supporting Eskom and national government objectives to stabilize the power grid and reduce load shedding. Through real-time data visibility and demand-side management, AMI empowers utilities to optimize energy distribution, forecast consumption patterns, and implement targeted interventions during peak demand periods.

Economic and Strategic Impact:

- *Economic Growth:*
  Reliable electricity supply is a cornerstone of economic development. By reducing load shedding, AMI helps sustain industrial productivity, attract investment, and protect jobs in key sectors of the South African economy.
- *Energy Efficiency:*

AMI enables dynamic pricing and demand response programs, encouraging efficient energy use and reducing strain on generation capacity.

- *Grid Modernization:*
  The programme supports South Africa's transition to a smarter, more resilient grid, paving the way for renewable energy integration and long-term sustainability.

This programme will establish a fully integrated infrastructure comprising Meter Data Management System (MDMS), Head End System (HES), and Smart Metering Operating Centre (SMOC). These components will collectively ensure reliable data acquisition, secure communication, and real-time operational oversight.

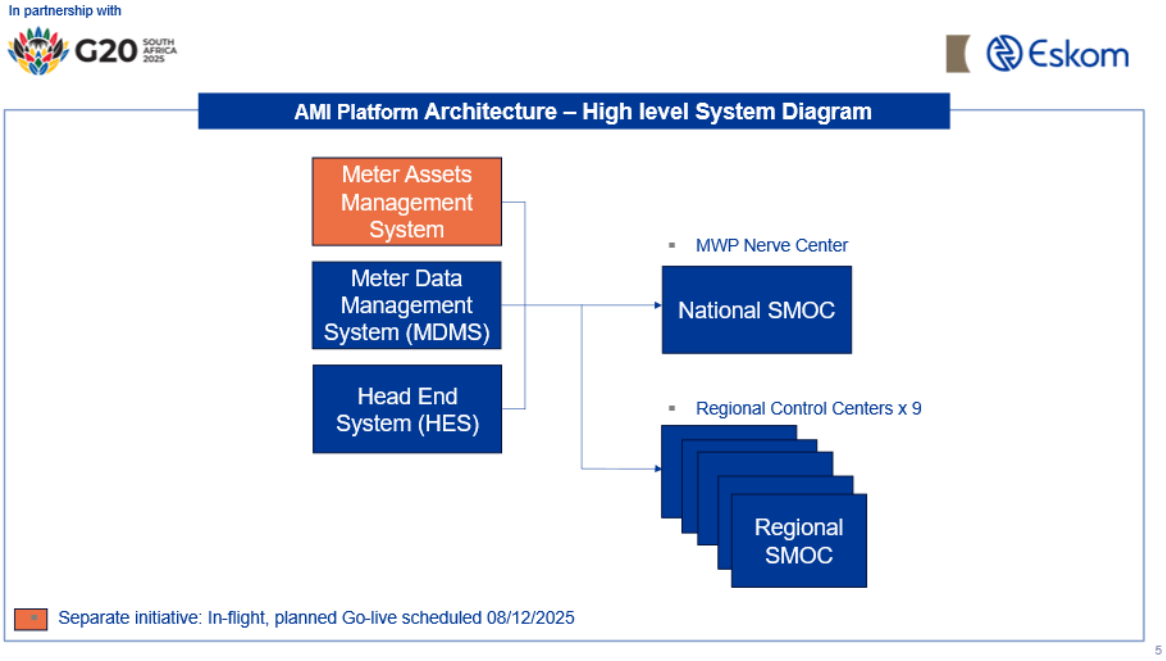


Figure 1: AMI Platform Architecture- High level System diagram

The following diagram illustrates the integrated infrastructure comprising Meter Data Management System (MDMS), Head End System (HES), and Smart Metering Operating Centre (SMOC)

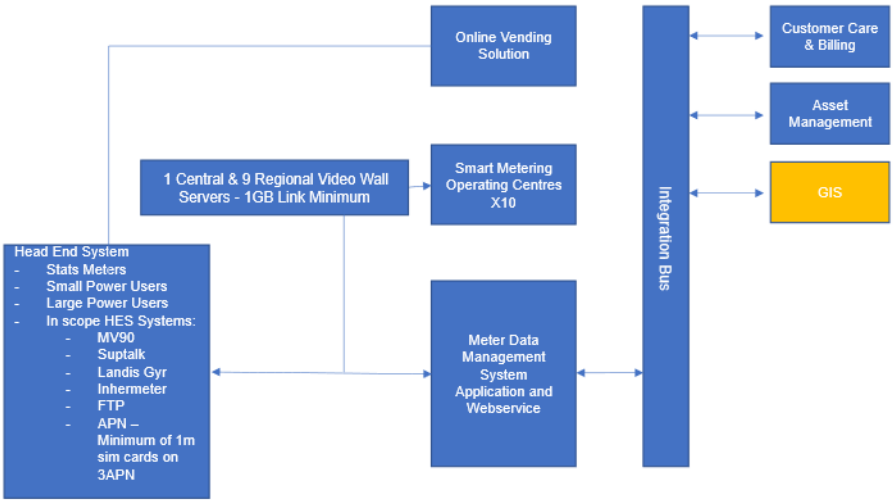


Figure 2: Integrated Infrastructure with Core components for AMI

2.1 Project Benefits:

The Advanced Metering Infrastructure (AMI) Programme introduces a transformative approach to metering and data management, delivering significant operational, financial, and customer-centric benefits. These benefits include:

2.2 Improved Data Accuracy:

The Advanced Metering Infrastructure (AMI) ensures precise and reliable metering data by automating validation, estimation, and editing (VEE) processes. This automation eliminates manual errors typically associated with traditional meter reading, thereby enhancing the accuracy of consumption data used for billing. As a result, it reduces billing disputes and fosters greater customer trust. Additionally, the availability of granular interval data supports advanced forecasting and load management, contributing to more efficient energy distribution and operational planning.

2.3 Enhanced Operational Efficiency:

Centralized communication and network management within the Advanced Metering Infrastructure (AMI) significantly streamline operations across vast numbers of endpoints. This approach reduces operational costs by minimizing the need for field visits and manual interventions. It enables remote configuration, diagnostics, and firmware updates for smart meters, enhancing system responsiveness and efficiency. Additionally, it improves outage detection and restoration times through real-time alerts, contributing to more reliable service delivery and faster issue resolution.

2.3.1 Revenue Protection:

Advanced analytics and monitoring capabilities within the Advanced Metering Infrastructure (AMI) play a vital role in identifying anomalies, energy theft, and non-technical losses. These tools enable the prompt detection of irregular consumption patterns and tampering attempts, thereby enhancing revenue assurance by minimizing unbilled energy and fraudulent activities. Furthermore, they support compliance with regulatory requirements by ensuring accurate and transparent energy accounting practices.

2.3.2 Customer Service Improvement

Real-time visibility into consumption data and system performance empowers utilities to deliver superior customer experiences. This capability allows for the provision of timely and accurate billing information, reducing disputes and enhancing customer trust. It also enables proactive communication during outages or service disruptions, ensuring customers are informed and supported. Furthermore, it facilitates demand-side management programs and offers personalized energy insights, helping consumers make informed decisions about their energy usage.

1. System Implementation Scope – Functional Requirements

The tenderer is required to provide a comprehensive Advanced Metering Infrastructure (AMI) solution comprising the following three core components:

- Meter Data Management System (MDMS)
  A centralized platform for storing, validating, and analysing high-volume metering data, enabling accurate billing, operational insights, and smart grid capabilities.
- Head End System / Data Acquisition System (HES/DAS)
  A robust communication interface responsible for acquiring data from smart meters and field devices, supporting remote configurations, firmware updates, and secure data transmission.
- Smart Metering Operations Centre (SMOC)
  A centralized control and visualization hub for monitoring, managing, and analysing smart metering infrastructure and Distributed Energy Resources (DER), ensuring real-time operational oversight and decision-making.

The requirements pertaining to the provision of the above are listed in the:

1. BRS's attached and Annexures
2. Technical Evaluation criteria (TEC) Attached
3. Tender Scope

Exclusions:

The following item is excluded from the Scope of Work:

Physical Room:

The construction, furnishing, and setup of the physical rooms housing the Smart Metering Operations Centre (SMOC) are excluded from this tender.

2. Meter Data Management System (MDMS)

A MDMS is a critical enabler and base infrastructure that is required to manage the large volumes of meter data generated by all these meters. Eskom thus requires an integrated solution to satisfy its storage of metering data, improved meter reading as well as cater for present and future Smart Metering requirements. This project is required to deliver the Meter Data Management (MDMS) solution that will support and manage meter data.

Meter data management system (MDMS) is a central repository system that performs long-term data storage and management for the vast quantities of data delivered by metering systems. This data consists primarily of usage data and events that are imported from the head-end servers managing the data collection in advanced metering infrastructure (AMI) or automatic meter reading (AMR) systems. It renders the complexity of different head-ends and acquisition technologies invisible to the enterprise applications. It stores all the meter data collected from different smart meters, and processes it as required by the enterprise applications. The MDMS serves not only as a data repository but as an umbrella of services that enable additional processing (calculations, Validation, Editing and Estimation (VEE) and analytics).

An MDMS is a standalone solution that provides the following to utilities:

- Common integration point for disparate back-office systems
- Common repository for meter reads and interval data from different sources
- Common solution for translating data into a common format for a wide range of business purposes
- Common source that sends alarms to varied business systems for required actions
- Common engine for enabling advanced analytics that support smart grid applications

When used in its entirety, an MDMS must:

- Store all meter reads as the system of record
- Validate the accuracy and performance of meter reads and outage event data
- Assess possible diversion situations or issues requiring a field visit
- Improve estimation and validation using multi-dimensional analytics
- Enable large-scale deployments and Smart Grid initiatives
- Synchronize data between MDMS, head end databases and back-end systems
- Improve utility back-office operations and understand the potential of the Eskom smart grid investment
- Accommodate the utilities' transition to multiple interval meter reads and be able to handle the massive amounts of data that is received. In this context, the MDMS that Eskom requires should be able to cater for up to 5,000,000 customers (currently)

An MDMS, at a high level, must cater for:

