



KOUGA MUNICIPALITY EC108

Notice No. 167/2025

RATES TENDER FOR SOLAR PHOTOVOLTAIC (PV) GENERATION AND BATTERY ENERGY STORAGE SYSTEM (BESS) FOR A PERIOD OF TWELVE (12) MONTHS: SPECIFICATION NO. G/10676/E

PROCUREMENT DOCUMENT

(Based on GCC 2015)

18 August 2025

Issued by:

Kouga Municipality
Municipal Offices
16 Woltemade Street
Jeffreys Bay
6300

Prepared by:

Clinkscapes Maughan-Brown South (Pty) Ltd
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GEORGE
6530

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Mr. Stiaan Adams

044-874 1511

sadams@cmbgeorge.co.za

Name of Tenderer:



CLINKSCALES MAUGHAN-BROWN
CONSULTING MECHANICAL
& ELECTRICAL ENGINEERS



KOUGA MUNICIPALITY EC108

Notice No. 167/2025

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TENDERER CONTACT DETAILS

This information shall be used for any correspondence or contact with the Tenderer.

Please indicate whether you prefer to receive any correspondence via e-mail or sent to your postal address by registered mail.

Name of Bidding Company:		Mark choice of correspondence with an X
Name of Contact Person:		
Postal Address:	 Postal Code:	
E-mail Address:	.....	
Telephone No:	.....	
Cell No:	.....	
Fax No:	.....	

TENDER OFFER

The offered total of the prices inclusive of Value Added Tax, carried over from Part C1.1, Form of Offer and Acceptance, Page C1.1.1, is:

.....

..... Rand (in words)

R (in figures).

KOUGA MUNICIPALITY

NOTICE NO. 167/2025

**RATES TENDER FOR SOLAR PHOTOVOLTAIC (PV) GENERATION AND BATTERY
ENERGY STORAGE SYSTEM (BESS) FOR A PERIOD OF TWELVE (12) MONTHS:
SPECIFICATION NO. G/10676/E**

GENERAL TENDER INFORMATION

TENDER ADVERTISED	: 18 August 2025
COMPULSORY VIRTUAL CLARIFICATION SESSION DATE:	: Wednesday, 27 August 2025 @ 10h00am
TENDER CLOSING DATE	: Wednesday, 17 September 2025
CLOSING TIME	: 12h00pm
LOCATION OF TENDER BOX	: Tender Box in Room 122 at 16 Woltemade Street, Jeffreys Bay

THE TENDER**PART T1 – TENDERING PROCEDURES****T1.1 TENDER NOTICE AND INVITATION TO TENDER**

KOUGA LOCAL MUNICIPALITY (EC108)
DIRECTORATE: ELECTRO-MECHANICAL ENGINEERING

**NOTICE 167/2025: RATES TENDER FOR SOLAR PHOTOVOLTAIC (PV) GENERATION AND
BATTERY ENERGY STORAGE SYSTEM (BESS) FOR A PERIOD OF TWELVE (12) MONTHS:
SPECIFICATION NO. G/10676/E**

Suitably qualified, capable and experienced Contractors are hereby invited to submit tenders for the Rates Tender for Solar Photovoltaic (PV) Generation and Battery Energy Storage System (BESS) for a period of twelve (12) months: Specification No. G/10676/E.

Tenders

An electronic copy of the tender document will be available on E-Tender portal www.etender.gov.za or the municipal website www.kouga.gov.za as from **Monday, 18 August 2025**. After downloading the tender document from the website each prospective bidder **MUST** ensure that all the pages of the tender document are printed.

A compulsory virtual clarification session will be arranged for **Wednesday, 27 August 2025 @10h00am**. **Prospective bidders can use the very same link below which is direct from this advert, it will link them directly to the meeting. Please take note that no attendee arriving 10 minutes late or more will be allowed to attend the clarification meeting.**

The link will also be available on the municipal website.