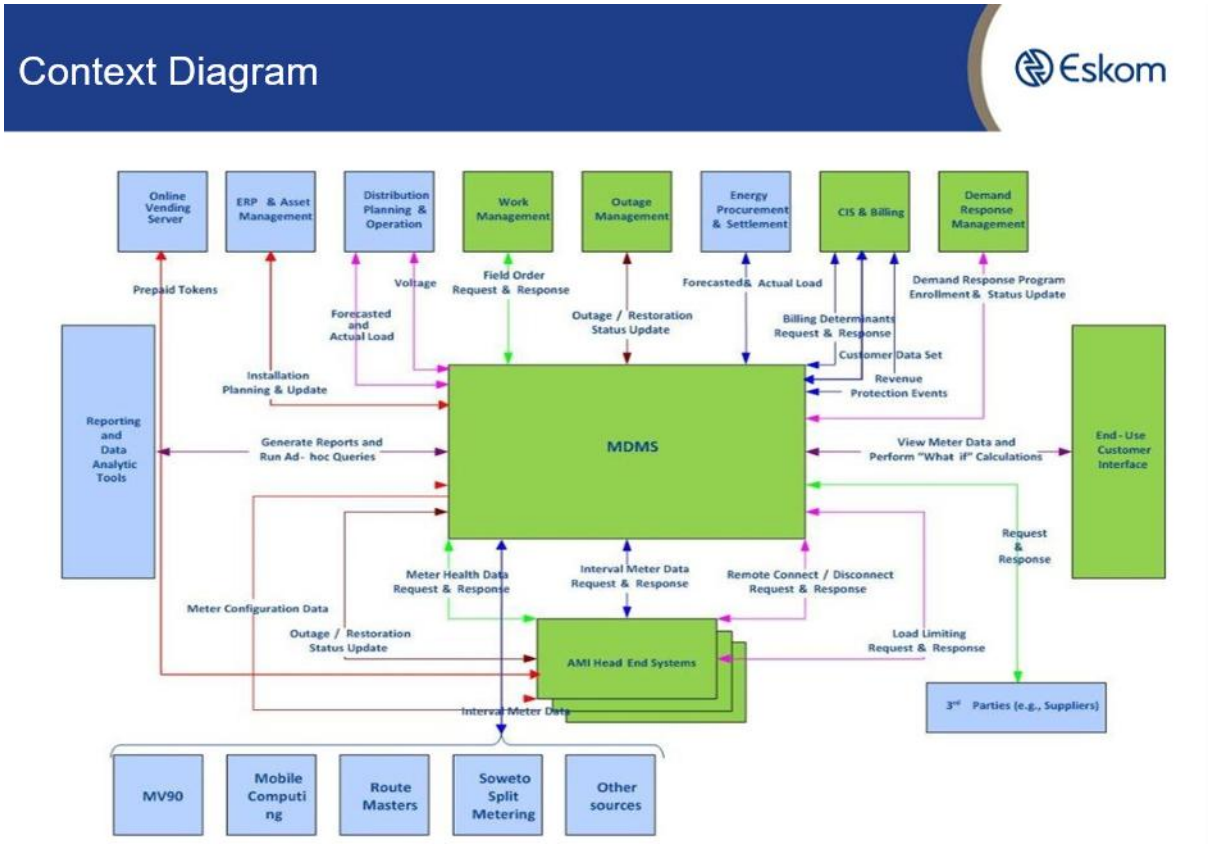
- Support Smart Grid Enablement (SGE), though the provisioning of a smart meter compliant, intelligent back end
- Meter readings from multi-channel, bi-directional smart meters
- A metering communication system that provides a complete solution to collect meter reading data and also tracks the state of smart meter assets (E.g. forwards a "last gasp" signal from a meter when it fails)
- Automated metering data collection

- Conservation Rates – with the availability of interval energy usage information, the design and implementation of new rate structures designed to incentivise conservation behaviour at the customer level
- Events detection capabilities (tampering, outages, meter failures etc.)
- Energy balancing to support non-technical losses identification

The MDMS should not be limited to data storage as device management, which is fully inclusive of meter management, is critical in the process to enable full device management and lifecycle management of all the appropriate devices that may be used, especially meters and meter management. This is critical due to the large volumes of new devices that will be deployed.

There is a need for utilities to transition to a Smart Grid vision by enabling incremental functionality for which the MDMS is a key component. The MDMS will enable the following Smart grid capabilities.

Graphical Representation of the MDMS:



A comprehensive release and deployment plan as part of the Detailed Design must be factored. This plan will describe the implementation of the various environments, as well as the process of deploying changes to each environment during the various releases. It shall take into consideration the availability of Eskom environments related to applications to be interfaced to.

Once the Base Solution has been deployed and configured, the respondent will be required to build on this foundation to deliver the functionality required. This includes, but not limited to applications, including application modification/configuration needed to enable the relevant

services; interfacing to the respective Eskom AMI/AMR Master Stations (Head End Systems) and MV90 as well as Billing system (CC&B) – Oracle Customer Care Billing System.

The objective of this scope is the integration/servicing of Eskom's LPU, SPU, PPU customers to the MDMS platform and includes:

- The provision of all licenses and services required to enable communication between the respective Eskom AMI, MV90 systems and the MDMS
- Configuration of all AMI and MV90 HES
- Storage of configuration data for SPU, PPU and LPU customers on the MDMS
- To ensure that all meters are read, received meter readings are uploaded timeously, validated and all the exceptions are managed, in order to produce accurate bills
- To ensure that MDMS is integrated with Eskom's CC&B in order to enable seamless billing
- CC&B Configuration and Development. This will include, but not limited to:
    - Development required on CC&B (This will follow the normal SDLC process i.e. Development in the different Eskom environments (Development, QA, Pre-production, Production)
    - Integration Configuration for data pass through between MDMS and CC&B
- The scope of the project includes integration to the following systems:
    - CC&B (Billing)
    - MV90 Distribution
    - Route Master or Replacement
    - (Maximo)/SAP
    - ETS – Energy Trading System
    - Smart Meter Head End Systems
    - Prepayment Vending System or Replacement
    - Mobile Computing
- The supplier is encouraged to proactively propose and implement additional integrations that enhance business processes and operational efficiency.

Note:

- The required changes will be based on the requirements as specified on the Business Requirements Specification attached. Respondents are allowed to recommend system and business process changes to ensure the process is efficient.

- LPU Transitioning will occur in parallel with the legacy LPU metering architecture and in a manner that is least disruptive to the billing process.

3. Head End System (HES)

The HES is a critical enabler and base infrastructure required to manage the large volumes of meter data generated by all these smart meters.

The HES is mainly used to acquire billing and other data from meters and other field devices as well as remote configurations of meters and other metering related field devices. The proposed HES Solution should have the capacity and capabilities to handle increased meter volumes proposed to handle 8 million meters and increased functional requirements from various business initiatives including the following:

- **Billing Process:**
    - Actual consumption information and automated process
    - Readings according to pre-defined schedule or on-demand
    - Automated re-reading process
    - Remote disconnection/ reconnection of energy supply
- **Customer Services:**
    - On-line access to actual metering data for customer service personnel
    - On-time consumption information and power quality data as well as meter events for a single meter
    - Disconnections /reconnections can be done by service personnel
    - Creating customer profiles
    - Remote configuration of meters and metering field devices
    - Demand management
    - Remote firmware upgrade of meters

Eskom is looking at acquiring more than one Head End from different vendors to essentially prevent lock into a single vendor or meter.

Eskom's strategy is to procure a Multivendor HES that comply with the standards depicted in the picture below:

The goal is to enable several meter types to communicate the Master Station/Head end System (HES) through a multivendor integration layer provided by the HES.

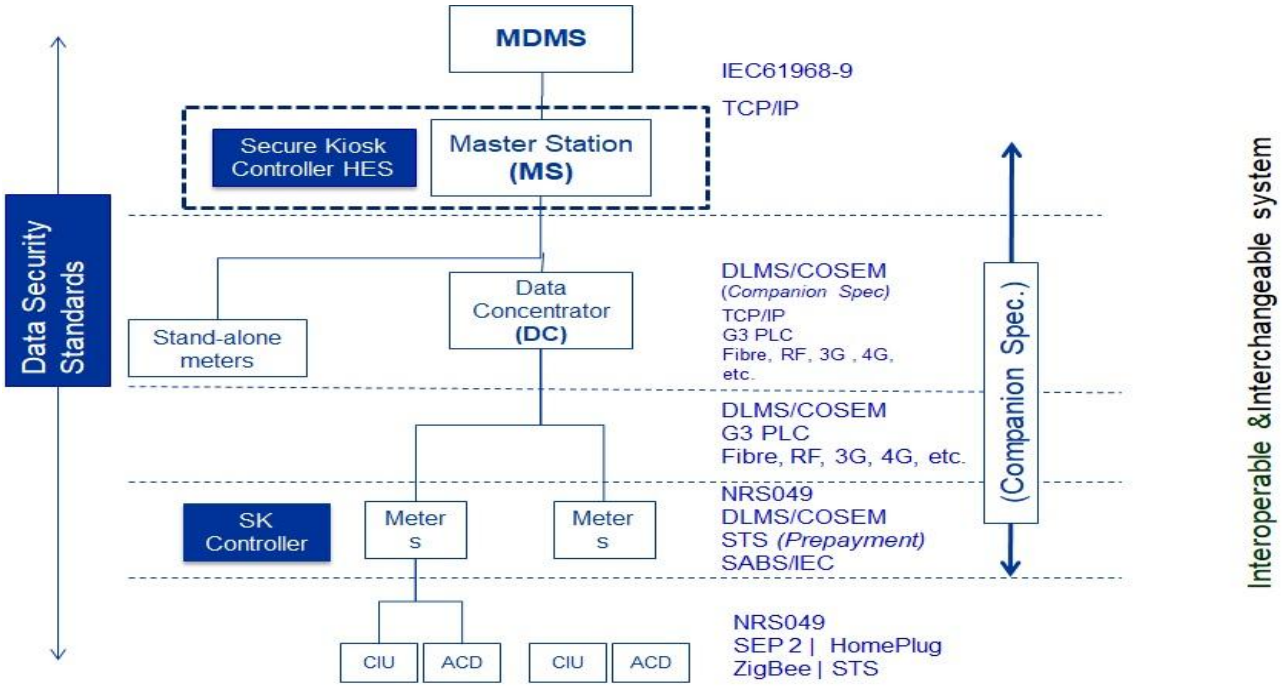


Figure 3: NRS 049 Standards and Companion Specification

Eskom is looking for a HES that has the capability to connect to the following as per in the diagram above using the listed protocols at a minimum:

- Network Gateway, Data Concentrator and directly with the meter

4. Smart Metering Operation Centre

The National Prepayment strategy plans to deploy approximately 6.2 Million electricity smart meters within a period of 3 years in total will have a capacity of 8 Million including existing systems. The Smart Meter Operational Centre (SMOC) is a critical enabler and base infrastructure that is required to control, manage and visualise the large volumes of metering data. Eskom thus requires an integrated solution to satisfy the monitoring of smart meters, improve meter reading processes as well as cater for present and future Smart Metering and other DER on transformer network requirements. This project is required to deliver the SMOC solution that will support and visualise to control, monitor and prioritise system needs.

Smart Meter Operational Centre is centralized hub that is used to monitor, track and manage smart metes within the distribution business. This data consists primarily of usage data and events that are imported from the head-end servers managing the data collection in advanced metering infrastructure (AMI) and automatic meter reading (AMR) systems. It renders the complexity of different head-ends and acquisition technologies invisible to the enterprise applications.

The SMOC solution will provide centralized management of the smart metering infrastructure, ensuring efficient and streamlined operations. It will offer end-to-end security across the entire value chain, protecting data and systems at every stage. Additionally, the solution will integrate seamlessly with Eskom systems as well as third-party partner solutions, enabling broader interoperability. Real-time monitoring, reporting, and analytics will support proactive decision-making and operational transparency. Furthermore, the solution will include comprehensive training, change management, and support processes to ensure successful adoption and ongoing system performance.

The solution should contain the following requirements, though not limited to the following:

1. Fully operational control centres, for 24/7 operations
    - National Smart metering Operating Centre (National SMOC)
    - 9 x Regional Smart metering operating centres (Regional SMOC)
    - Room control solution for each SMOC centre
    - AMI Management system – either through MDMS (if built-in) or an agnostic solution to MDMS & HES.
2. A solution to manage the Control centre IT and auxiliary function in the physical room
    - Provision, Physical installation and Maintenance of the following:
        - video wall,
        - operating desks/consoles,
        - operating screens and PC,
        - ergonomic chairs and desks,
        - professional cosmetic finish to SMOC
        - Audio (speaker and microphones) and Visual (Cameras)
        - Smart Boards
3. Room control system Solution to run all systems and equipment to be fully integrated between each system to manage operations in each SMOC centre.
4. An AMI management system solution to monitor, operate, control and manage all metering infrastructure in near real time- Either a building solution to MDMS or separate agnostic system.
5. An AMI Management system solution to management Basic information, energy monitoring, energy saving analysis, alarm management, data centre information and data collection monitoring, while system management including audit statement and electricity consumption with the data from PV system, Storage systems, EV charging management and power distribution management.

6. An AMI management system solution should have APP support and development which allows for creation and maintenance for monitoring the AMI, with app being created by Eskom distribution freely to create applications based on business needs.
7. An AMI management system solution should have a customer app which can facilitate customer needs such as checking electricity usage, historical data and ability to view purchase history and making purchases.
8. An AMI management system solution should integrate with Eskom current WMS to create work orders, co-ordinate planning and resource planning.
9. An AMI management system solution must have the functionality and ability to:
   - Manager alarms, events and control the advance metering infrastructure
   - Configure and setup all assets in the advance metering infrastructure
   - Do reporting and analytics
   - Export data
   - Visualise the entire network via GIS, with representation of feeder and meter data
   - Integration with current Eskom business systems
   - Support Eskom approved meters, future meters protocol and communication infrastructure
   - System to be agnostic to the MDMS and HES
   - The solution should be able to customisable and flexible to create rules/analytics for future business needs, possible creation of app or new requests.
   - The system shall provide end-to-end data security across the entire value chain
   - The solution should be scalable
   - Training to be provided

Manage Energy via AMI with connected Distribution energy resources to LV networks

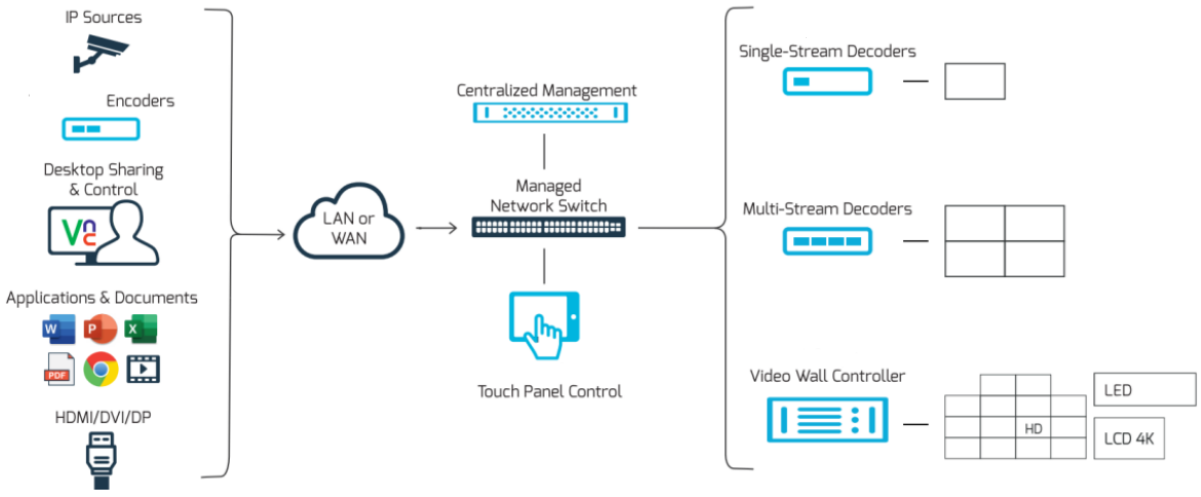


Figure 4: SMOC hardware interface Architecture

For detailed functional requirements, please see:

- GCS12_BRS2_Meter Data Management System Annexure A
- Group IT_BRS_GCS20_Head End System Annexure B
- DEM-03516-H8M2_BRSF_Data Acquisition System Annexure SMOC Requirements Annexture D
- AMI Platform Evaluation Criteria Excel document Annexture E

- AMI Platform_Evaluation_Criteria version 6.00_Final

5. Non-Functional Requirements

The MDMS, HES, and SMOC systems must meet a set of critical non-functional requirements to ensure robust, secure, and scalable operations. These include high availability and reliability to support continuous service delivery, strong security protocols to safeguard data, and interoperability with existing enterprise systems. The solutions must be scalable to accommodate future growth, maintainable for efficient updates and support, and capable of real-time or near real-time performance. Additionally, comprehensive auditability, disaster recovery capabilities, and user-friendly interfaces are essential to support operational efficiency and uphold Eskom's standards of service excellence.

7.1 Non-Functional: IT/OT Security

1. The Tenderer shall have a valid ISO27001 certificate.
2. The System shall be able to integrate with existing Eskom's identity providers (IdP's) such as Microsoft (MS) Active Directory (AD), Entra Identity (ID) and shall support Security Assertion Markup Language (SAML) 2.0, Open Authorization (OAuth) 2.0 and OAuth 2.1 to enable Multi-Factor Authentication (MFA) and Single Sign-On (SSO).
3. The System shall employ a Role-Based Access Control (RBAC) mechanism.
4. The system shall be able to onboard privileged accounts onto Privileged Access Management (PAM) tools, such as CyberArk but not limited to onboard privileged accounts to securely manage, rotate passwords, monitor, record sessions, control, enforce access to privileged accounts, auditing and reporting capabilities.
5. Data at rest using minimum Advanced Encryption Standard (AES)-256, in use and in transit (or in motion) using minimum Transport Layer Security (TLS) 1.3 or later version. Dynamic key rotation shall be supported.
6. Data shall be secured at minimum using a Secure Hash Algorithm (SHA)-256 for data integrity, securing transactions, and messages.
7. Audit trails, logs, user administration and user activity logs shall be enabled, encrypted, and securely kept with limited access to administrators.
8. Sensitive information such as Personal Information (PI) data in or non-production environments shall be masked.
9. Disaster Recovery Plan (DRP) shall be defined.
10. A Back up Restore Plan and Procedure shall be defined.
11. Patch Management Process shall be defined. The software updates and patches shall be tested on Sandbox or development, or non-production environment prior being deployed into production environment.
12. The database shall be placed within Eskom corporate Local Area Network (LAN)/Business Information Network (BIN) network.
13. The System shall support the prevailing Enterprise Services Bus (ESB) such as Oracle Fusion but not limited to this integration middleware, Application Programmable Interfaces (API's) and Integration Platform as a Service (iPaaS) platform for security, logging and monitoring.
14. The System shall be able to integrate with Security Information and Event Management (SIEM) standard technologies such as Syslog, Windows event logging, Simple Network Management Protocol (SNMP) and Application Programming Interface (API) but not limited to these technologies listed.
15. The vendor shall be responsible to implement a room management (Smart Building) solution in each SMOC. The design and solution room management must be approved and provisioned by Eskom, if required.

16. The full SMOC room management solution to accommodate the Video wall, consoles, all audio and camera integration with the controllability of environmental device, such as

HVAC, lighting, smart boards and blinds etc. The solution shall be based on Zigbee or LoRA protocols for their security features. Future integration to Building Management Systems shall be enabled. The Smart Building system shall have its own separate network.

7.2 Non-Functional: Business Systems Integration Requirements

The Tenderer must provide technical resources to build and implement all required Business Services for the interfaces. Please reference the "Group IT End Systems Integration Design Requirements v1.0.1 (4)" document to guide the available communication protocols. Please be aware that the Eskom Integration team (ICOE) will do the building of the defined Business Integration Services on the approved Eskom Middleware.

- The application must have the capability of secure communication when exposing the services via the business services.
- Additionally, the tenderer must:
    - Provide the required detail to the Eskom Integration Team to enable the design of the end-to-end solution and work closely with Eskom's Integration team.
    - Provide input and contribute to the Analysis, Design, Message Modelling, Unit testing, SIT testing, UAT testing, and Non-Functional testing.
    - Provide Application Business Services that conform to the specific security and Integration standards.
    - Provide Application Business Services that can receive an Integration reply with a full-service response (pre-defined message structure) in case the Application is invoking an Integration Web Service.
    - Provide Application Business Services that can communicate via One-Way or Two-Way certificate (SSL/TLS) to secure the channel.
    - Provide Application Business Services that support Basic Authentication for Web Services, Database, or SFTP for Authentication security.
    - Provide Application Business Service with the capability to distinguish between Technical and Business errors and handle each one separately.
    - The solution can manage instances where the same record is published multiple times, and not create duplicates

A signed-off test closure report is required before a test milestone is completed. The following testing milestones must be completed:

- Unit Testing – test results from the Tenderer's team. System Integrated Testing, Functionality testing (in QA – end-to-end functional testing and integration testing. That means testing with other systems and ensuring that all requirements have been successfully configured). This testing must be driven & executed by the Vendor but must include Eskom staff for completeness & authenticity.

- Non-Functional Testing (performance testing and disaster recovery testing). This testing must be driven & executed by the Vendor but must include Eskom staff for completeness & authenticity. User Acceptance Testing (Testing by the Eskom customer team to ensure that the system is working and meets requirements). This testing must be driven by the Tenderer but must be executed by Eskom staff for completeness & authenticity.

All testing requirements must cover all identified interfaces that have been identified. The testing team must adhere to the TCoE Project Requirements.

7.3 Testing Requirements:

The solution will undergo comprehensive testing following Eskom's standards to ensure its completeness and authenticity. The testing team is responsible for gathering testing requirements, creating test cases, and executing the tests to thoroughly evaluate the solution for deployment within Eskom's IT environment.