Join Teams Meeting

https://teams.microsoft.com/l/meetup-join/19%3ameeting_NmEwYzkyOGMtYzE0NS00ZjAyLWI2MzgtNDBmZmFIYWE1YjVh%40thread.v2/0?context=%7b%22Tid%22%3a%2226227dc1-4e2b-407e-9bee-81acf6fe8aa9%22%2c%22Oid%22%3a%220f003184-f74c-40a3-9b40-9fda5b3dfcff%22%7d

Meeting ID: 370 525 917 741 1

Passcode: 4iM9cJ2Z

Please note:

- Telegraphic, telephonic, telex, facsimile, email or late tenders will not be accepted.
- This contract will be evaluated on the 90 (price)
- The specific goals would be for a maximum of 10 points. To claim for specific goals prospective bidders MUST submit proof/required documents.
- **An electronic copy of the completed tender document with returnable documents must be submitted with tender submission saved in a flash drive or CD. Failure to submit AN ORIGINAL HARD COPY AND A COPY ON EITHER USB or CD will deem the bid non-responsive.**
- **An estimated contractor CIDB Grading of 4EP or higher is required.**
- **A minimum functional assessment score of 70% will apply to this contract.**
- **The successful contractor must be registered with the National Bargaining Council for the Electricity Industry of South Africa (NBCEI) within 30 days of commencement of operations.**
- **Bidders must note that the Municipality will make use of additional vetting methods to further qualify capacity of bidders to eliminate delays during project implementation.**
- A valid Tax compliance Status pin must be submitted.
- Prospective Service Providers must register on Kouga Municipality's Supplier database as per the registration requirements.
- The National Treasury Central Supplier Database Summary report must be submitted.

T1.1.2

- The Council reserves the right to accept any tender and, or part thereof, appoint more than one contractor, and does not bind itself to accept the lowest or any tender. The Council reserves the right to appoint any contractor.
- The validity period for submission will be 90 days from the closing date.
- Tenders that are deposited in the incorrect box or delivered to any other venue will not be considered.

Any inquiries relating to this tender must be submitted in writing via e-mail to tenders@kouga.gov.za and copied to bbosch@kouga.gov.za.

Completed documents in a sealed envelope endorsed "**NOTICE NO: 167/2025: "RATES TENDER FOR SOLAR PHOTOVOLTAIC (PV) GENERATION AND BATTERY ENERGY STORAGE SYSTEM (BESS) FOR A PERIOD OF TWELVE (12) MONTHS: SPECIFICATION NO. G/10676/E"**" must be placed in the Tender Box at 16 Woltemade Street (front entrance), Jeffrey's Bay, Room 122 on or before **WEDNESDAY, 17 SEPTEMBER 2025 at 12:00.**

C. DU PLESSIS
MUNICIPAL MANAGER

P.O. Box 21
JEFFREYS BAY
6330

For Placement: Herald/Municipal Website/ Municipal Notice Boards in all offices/areas – 18 August 2025

T1.2 TENDER DATA

The conditions of tender are the Standard Conditions of Tender as contained in Annex C of the Construction Industry Development Board (CIDB) Standard for Uniformity in Engineering and Construction Works Contracts as published in Department of Public Works Notice 423 of 2019 No. 42622 Government Gazette 8 August 2019. (See www.cidb.org.za).

The Standard Conditions of Tender make several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the standard conditions of tender. Each item of data given below is cross-referenced to the clause in the Standard Conditions of Tender to which it mainly applies.

The following variations, amendments and additions to the Standard Conditions of Tender as set out in the Tender Data below shall apply to this tender:

Clause number	Tender Data
C.1.1	The Employer is Kouga Municipality.
C.1.2	The Tender Documents issued by the Employer comprise the following documents: THE TENDER Part T1: Tendering procedures. Part T2: Returnable documents. THE CONTRACT Part C1: Agreements and Contract data Part C2: Pricing data. Part C3: Scope of work. Part C4: Site information Annexures
C.1.4	Any inquiries relating to this tender must be submitted in writing via e-mail to tenders@kouga.gov.za and copied to bbosch@kouga.gov.za .
C.1.6.2	The Competitive Negotiation Procedure will not be followed.
C.1.6.3	The proposal procedure using the two-stage system will not be followed.
C.2.1.1	Only those Tenderers who are registered with the CIDB, or are capable of being so prior to the evaluation of submissions, in a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations, for a EP class of construction work, are eligible to have their tenders evaluated. Joint ventures are eligible to submit tenders provided that: 1. every member of the joint venture is registered with the CIDB; 2. the lead partner has a contractor grading designation in the EP class of construction work; and 3. the combined contractor grading designation calculated in accordance with the Construction Industry Development Regulations is equal to or higher than a contractor grading designation determined in accordance with the sum tendered for a EP class of construction work or a value determined in accordance with Regulation 25 (1B) or 25(7A) of the Construction Industry Development Regulations.