Please note that the following:

- All testing, except unit testing, will be carried out by the Eskom testing team. The tenderer is responsible for conducting unit testing.
- All testing (including unit testing) must be performed within Eskom's test management systems, such as Application Lifecycle Management (ALM), LoadRunner (for performance testing), and Unified Functional Tester (UFT). The implementation team must coordinate with the testing team to ensure sufficient time is allocated for testing, and that all testing activities are incorporated into the project schedule.
- Before the official test cycle begins, the development team must provide unit test results, adhering to the entry and exit criteria outlined in the master system test plan. A signed-off test closure report is required before making any test milestone as complete.

The following tests and milestones must be completed:

- **Unit Testing (Development Environment):** Results provided by the tenderer's development team.
- **System Integration Testing & Functionality Testing (QA Environment):** This includes end-to-end functional testing and integration testing, ensuring the solution works with other systems and meets all requirements. The Eskom testing team will lead and execute this testing, while the tenderer's team must provide necessary inputs.
- **User Acceptance Testing (Pre-Prod Environment):** Facilitated by the testing team but executed by Eskom's customer/business team to verify that the system meets the requirements defined in the BRS for completeness and authenticity.
- **Non-Functional/Performance Testing (Pre-Prod Environment):** Led and executed by the performance tester.
- **Disaster Recovery Testing (for the on-premise option).** Led and executed by the Disaster recovery team.

All testing requirements must cover all identified interfaces that have been identified. The testing team must adhere to the Testing Centre of Excellence (TCoE) standard document provided as part of the RFP documentation.

7.4 Infrastructure:

The supplier is required to provide a comprehensive list of all infrastructure necessary for the implementation of the proposed solution. This must include detailed specifications for each item, along with corresponding costing estimates.

Eskom reserves the right to procure the required infrastructure equipment either under the same contract or through alternative sourcing channels. This decision will be based on a detailed analysis conducted in collaboration with the Infrastructure Centre of Excellence, ensuring alignment with technical, operational, and strategic requirements.

The supplier must provide all required system environments necessary for the implementation and operation of the solution. These environments include the following:

- Development
- Quality Assurance (QA)
- Pre-Production
- Production
- Disaster Recovery (DR).

Each environment must be clearly defined and provisioned to support the respective stages of the system lifecycle, ensuring stability, scalability, and continuity of operations

7.5 Maintenance and Support:

- Vendor to indicate licensing models for requisite software, the validity periods, mechanisms for renewal/extension and associated costs.
- All diagnostic software necessary to debug/diagnose/troubleshoot the system applications must be provided with the initial application release package or be readily available for the base operating system (i.e. Microsoft).
- Subsequent releases or updates of the initial software package must adhere to CI/CD best practices. Vendor to advise how and when releases, patches or any upgrades will be implemented on the system.
- Any expected planned maintenance activities for the solution's lifetime are to be provided, including the expected system downtime for these activities
- Vendor to provide details on Operating System Patch Management process, indicating evaluation of patches and process for deployment (i.e. approval of released MS patches for the application environment and the responsibility for implementation).
- List of all software and other licenses used by the solution must be provided. Eskom to leverage existing enterprise licensing agreements to aid in the determination of the elected solution.
- The offered solution must be capable of logging system errors, and generating error reports exportable to formats native to Microsoft.
- Offered solution must also comprise a fully licensed, Production, Pre-Production, Development/QA environment that replicates the solution placed into Production.
- Disaster Recovery solution with associated architecture environment to be provided.
- Proposed solution should offer system redundancy, such that service downtime on primary systems is negated/minimized.
- All applications and services necessary for the operation of the solution must start automatically from cold or warm-restart conditions.
- The vendor shall provide details of all single points of failure in the expected data flow, and the manual interventions necessary to remedy the particular point of failure.
- Vendor to provide comprehensive free-issued support documentation for all components of the solution delivered. Documentation to be available in English.
- Vendor to provide expected performance and expected failure rates, based on historic experience with the offered solution.
- Solution platform must be extensible via in-built tools or low/no-code capabilities.
- Any client software must have the capability to be packaged for remote deployment via SCCM.`
- Vendor to provide details of any certification or product agreements with the solution OEM.

7.6 Service Level Agreement (SLA Requirements)

- SLA to be proposed by vendor with clearly defined support tiers, response times and escalation processes.
- Vendor to offer 2nd line and higher system support, with details of the type of support (e.g. on-site support, remote support, hardware support, error debugging, upgrade implementation) and extent of technical support received from the OEM for all applications constituting the solution for the duration of the solution/contract lifetime.
- SLA to detail standard system and maintenance support provided, and the associated annual costs.
- Vendor to have available at least 2 technical resources for 2nd line support during contracted support hours.
- SLA proposal to include factors that constitute a critical incident and expected response times.
- SLA to detail process for requesting vendor support for troubleshooting/maintenance, and the hours of availability. A formal method for the logging, tracking and reporting of such instances must be detailed. Process for requesting additional/ad-hoc support outside of the standard software support must be detailed. Process for requesting technical support outside of standard office hours must be detailed.
- The SLA must detail baseline system performance. Vendor should also express a commitment to exceed the outlined system performance.
- The platform shall support automated deployment and rollback procedures, using CI/CD best practices.
- The vendor shall provide 24×7 monitoring, with real-time dashboards and automated alerting for critical components for the AMI platform.
- Updates and patches must not result in more than 30 minutes of downtime or shall be scheduled outside of business hours.
- Platform extensibility via low code/ no code capability to cater for about 80% of forms to be developed/ customised with no programming background

7.6.1 Availability & Reliability

- ≥ 99.5% availability of the mobile platform during business hours, excluding during planned maintenance. The critical operations to be identified and prioritized e.g. outage response and restoration
- In terms of Disaster Recovery (DR) capabilities, the ability to restore platform functionality with:
  - RTO ≤ 1 hour (restoration time indicator)
  - RPO ≤ 5 minutes (max data loss after failure)
- Near-real time availability of audit trail logs for all form submissions
- Offline capability of more than 12hrs, to enable uninterrupted field operation for out of coverage areas.

The following table depicts Eskom's current recovery objectives, such as Recovery Time Objective (RTO) and Recovery Point Objective (RPO), with the needs and priorities of the organisation. It should be noted however, that these RTOs and RPOs need to be revised, in view of the AMI Platform to support real-time functionality.

System Importance	Safety and revenue Critical	Mission Critical	Business Critical	Normal Business Essential	Normal Non-essential
Impact Rating	High	High	Medium	Medium	Low
Tier	Tier 0	Tier 1	Tier 2	Tier 3	Tier 4
Definition	Failure of system may result in injury or death and/or	Vital to the functioning of the organisation and accomplishment of its mission	Without which the business can continue operations for a	Without which the business can continue operations for after	Without which the business can continue operation for up

System Importance	Safety and revenue Critical	Mission Critical	Business Critical	Normal Business Essential	Normal Non-essential
	significant loss of revenue		predefined time period-	5 days	to a month
Time Loss/ RTO	<8 hrs	<24 hrs	<48 hrs	<5 days	>5 days
Data Loss/ RPO	0	0	<24 hrs	<24 hrs	>5 days

A Business Impact Assessment (BIA) review must be done as part of the solution design, together with the business stakeholders and IT Business Continuity team.

The service provider must provide hardware specs as part of the proposal for Eskom's data to be backed up. This backup could be located at Teracco at Eskom's DR site, or on-premises at the MWP data centre or another supported Eskom hyperscale tenant. The software standard for backups at Eskom is Netbackup.

7.7 Architecture Requirements

The tenderer shall provide a comprehensive architecture design for the Advanced Metering Infrastructure (AMI) platform. This design must clearly outline the structure and interaction of all relevant components, including:

- **Software Components:** Detailed specifications of the MDMS, HES, and SMOC systems, including third-party applications, middleware, and licensing requirements.
- **Interfacing Systems:** Propose additional integrations that enhance business processes.
- **System Infrastructure:** Definition of all required environments (Development, QA, Pre-Production, Production, DR), hardware specifications, and virtualization/storage strategies aligned with Eskom standards.
- **Data Architecture:** Data flow models, governance frameworks, and migration strategies for historical and operational data, including dummy data sourcing and validation.

7.7.1 IT Standards

The tenderer must ensure adherence to Eskom's architectural standards, where applicable. The following base ICT standards apply

Integration	End interface points, whether consuming or providing, needs to be done in a secure web service fashion. The Eskom standard is Oracle Fusion and IBM DataPower Gateway, which underlie the present Enterprise Integration Platform/Service Bus**.**
Server Virtualization	It is expected that the solution will run in a virtualised environment. Clear motivation and reasons will have to be provided where it is not possible
Storage Virtualization	It's expected that the solution will run in a virtualised environment. Clear motivation and reasons must be provided when it is not possible. Current Standards of the on-premise environment: - VMware vSphere 7 or higher, - PowerVM (RISC) (only exceptional cases shall be supported)
Database	- MS SQL 2022 - IBM DB2 V 11.5 - Oracle Database 19c (not preferred) - Oracle Database 21c (not preferred) - PostgreSQL V13.2 and PostGIS
Server OS	• Microsoft Windows Server 2022

	• SuSe Linux SLES 15 • AIX 7
Client OS	Windows 11
Browser	• Edge • Mozilla Firefox v39 • Mozilla Firefox V60
Load Balancing	F5 Viprion
Backup	NetBackup
Communication Protocol	TCP/IP

8. General Requirements

8.1 Contract period

- **Implementation**
  - 2 years for initial implementation including all integration
- **Support and Maintenance: 24 months**
  - 2 years Maintenance and Support.
    - This will only apply after base implementation is completed and in production.
  - Fixed or Milestone based Contract.

8.2 Licencing Requirements:

The supplier must provide detailed licensing requirements for both the implementation period and the subsequent two-year support and maintenance phase. This should include all necessary licenses to ensure full functionality of the solution throughout its lifecycle, covering development, deployment, integration, and ongoing operational support.

The envisaged number of devices per system is as follows:

No	System	During Implementation	Year 1 (Production)	Year 2 (Production)
01	MDMS	1 000 000	5 000 000	8 000 000
02	HES	1 000 000	5 000 000	8 000 000
03	SMOC	50	150	150

Device licenses will be billed only upon allocation to the system, with regular consolidation and verification conducted in coordination with the Contracts Manager.

8.3 Training/Transfer of Skills Requirements:

The supplier shall be responsible for the development, coordination, and delivery of a comprehensive training and skills transfer programme to support the successful implementation and long-term sustainability of the AMI solution. This includes both user and technical training, as well as structured knowledge transfer to Eskom's Group IT support teams.

- Training Types and Objectives
  - User Training: To equip system users with the necessary skills to operate the AMI systems (MDMS, HES, SMOC) effectively and achieve desired business outcomes.
  - Technical Training: To enable Eskom's technical support teams to provide at least 1st and 2nd line support, including system configuration, troubleshooting, and maintenance.
- Knowledge and Skills Transfer
  - The supplier must implement a structured knowledge transfer programme for Group IT support resources who will be responsible for ongoing system support.
  - Mentorship must be provided during installation, configuration, and deployment phases to ensure hands-on learning and continuity.
- Training Strategy and Delivery
  - The supplier will develop tailored training strategies for all stakeholder groups, based on the impact on business processes and human resources.
  - Training must include:
    - Classroom-based sessions:
      - MDMS: 300 users
      - HES: 100 users
      - SMOC: 150 users
    - Train-the-Trainer Programme:
      - At least 10 IT Administrators/Super Users to be trained to ensure internal capacity building.
    - Web-based Training:
      - Developed in line with Eskom Academy of Learning (EAL) guidelines, accessible on-demand via the EAL platform.
    - Post-Implementation Training:
      - Online training to support future system changes during the maintenance and support phase.
- Training Materials and Support
  - All training materials must be provided in English and aligned with Eskom's standards.
  - The supplier must ensure that training content is updated to reflect any system enhancements or process changes during the contract period.

8.4 Migration Requirements:

The supplier is required to develop and document a comprehensive data migration plan for all relevant data systems.

This plan must include the sourcing of dummy data for testing purposes and outline the approach for formatting and migrating data from current systems interfacing to the new solution. In addition to migrating historical data, the supplier must ensure seamless data migration from all interfacing systems, including but not limited to billing, metering, and customer management platforms. This will ensure data continuity, integrity, and readiness for operational use within the new environment.

8.5 Eskom Governance and Process:

Various Eskom governance and processes need to be followed. Please allow for sufficient time in your estimated timelines/ project plan.

The supplier must be aware that several governance processes are required throughout the project lifecycle should be factored into the project planning. These include, but are not limited to:

- **Enterprise Architecture (EAAB)** approvals and support, typically reviewed during weekly Monday meetings, with submissions due by mid-week of the preceding week
- **Integration Centre of Excellence (CoE)** approvals for new integration messages or amendments to existing ones
- **Project Delivery -** related approvals, which may vary depending on the phase and scope of the implementation
- **Infrastructure provisioning**, including setup and patching activities, which may take several days and are subject to approval by the Infrastructure Platform CoE and Hosting CoE

8.6 Minimum Resource Requirements:

This is a milestone-based project, and the supplier needs to specify any extra resources they need to finish it. Eskom has given the minimum requirements, but the supplier can add more resources as they see fit to meet the deliverables.

#	Resource	Level	Number of resources
01	Project Manager	Intermediary / Senior	1
02	Business Analysts	Intermediary	2
03	Technical Architect/Data Architect	Intermediary	2
04	Change Manager	Intermediary	1

The supplier must make provision for ad-hoc professional services, to be rendered on an as-and-when-required basis, totalling 160 hours per year over the five-year support and maintenance period. In support of this, the supplier is required to provide a detailed hourly rate card for the various resource categories, aligned to the estimated hours and roles anticipated for these services.

8.6.1 Resource Requirements: Project Management

The supplier shall provide comprehensive project management services aligned with the principles of the Project Management Body of Knowledge (PMBOK) and Agile delivery methodologies to ensure structured execution and responsiveness to evolving project needs.
A full-time Project Manager must be assigned for the duration of the project to oversee planning, execution, monitoring, and closure activities. The supplier must submit a detailed implementation plan and timeline, including a phased rollout strategy that identifies quick wins and prioritizes high-impact deliverables to accelerate value realization.

The project plan must incorporate:

- **PMBOK** aligned processes such as scope definition, schedule management, cost control, risk management, stakeholder engagement, and quality assurance.
- **Agile principles**, including iterative development, continuous feedback, and adaptive planning to accommodate urgent requirements and changing priorities.

- A **quality assurance framework** to ensure deliverables meet Eskom's standards and are validated throughout the lifecycle.

The supplier must also ensure that project governance, reporting, and milestone tracking are integrated into Eskom's existing project delivery structures, with clear escalation paths and performance indicators.

Skills and Resource Requirements:

The supplier must provide at least one Business Analyst with the following minimum qualifications:

- Experience: Minimum of 10 years in Project Management.
- Education: B Degree in Business in IT/Computer Science. Registered with the Project management Body of Knowledge (PMBOK) and Agile Framework/Prince 2.

8.6.2 Resource Requirements: Business Processes

The supplier shall provide dedicated Business Analysts to support the successful delivery of the AMI Programme, ensuring that business requirements are accurately captured, validated, and translated into actionable system specifications. Business analysis activities must be aligned with the Project Management Body of Knowledge (PMBOK) framework and incorporate Agile principles to accommodate evolving priorities and accelerate delivery.

Key Responsibilities:

- Conduct stakeholder engagement sessions to elicit, document, and validate business requirements across all AMI components (MDMS, HES, SMOC).
- Facilitate workshops and interviews to understand current processes, identify gaps, and define future-state workflows.
- Collaborate with technical teams to ensure requirements are feasible, traceable, and aligned with Eskom's strategic objectives.
- Support iterative development cycles by refining user stories, acceptance criteria, and backlog prioritization in line with Agile practices.
- Ensure alignment between business needs and system capabilities through continuous feedback loops and change impact assessments.

Skills and Resource Requirements:

The supplier must provide at least one Business Analyst with the following minimum qualifications:

- Experience: Minimum of 8 years in a relevant business analyst.
- Education: B Degree in Business in IT/Computer Science. Registered with the Business Analysis Body of Knowledge (BABOK)

8.6.3 Resource Requirements: Change Management

The supplier shall develop and implement a comprehensive Change Management Programme to prepare users, administrators, and support teams for the adoption of new processes introduced by the AMI solution. This programme must be aligned with the Project Management Body of Knowledge (PMBOK) framework and incorporate Agile principles to ensure responsiveness to evolving stakeholder needs and project urgency.

Key Responsibilities:

- Facilitate smooth transition from legacy systems and processes to the new AMI platform.
- Minimize resistance and maximize user engagement through structured communication, training, and support.
- Ensure long-term sustainability of the solution through effective organizational alignment and readiness.
- Key Deliverables
- Change impact assessments across business units affected by MDMS, HES, and SMOC.
- Stakeholder engagement plans and communication strategies tailored to various user groups.
- Updated policies, standards, and work instructions where required.
- Training and awareness campaigns to support behavioural and process changes.
- Post-implementation support to reinforce adoption and address emerging challenges.

Skills and Resource Requirements:

The supplier must provide at least one Change Manager with the following minimum qualifications:

- Experience: Minimum of 8 years in a relevant change management role.
- Education: B Degree in Business Management, with a completed Change Management course or module.

8.6.4 Resource Requirements: Technical and Data Architect

8.6.4.1 Technical Architect:

The supplier shall provide Technical Architecture services to support the design, integration, and deployment of the AMI solution components (MDMS, HES, SMOC).

Key Responsibilities:

- Define and validate the technical architecture for all solution components
- Ensure alignment with Eskom's enterprise architecture standards and integration frameworks
- Support system design, infrastructure planning, and technology selection
- Collaborate with business analysts and developers to ensure technical feasibility of requirements
- Provide input into system performance, scalability, and security design

Skills and Resource Requirements:

- Minimum of 10 years of experience in a relevant technical architecture role and must be registered with Business Technology Architecture Body of Knowledge (BTABoK).
- B Degree in IT/Computer Science or related field.
- Proven experience in:
    - Solution architecture
    - Systems integration
    - Infrastructure design
    - Security and compliance frameworks
- Familiarity with Eskom's integration protocols and enterprise systems.

8.6.4.2 Data Architect Services:

The supplier shall provide Data Architecture services to ensure the effective design, management, and governance of data across the AMI platform.

Key Responsibilities:

- Design and document the data architecture for MDMS, HES, and SMOC systems.
- Define data models, storage strategies, and integration points with legacy and external systems.
- Ensure data quality, consistency, and security across all environments.
- Support migration planning, including historical data and real-time data flows.
- Collaborate with technical teams to implement scalable and efficient data solutions.

Skills and Resource Requirements:

- Minimum of 10 years of experience in a data architecture or data engineering role and must be registered with Business Technology Architecture Body of Knowledge (BTABoK)
- B Degree in IT/Computer Science or related field.
- Expertise in:
    - Data modelling and governance
    - ETL processes and data migration
    - Analytics and reporting frameworks
    - Database performance optimization
- Experience with high-volume data systems and smart grid analytics preferred and familiarity with Eskom’s integration protocols and enterprise systems.

6. General Scope:

6.7.1 The ***purchase and installation*** of the following core components of the Advanced Metering Infrastructure (AMI) solution: the Meter Data Management System (MDMS), the Head End System (HES), and the Smart Metering Operations Centre (SMOC).
This includes:

- Implementation
- Support and Maintenance for a period of 3yrs

6.7.2 ***Seamless integration*** of all critical systems into the AMI platform is essential to ensure efficient data flow and operational effectiveness.

6.7.3 The supplier shall be responsible for the integration with critical systems as ***Customer Care and Billing (CC&B)*** *and* ***Maximo*** must be prioritised to enable accurate and timely billing, which is considered the most essential integration requirement.

- The phasing and sequencing of additional system integrations will be determined during subsequent stages of the project, in alignment with Eskom's operational priorities and governance processes.

6.7.4 The ***purchase and installation of the required hardware***, such as servers depending on the selected solution option. Please note that detailed specifications and pricing must be provided; however, Eskom reserves the right to procure the hardware either under the same contract or through alternative sourcing channels.

6.7.5 The supplier shall be responsible for the ***Detailed Design*** of the AMI solution, encompassing all functional and non-functional components. This includes the development of comprehensive design documentation, interface specifications, and system architecture aligned with Eskom's enterprise standards. The design phase must incorporate all relevant governance processes, including approvals from Enterprise Architecture (EAAB), Integration Centre of Excellence (CoE), and Project Delivery forums. Additionally, the supplier must ensure that pre-transfer activities prior to system deployment.

6.7.6 The supplier shall be responsible for the customized development of ***data interfaces***, implementation-specific components, reporting tools, and data archiving mechanisms. These elements must be tailored to ensure compatibility with Eskom's operational environment and support seamless integration, data management, and analytics across the AMI platform.

6.7.7 The supplier shall be responsible for the ***comprehensive testing*** of the deployed solution, including data interfaces, implementation-specific components, reporting tools, and data ingestion and archiving mechanisms. Testing must validate the functionality, performance, and integration of these components within Eskom's operational environment. All testing activities must align with Eskom's standards and be conducted in collaboration with Eskom's testing teams to ensure completeness, authenticity, and readiness for production deployment.

6.7.8 The scope of this work includes the ***comprehensive migration of historical data*** from existing interfacing systems—such as MV90, billing, metering, and customer management platforms—into the new Meter Data Management System (MDMS). This migration is essential to ensure data continuity, integrity, and operational readiness of the AMI platform. The process must include the extraction, cleansing, formatting, and validation of historical data, as well as the sourcing of dummy data for testing purposes. Special attention must be given to the inclusion of statistical metering data, which currently lacks a dedicated repository but is critical for planning, forecasting, and energy balancing. Additionally, the migration must incorporate data from LPU (Large Power Users), SPU (Small Power Users), and PPU (Prepaid Power Users) to ensure a

holistic and accurate representation of historical consumption and operational data within the MDMS environment.

6.7.9 The scope of the ***Change Management*** component encompasses the planning, development, and execution of a comprehensive programme to support the transition from legacy systems and processes to the new AMI platform, including MDMS, HES, and SMOC. The objective is to ensure organizational readiness, minimize resistance, and promote user adoption through structured communication, stakeholder engagement, training, and support. The consultant is expected to review all existing business processes within the context of their service offering and implement necessary changes. This includes updating relevant policies, standards, and work instructions, and providing training to support these changes. Eskom's Group IT BPM teams, in collaboration with business stakeholders, will oversee process change management (PCM) activities. The change management programme must also include post-implementation support to reinforce adoption and address emerging challenges.

6.7.10 The scope includes the validation of the ***Business Requirements*** Specification (BRS) for the AMI solution, encompassing the MDMS, HES, and SMOC components. The BRS must capture all functional and non-functional requirements necessary to support Eskom's operational, regulatory, and strategic objectives. In addition to the core functionality, the consultant is expected to identify and recommend additional capabilities that enhance system performance, integration, analytics, and user experience. This includes ensuring alignment with Eskom's enterprise architecture, integration protocols, and future scalability needs. The BRS will serve as a baseline for solution design, development, testing, and implementation.

6.7.11 The scope of ***training*** includes the development, coordination, and delivery of a comprehensive training programme to ensure effective adoption and operation of the AMI platform, including the MDMS, HES, and SMOC systems. The training must equip system administrators, end-users, and support and maintenance personnel with the necessary skills to operate, configure, and maintain the solution. The programme must include classroom-based training for 300 MDMS users, 100 HES users, and 200 SMOC users, as well as a Train-the-Trainer initiative targeting at least 10 IT administrators or super users to build internal capacity. Additionally, the supplier is required to develop web-based training content aligned with Eskom Academy of Learning (EAL) guidelines, ensuring on-demand accessibility via the EAL platform. Post-implementation training must also be provided to support future system changes during the maintenance and support phase. All training materials must be in English and updated regularly to reflect system enhancements or process changes.

6.7.12 The scope includes the ***provision of skilled and experienced*** resources from the commencement of the AMI platform implementation to ensure successful delivery of the MDMS, HES, and SMOC components. The supplier is required to allocate a minimum team comprising a Project Manager, Business Analysts, Technical/Data Architects, and a Change Manager, with the flexibility to scale resources as needed to meet project milestones. These resources must be available full-time and possess the necessary qualifications and certifications aligned with PMBOK, BABOK, and BTABoK frameworks. In addition to the core team, the supplier must make provision for ad-hoc professional services totalling 160 hours per year over the five-year support and maintenance period, with a detailed rate card for various roles. Preference will be given to suppliers who can provide the majority of these resources locally to support skills development and economic empowerment.

6.8 Tender Consideration:

6.8.1 Tenderers are encouraged to complete the TEC documents with clear reference information, including the document name and corresponding page numbers, to facilitate a fair and efficient evaluation process.

6.8.2 Tenderers are advised to initiate the visa application process as early as possible, as shortlisted suppliers will be given only two weeks' notice to prepare for the next evaluation phase due to the urgency of the project.

1.3 Interpretation and terminology

The following abbreviations are used in this Works Information:

Abbreviation	**Meaning given to the abbreviation**
AMI	Advanced Metering Infrastructure
DC	Data Concentrator
LPU	Large Power Users
ECU	Edge Computing Unit
SPU	Small Power Users
IPC	Insulated Piercing Connector
EPC	Engineering Procurement and Construction
SMOC	Smart Meter Operations Centre

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:
Risk register and compensation events	Weekly on _____ at ___	TBA	TBA
Overall contract progress and feedback	Monthly on _____ at ___	TBA	*Employer*, *Contractor*, *Supervisor*, and ___

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.

2.2 Documentation control

All correspondence is to be addressed to the Project Manager with a chronological numbering system.

2.3 Health and safety risk management

The *Contractor* shall comply with the health and safety requirements in accordance with the Occupational Health & Safety Act, No. 85 of 1993.

2.4 Environmental constraints and management

The *Contractor* shall comply with the environmental criteria and constraints in line with the Environmental Legislation and by-laws.

2.5 Quality assurance requirements

Quality Assessment Criteria, Forms A and Form B of the QM-58 specification will be selected and completed by Eskom Representative who will identify the applicable Contractor quality requirements to be met. Form A and Form B of the QM-58 specification shall be signed by the Contractor responding to an Eskom Enquiry.

2.6 Programming constraints

A comprehensive and fully detailed programme is to be submitted within the seven (7) days after the introductory meeting and should indicate all milestones and critical dates. This programme must first be approved by the Project Manager and must be updated on an as and when required basis by the Project Manager.

The following dates shall be clearly reflected on the programme:

- Starting and completion dates 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 in the factory/workshop.
- 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 meetings reflecting progress to date and the date when delivery will take place through the use of task orders.

FORMAT OF THE PROGRAM

- The Contractor shall submit his construction program in terms of the conditions of contract.
- The Contractor is to submit a revised programme for acceptance at each site meeting.
- This program shall be in the form of an approved Gantt Chart containing the following information:
- All construction activities, including milestones, initial tasks, critical path, required Outages, and target Dates. All potential risk activities should be clearly indicated on the critical path.
- Every activity on the programme will be clearly linked to labour resources and equipment required to perform the specific activity.
- Projected weekly progress on site for the entire duration of the contract.
- Completion and hand-over Dates for formal inspection by the site supervisor must be indicated.
- A column showing the daily tempo of all the construction activities must be indicated next to the activity on the programme.
- Project expenditure on a monthly basis for the entire duration of the contract.
- The following project phases and activities are minimum requirements for the programme:
- Site Establishment and Material Delivery – Lead times to be specified.

- Preparation work – Work that can be completed without the necessity of power outages.
- Outage work – Work that must be completed under outage conditions.
- Planned outages to be included in the programme.
- Contractors float to be included in the programme.
- The Contract Program will be on display in the Contractors Site Offices and will be updated weekly. In addition to the maintaining of this programme, the Contractor will report progress to the Project Manager at each site meeting or at request of the Project Manager.
- The Contractor shall also provide an organisation chart showing the personnel to be employed for the works, along with a detailed CV of all key personnel.
- Should any deviations to the program be found the Contractor shall submit a revised program to the
- Project Manager within one week of such deviations being brought to the Contractor's attention.
- The Outages must be arranged with Employer via the Outage arrangement procedures, as a pre-requisite for the acceptance of the programme by the Project Manager.
- Acceptance of any program by the Project Manager shall have no contractual status other than an indication that the Project Manager is satisfied as to the order in which the work is to be carried out, and that the Contractor undertakes to perform all work in accordance with the accepted program.

- The Project Manager retains the right to alter the accepted program should circumstances on site
- necessitate such a change.

OTHER INFORMATION TO BE SHOWN ON THE PROGRAM.

The following Statutory non-working days are included within the contract period:

- All Public Holidays for the duration of the contract.
- The programme must clearly indicate the non-working days for the entire construction period.

2.7 *Contractor*'s management, supervision and key people

The Contractor is to submit an organogram showing all key people involved in the contract 7 days after contract award. All Key Personnel must be appointed in writing, must be current for the specific site and area of work and must be kept on file. This would be essential if the Contractor is a Joint Venture.

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 *Contractor* provides the *Employer* with a tax invoice showing the amount due for payment equal to that stated in the *Project Manager's* payment certificate.

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

- Name and address of the *Contractor* and the *Project Manager.*
- The contract number and title.
- *Contractor*'s VAT registration number.
- The *Employer*'s VAT registration number 4740101508.
- Description of service provided for each item invoiced based on the Price List.
- Total amount invoiced excluding VAT, the VAT and the invoiced amount including VAT.

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

General Information	**X**
- No Pro-forma Invoice	
- Check Vendor number against the Address and name on Tax invoice	
- Insert the Vendor number on Tax invoice (Top right-hand corner)	

- Bank details must be on the invoice or on an attach sheet, but it does not require a bank stamp just a letter)	
- Check banking details on invoice against SAP system. If more than one banking account check bank account against banking details on invoice. If banking details not on invoice, write the bank code next to the vendor account (bank code 0002)	
- Check Vendor VAT number against the vendor master. (FK03) If VAT number not on master records, prepare a list and forward to Vendor Management to check and update the vendor master records	
- No fax copies of Tax invoices allowed	
- No copies of Tax invoices allowed unless originally printed by the Vendor if a photocopy tax invoice, it must be an original "certified copy" (i.e., not a copy of a "certified copy" invoice) from the vendor and check in system if not previously be paid. Put stamp "not previously paid" on invoice and sign.	
- Ensure that date received stamp is clear on invoice	
- Stamp all Invoices with the Vat stamp, complete and sign (only when VAT is applicable)	
- The stamp should not be stamped over any written information	
- When scanning invoice, check the quality before linking in SAP (inboxes)	
With Reference Invoices	**X**
- Goods receipt must be done (payment with reference)	

- Ensure that the SAP purchase order number is clear and correct on the invoice	
- GR number to be written on the Invoices	
- If multiple lines on invoice write the line number of the order against the line to ensure that the processors match the correct lines (to ensure that 191100 is matched correctly)	

2.9 Insurance provided by the *Employer.*

Refer to the embedded document below for details.

Confirmation of insurance cover - Esk

2.10 Contract change management

The NEC contractual mechanism will be applied for changes to the Contract and supporting documents must be provided by the Contractor when required by the Employer.

2.11 Provision of bonds and guarantees

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*

For other compensation events, the changes to the Prices are assessed as the effect of the compensation event upon

- the actual Defined Cost of the work already done,
- the forecast Defined Cost of the work not yet done and

- the resulting amount calculated by applying the percentage for overheads and profit to the Defined Cost of the work.

Effects on Defined Cost are assessed separately for
- people,
- equipment,
- plant and materials included in the goods,
- work subcontracted by the Supplier and
- transport.

The Contractor shows how each of these effects is built up in each quotation for a compensation event.
If the compensation event arose from the Supply Manager giving an instruction, changing an earlier decision or correcting an assumption, the date which divides the work already done from the work not yet done is the date of that communication. In all other cases, the date is the date of the notification of the compensation event.
The percentage for overheads and profit is applied to the assessed effect of the event on Defined Cost except that it is not applied to any tax charges for
- customs clearance and
- export and import.

The date when the Project Manager instructed or should have instructed the Contractor to submit quotations divides the work already done from the work not yet done.

2.13 Training workshops and technology transfer

The obligation for technology transfer being included as part of this contract on both during Project execution, and for future training (Support and Maintenance). The Contractor shall provide a proposal that addresses this requirement, without the need for dedicated training infrastructure.

3 Engineering and the *Contractor*'s design

3.1 *Employer*'s design

The embedded documents contain the Employer's specification.

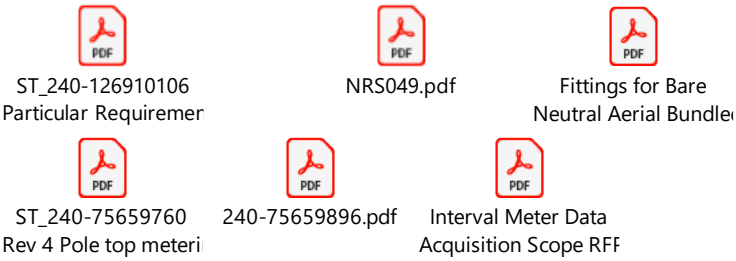
The following technical documents are applicable for the smart meters and DCU/ECUs:
- Evaluation Criteria for a smart metering system.
- NRS 049-2:2024 (Edition 3 Advanced metering infrastructure requirement for smart metering system - Part 2: Requirements for smart metering equipment).
- Particular requirements for Eskom smart metering system

The following technical documents are applicable for pole top split metering kiosks and secure pole mount DC kiosk:
- D-DT-3055, Buyers guide for pole top split metering kiosks.
- D-DT-1034, Manufacturing drawings for a secure pole mount DC kiosk.
- D-DT- 1042, 1043, 1044 & 1045, Manufacturing drawings for Pole Top Boxes.
- ST_240-55146411 standard for energy meter kiosks: secure pole-top multi-way metering kiosks.
- ST_240-75659760 Pole-mounted service distribution boxes for split prepayment metering standard
- Phase 1 and Phase 2 Technical Schedule for pole top split metering kiosks (Microsoft Excel files).
- Technical scheduled AB for 3CR12 metering kiosks and DC (Microsoft Excel files).
- Technical evaluation criteria for pole top split metering kiosks.
- Technical evaluation criteria for metering kiosks and DC.

The following technical documents are applicable for Insulation Piercing connector (IPC)s:
- D-DT 3039, Insulation Piercing connector.
- 240-171000105, Technical evaluation criteria for IPCs.

The following technical documents are applicable for the readyboard retrofit and access cover:

- D-DT 3171 (Readyboard, Split Meter retrofit and Access cover).



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

Refer to the specifications stipulated under section 3.1 of the scope of work.

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

- The Contractor designs the parts of the works which the Works Information states he is to design.
- The Contractor submits the particulars of his design as the Works Information requires to the Project Manager for acceptance. A reason for not accepting the Contractor's design is that it does not comply with either the Works Information or the applicable law.
- The Contractor does not proceed with the relevant work until the Project Manager has accepted his design.
- The Contractor may submit his design for acceptance in parts if the design of each part can be assessed fully.

3.4 Other requirements of the *Contractor*'s design

Refer to the specifications stipulated under section 3.1 of the scope of work.

3.5 Use of *Contractor*'s design

The Employer may use and copy the Contractor's design for any purpose connected with construction, use, alteration or demolition of the works unless otherwise stated in the Works Information and for other purposes as stated in the Works Information.

3.6 Design of Equipment

Refer to the specifications stipulated under section 3.1 of the scope of work.

3.7 Equipment required to be included in the *works*

Refer to the specifications stipulated under section 3.1 of the scope of work.

3.8 As-built drawings, operating manuals and maintenance schedules

As-built drawings required, must be marked up by The Contractor in conjunction with the Engineer. The final completion certificate for the works will not be issued by The Project Manager unless all as-built drawings have been received if required. The Contractor should take note that the 50% retention release is subject to

the Employer having received the As-built drawings if applicable. The Contractor is required to comply with the Eskom 240-105658000 Supplier Quality Management Specification Should there be a requirement for The Contractor to provide any operating and maintenance manuals, two full sets must be provided to the Employer within one working day of the handover.

Handover: Contractor shall handover the works after commissioning procedure standards has been confirmed and issuing of Certificate of Compliance has been made available and signed and approved by accredited Lab Master Installation Electrician. Configuration Management: All name coding shall be guided by the Employer. • Labels shall be manufactured as per configured data by The Contractor and affixed. • Employer shall provide The Contractor with a Labelling Standard which provides a guideline on the manufacture of the labels.

4 Procurement

4.1 Minimum requirements of people employed on the Site

All people employed by the Contractor to perform supervision of installation and commissioning should have Police Clearance before work can commence. The Contractor's employees shall be sober when carrying out their duties and may be subjected to random breathalyser tests.

4.2 National Industrial Participation Programme

Eskom will implement the NIPP requirement, which determines that the contractor/supplier must contact the Department of Trade, Industry and Competition (DTIC) to arrange for support and development of local businesses. Eskom is required to inform the tenderers of this requirement. NIPP will only be applicable for contracts with an FGN component or content of USD 5 million or more.

"NIPP is a programme that seeks to leverage economic benefits and support the development of South African industry by effectively utilising the instrument of government procurement. The NIPP programme is mandatory for all government and parastatal purchases or lease contracts (goods and services) with an imported content equal to or exceeding USD 5 million.

"The programme targets South African and foreign industries, enterprises, and suppliers of goods and services to government/parastatals, where the imported content of such goods and services equals to or exceeds USD 5 million. The first customer of NIPP is the South African industry that benefits through the NIPP business plans, which, when implemented, generate new or additional business activities through one or more of the following: investment, export opportunities, job creation, increased local sales, SMME and BEE promotion, R&D, and technology transfer.

"Companies with an NIPP obligation must sign this obligation agreement with the Department of Trade, Industry and Competition (DTIC) before the contract with Eskom Holdings SOC Ltd, as a purchasing entity, is signed. The obligation agreement governs the relationship between the DTIC and the supplier. It defines the NIPP obligation value(s), requirements to fulfil the NIPP obligation, performance milestones, performance monitoring processes, and the NIPP credit allocation criteria.

"All tenders with an import content that is equal to or exceeds the threshold of USD 5 million compels the winning bidder to negotiate and enter into a NIPP obligation agreement with the DTIC before signing the contract with Eskom."

NIPP Applicability

The successful tenderer will be required to negotiate and enter into a NIPP obligation agreement with the Department of Trade Industry and Competition (DTIC) before signing the contract with Eskom SOC Ltd, should the tenderer have an import portion that amounts to USD 5 million or more. Compliance on these

contractual obligations will be monitored by the DTIC and in the event of non-compliance by the Supplier / Obligor, penalties will be applied as per paragraph 8.3 of the NIPP Guidelines.

4.3 Subcontracting as condition of award

Subcontracting will be treated as a condition for contract award.

The tenderer is encouraged to procure/spend on designated groups on the following paid invoices for both:
- indirect expenses (e.g. overheads) on goods and services supplied to the contractor/supplier by designated groups; and
- direct spend on goods and services supplied by the subcontractors for the execution of the scope of work

Tenderers are required to indicate the percentage to be subcontracted to / procured from the designated groups as indicated below:

Designated Groups	**Tenderer's Subcontracting Percentage Proposal**
Procurement from EME/QSE >51% owned by Black People (**BO**)	
Procurement from EME/QSE >51% owned by Black People who are Youth (**BYO**)	
Procurement from EME/QSE >51% owned by Black People who are Women (**BWO**)	
Procurement from EME/QSE >51% owned by Black People living with Disability (**BPWD**)	

NOTE: Tenderers shall submit the following mandatory returnable for Subcontracting:

- Subcontracting agreement / contract signed by both parties, with subcontractors' company registration documents and B-BBEE certificate or sworn affidavit or
- Copies of letters from the tenderer to the sub-contractors, stating the intent to sub-contract, signed by both the tenderer and earmarked subcontractor

Subcontracting, in this instance, will be treated as a condition for contract award. A supplier awarded a contract may not subcontract more than 25% of the value of the contract to any other entity that does not have an equal or higher B-BBEE status level of a contributor than the supplier concerned unless the contract is subcontracted to an EME that has the capability and ability to execute the subcontract.

Note: The successful tenderer will be required to submit subcontractors' BBBEE Certificate / Sworn Affidavit and CSD numbers upon award.

Enterprise and Supplier Development – Phase 1 (AMI)

- As part of Enterprise and Supplier Development (ESD), the main contractor is to ensure that skills are transferred the subcontractor, so that the subcontractor gets to a level where they can offer the full services on their own
- The main contractor and subcontract to sign an Enterprise Development Agreement to be availed by Eskom
- The main contractor will be required to report on interventions provided as well as progress made

4.3 **SDL&I Objectives in line with Reconstruction and Development Programme (RDP**

Transformation – BBBEE Improvement or Retention Plan

Transformation remains an area of focus, where Eskom continuously strives to align itself with national transformation imperatives to unlock growth, drive industrialization, create employment and contribute to skills development.
Eskom encourages its suppliers to constantly strive to improve their B-BBEE rating. Whereas Tenderer/s will be allocated points in terms of a preference point system based on specific goals, Eskom also requests that tenderer/s submits their B-BBEE improvement or retention plan within 30 days of signing the contract.

Tenderer/s are therefore requested to indicate the extent to which they will maintain (only if the respondent is a Level 1) or may improve/maintain their B-BBEE status over the contract period if their B-BBEE status is level 2 or 3. Tenderer/s with a B-BBEE status level 4 at the time of contract award, shall migrate and achieve as a non-negotiable a milestone of B-BBEE Level 3 by the end of the first year of the contract and thereafter improve their B-BBEE status level or migrate by one level higher.

Tenderer/s with a B-BBEE recognition status of Level 5 to Level 8 or non-compliant at the time of contract award, shall migrate and achieve as a non-negotiable a milestone of Level 4 by the end of the first year of the contract and thereafter improve at least one B-BBEE Level higher of each year from the second year of the contract. Tenderer/s are requested to submit their B-BBEE Improvement Plan as an essential document within 30 days of signing the contract.

NB: A valid B-BBEE certificate or Sworn Affidavit is a condition for contract award, if your company's annual Total Revenue is R10 Million or less you qualify as an Exempted Micro Enterprise therefore you can submit Sworn Affidavit. If your annual Total Revenue is R50 Million or less, you qualify as Qualifying Small Enterprise and must comply with all of the elements of QSE score card relevant to your sector unless an entity is at least 51% Black owned you are required to obtain a Sworn affidavit. If your Annual Total Revenue is above R50m you need to submit a Valid B-BBEE certificate.

4.5 Skills Development

Tenderers will be required to submit proposals in the table below for developing the skills of unemployed candidates in the country. The composition of the candidates shall be representative of the population demographics of South Africa

Skill Type / Occupation	Eskom Target	Proposed Number of Candidates
Project Manager	1	
Solution Architect	2	
Integration Specialist	10	
Developer	10	

The process of developing these skills shall involve the participation by tenderers directly and through their supply network. In certain cases, the SETA's accredited training providers can be approached to participate in developing critical and scarce skills.

Note: That these targets for skills development candidates categorically exclude Eskom employees and registered learners. The tenderers are required to take full responsibility for the total cost of developing the requisite skills, and Eskom shall not make any financial contribution towards the fulfilment of this obligation. Tenderers also are advised to approach their relevant SETAs to access grants, subsidies, and incentives as well as South African Revenue Services for tax rebates that are earmarked for skills development initiatives.

4.4 Job Creation

Tenderers will be required to indicate the number of jobs created and or retained as a result of being awarded this contract.

Tenderers are required to indicate the number of jobs created and or retained as a result of being awarded this contract.

Number of Jobs to be Created	Number of Jobs to be Retained

4.5 SDL&I Penalty and Performance Security

Eskom will apply a penalty of 2.5% of the contract value for failure to meet SDL&I obligations.
For the duration of the contract, Eskom will retain 2.5% of every invoice (excluding VAT) as security for the fulfilment of all SDL&I Obligations. The retained amounts shall only be released to the Contractor upon:

- Eskom receives the SDL&I progress report/s from the contractor.
- Fulfilment of all SDL&I obligations by the contractor.

Submission of an approved compliance report by SDL&I Department.

4.6 Reporting and Monitoring

The suppliers shall submit a report to Eskom in accordance with Data Collection Template on their compliance with the SDL&I obligations described above.
Eskom shall review the SDL&I reports submitted by the suppliers within 30 (thirty) days of receipt of the reports and notify the suppliers in writing if their SDL&I obligations have not been met.
Upon notification by Eskom that the suppliers have not met their SDL&I obligations, the suppliers shall be required to implement corrective measures to meet those SDL&I obligations before the commencement of the following report, failing which Retention clauses shall be invoked.
Every contract shall be accompanied by the SDL&I Implementation Schedule, which must be completed by the suppliers and returned to SDL&I representative for acceptance 28 days after contract award. This will be used as a reference document for monitoring, measuring and reporting on the supplier's progress in delivering on their stated SDL&I commitments.

4.7 Plant and Materials

4.7.1 Quality

The Contractor shall control his activities and processes in accordance with Eskom's Quality Requirements for Procurement of Assets, Goods & Services, QM-58 and ISO-9001.

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

The Employer requires warranties from the Contractor to be in favour of the Employer and not just to the favour of the Contractor during the life of the contract.

4.7.3 *Contractor*'s procurement of Plant and Materials

The Contractors must adhere to all relevant safety regulations during procurement and installation of materials and plant as well as environmental laws and regulations regarding material sourcing, disposal of waste, and energy consumption.

Contractors need to ensure that all procured components are compatible with each other and with the existing infrastructure and that they meet the required quality standards.

4.7.4 Spares and consumables

Not applicable

4.8 Tests and inspections before delivery

All materials shall be regularly tested at the manufacturers' factories within the country. The Contractor shall make sure that regular quality control tests are carried out to ensure that good quality of the materials is maintained.

4.9 Marking Plant and Materials outside the Working Areas

Whatever title the Contractor has to Plant and Materials which is outside the Working Areas passes to the Employer if the Supervisor has marked it as for this contract.

The Supervisor marks Equipment, Plant and Materials which are outside the Working Areas if

- this contract identifies them for payment and
- the Contractor has prepared them for marking as the Works Information requires.

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

The Contractor provides equipment that is rated for the environment that is suitable for the equipment. The Contractor incorporates factors such as ambient temperature, relative humidity, dust ingress, water ingress, wind, oil, access for maintenance and theft when selecting the equipment and its siting. The operating conditions where equipment will be installed must not reduce the life expectancy of the equipment.

4.11 Cataloguing requirements by the *Contractor*

The required goods already have SAP numbers which the Supplier have to indicate at all times.

5 Construction

5.1 Temporary works, Site services & construction constraints

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

- The Contractor is responsible to comply with all site regulations during construction phase of the project until completion date.
- The Contractor is responsible for the safety of all personnel involved in the works as well as the safety of all personnel and other members of the public affected by the construction of the works.
- The Contractor is responsible for the design, erection, maintenance and removal of all temporary bracing or propping or falsework required for the execution of the works.
- All construction works complies with SANS 1200 standardised specification for civil engineering construction.

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

In addition to the above, there may be restrictions on access to sites, roads, walkways, and the use of barricades which are crucial for safety and traffic management. These measures, often involving signage and physical barriers, are implemented to control the flow of people and vehicles, protect infrastructure, and minimize hazards. The Contractor shall comply to site specific rules.

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

Restrictions and hours of work may apply on some Sites. It is very important that the Contractor keeps records of his people on Site, including those of his Subcontractors which the Project Manager or Supervisor have access to at any time. These records may be needed when assessing compensation events.

5.1.4 Health and safety facilities on Site

The Employer prioritize health and safety in all construction sites, adhering to national standards, legislative requirements, and industry best practices. Contractors are responsible for managing their own health and safety programs, ensuring compliance with Eskom's policies and procedures, as well as relevant legislation.

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

This has been addressed under section 2.4 of the works information.

5.1.6 Title to materials from demolition and excavation

- The Contractor removes Equipment from the Site when it is no longer needed unless the Project Manager allows it to be left in the works.
- 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.

5.1.7 Cooperating with and obtaining acceptance of Others

The Contractor shall co-operate with Others in obtaining and providing information which they need in connection with the works. Furthermore, He shall co-operate with Others and share the Working Areas with them.

5.1.8 Publicity and progress photographs

All pictures taken must be used for Contract purpose/ requirement. The Contractor must get an approval from the Employer to use site pictures for reasons outside the Contract.

5.1.9 *Contractor*'s Equipment

The Contractor must provide all equipment and tools required to execute the works and complete the project. The Contractor is responsibility for safeguard of his equipment on site.

5.1.10 Equipment provided by the *Employer*

The Employer provides no equipment to the Contractor for execution of this scope of work.

5.1.11 Site services and facilities

Ablution Facilities:

Contractors are required to provide adequate and clean ablution facilities, often chemical toilets, or connect to existing Eskom facilities if available.

Wastewater Management:

A system for managing wastewater, such as a septic tank or a portable toilet system, is crucial for environmental compliance.

Potable Water:

Access to clean, potable water is essential for drinking and other site activities.

Contractor's Yard:

A designated area for the contractor's use, including space for storing materials and equipment.

5.1.12 Facilities provided by the *Contractor*

The Contractors must provide and manage their facilities that supports their work and personnel. These include site offices, storage areas, waste management solutions, and health and safety provisions like toilets. They are also responsible for ensuring access roads are maintained and restored to their original condition after construction.

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

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

5.1.14 Survey control and setting out of the *works*

Not applicable.

5.1.15 Excavations and associated water control

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

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

The Contractor must conduct underground survey/ detection to check and confirm existing services/ cables/ infrastructure in the specific area before excavating or trenching the ground.

5.1.17 Control of noise, dust, water and waste

The Contractor must comply with SHE specification requirements.

5.1.18 Sequences of construction or installation

Not applicable.

5.1.19 Giving notice of work to be covered up

The Contractor must give the Supervisor early notice before covering up work. This allows the Supervisor to inspect the work before it's covered. The specific notice period should be sufficient to allow for inspection. The Contractor is obligated to provide all necessary information and assistance for the inspection. Failing to provide proper notice could lead to delays or issues if the Supervisor needs to inspect the work after it's been covered.

5.1.20 Hook ups to existing works

The Contractor must comply with SHE specification requirements.

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**
	As built drawings of	Within days after Completion
	Performance testing of the *works* in use as specified in paragraph of this Works Information.	See performance testing requirements.

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

The Contractor will have to carry out the supervision of the installations, as per the instruction of the Project Manager

5.2.3 Materials facilities and samples for tests and inspections

From time-to-time random sample test and inspections may be requested, to ensure good quality of the goods being supplied.

The Contractor and the Employer must provide materials, facilities and samples for tests and inspections. These include but not limited to smart meter itself, along with communication modules, testing equipment, and potentially specialized facilities for handling and storing the meters, as well as samples for quality assurance.

5.2.4 Commissioning

Commissioning is to be done before or after Completion depending on the Programme from the Project Manager.

The Contractor is required to comply with the Eskom 240-105658000 Supplier Quality Management Specification

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

In order to put the works into operation the Project Manager may require the Contractor to either do this for him or be in attendance whilst he does it, depending on who is the responsible person.

5.2.6 Take over procedures

Take-over is after or at the same time as Completion. The Contractor is to arrange an inspection before completion of the installation to inspect and identify any outstanding or any defects. The Project Manager may require the Contractor to provide assistance, on an as and when required basis.

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

The Project Manager arranges for the Employer to allow the Contractor access to and use of a part of the works which he has taken over if they are needed for correcting a Defect. In this case the defect correction period begins when the necessary access and use have been provided.

5.2.8 Performance tests after Completion

The Contractor to demonstrate that the works can operate as guaranteed by the Contractor (in Contractor's Works Information) or specified by the Employer either here or elsewhere in this Works Information.

5.2.9 Training and technology transfer

The Employer requires the Contractor to provide training in the use and maintenance of the works or any associated transfer of technology from him to the Employer.

5.2.10 Operational maintenance after Completion

The Employer may require the Contractor before the defects date to perform certain duties after Completion and take over which relate to maintenance of the works.

6 Plant and Materials standards and workmanship

Smart meter installation standards and workmanship in South Africa are primarily governed by the NRS (National Rationalized Specifications) framework, particularly NRS057 for electricity metering and NRS071 for Automated Meter Reading (AMR). These standards, along with SANS (South African National Standards) and utility-specific requirements, ensure interoperability, safety, and accuracy of smart metering systems.

See below embedded document:

NRS049.pdf

6.1 Investigation, survey and Site clearance

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

6.2 Building works

Refer to Standards and Codes below:

- 140-170000189 Standard for Current and Future Metering Implementation
- SANS 10400-XA Building Occupancy Classes
- SANS 1544 Energy Performance Certificate
- 240- 170000540 National Contractor for Smart Meters
- 240-77224541 Standard for the operation of the metering data acquisition system

6.3 Civil engineering and structural works

Refer to section 6.2 of the works information.

6.4 Electrical & mechanical engineering works

Refer to section 6.2 of the works information.

6.5 Process control and IT works

Refer to section 6.2 of the works information.

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
See on Technical Specification		

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	
	This cover page	
C4	Site Information	

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.

5. General description

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

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

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

7. Subsoil information

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.

8. Hidden services

Before any work commences, it will be the responsibility of The Contractor to verify and ascertain the position of any other 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 due to Contractor’s fault/damage shall be for The Contractor’s account

9. Other reports and publicly available information

All relevant descriptions will be specified in the Project Specific Agreement for any project executed in terms of this contract.