C.2.1.1

Only Tenderers that meet the following pre-qualification conditions are eligible to have their tenders further evaluated. The qualifying criteria and the score in respect of each criteria is as follows. **A minimum of 70 points** out of a maximum total of 100 points is required for the tender to be evaluated further.

Should the Tenderer not complete the following column, no points will be awarded. The Tenderer must provide sufficient proof, i.e. documentation, contact persons and contact numbers, etc. under Parts T2.2.3 and T2.2.6 in this document for each of the following items stipulated. Unclear or incomplete information provided will result in no points being awarded.

Note:

In terms of Item 2 of Clause 3.2 of CIDB's Inform Practice Note #5, Tenderers may not provide additional information subsequent to the closing of the tender that may affect their competitive position. It is therefore very important that the Tenderer submit sufficient proof as requested above together with his/her tender.

Item	Description	Column to be completed by Tenderer	Points awarded by Employer
a)	Tenderer's relevant experience (track record) on previously completed projects of a similar nature, scope and complexity on hybrid grid-tied Solar Photovoltaic (PV) rooftop system of min. size 5kWp with back-up battery, over the past five (5) years: 1 to 2 projects = 20 points 3 to 4 projects = 30 points 5 to 6 projects = 40 points More than 6 projects = 50 points (Maximum points = 50) Completion certificates <u>or</u> reference letters of previously completed projects to be included with the tender. This requirement is compulsory in order to claim for points.	..... .....	..... .....
b)	Experience in number of years, of Tenderer's proposed Construction Manager: Experience: 1 to 5 years = 3 points 6 to 10 years = 5 points 11 to 15 years = 8 points 16 years or more = 10 points (Maximum points = 10) A CV of the proposed Construction Manager, indicating experience in years, is to be included with the tender. This requirement is compulsory in order to claim for points.	..... .....	..... .....

T1.2.3

	c)	<u>Compulsory</u> minimum qualification, plus experience in number of years, of Tenderer's proposed Site Supervisor: Compulsory Qualification/s: - Electrician Trade Certificate - PV Green Card Experience: 1 to 5 years = 10 points 6 to 10 years = 15 points 11 to 15 years = 20 points 16 years or more = 25 points (Maximum points = 25) A CV of the proposed Site Supervisor, indicating experience in years, including a copy of his/her relevant compulsory qualification to be included with the tender. This requirement is compulsory in order to claim for points.	.....	.....
	d)	<u>Special condition:</u> The successful Tenderer must have in its employment or alternatively a signed agreement with an ECSA registered professional engineer or professional technologist to sign off PV systems larger than 30kW: Yes = 15 points No = 0 points (Maximum points = 15) A CV of the proposed ECSA Professional Engineer, indicating experience in years, including a copy of his/her relevant compulsory qualification to be included with the tender. This requirement is compulsory in order to claim for points.	.....	.....
		Total points awarded out of 100	.....	.....

T1.2.4

C.2.7	An electronic copy of the tender document will be available on E-Tender portal www.etender.gov.za or the municipal website www.kouga.gov.za as from Monday, 18 August 2025. After downloading the tender document from the website each prospective bidder MUST ensure that all the pages of the tender document are printed. A compulsory virtual clarification session will be arranged for Wednesday, 27 August 2025 @10h00am. Prospective bidders can use the very same link below which is direct from this advert, it will link them directly to the meeting. Please take note that no attendee arriving 10 minutes late or more will be allowed to attend the clarification meeting. The link will also be available on the municipal website. Join Teams Meeting https://teams.microsoft.com/join/19%3ameeting_NmEwYzkyOGMtYzE0NS00ZjAyLWI2MzgtNDBmZmFIYWE1YjV%40thread.v2/0?context=%7b%22Tid%22%3a%226227dc1-4e2b-407e-9bee-81acf6fe8aa9%22%2c%22Oid%22%3a%220f003184-f74c-40a3-9b40-9fda5b3dfcff%22%7d Meeting ID: 370 525 917 741 1 Passcode: 4iM9cJ2Z
C.2.12	No alternative tender offers will be considered.
C.2.13.3	The complete Tender Document shall be returned with the tender, including all Parts as listed in C.1.2 above (not to be separated). Parts of each tender offer communicated on paper shall be submitted as an original, plus Nil copies.
C.2.13.5 C.2.15.1	The employer's details and address for delivery of tender offers and identification details that are to be shown on each tender offer package are: Location of tender box: Room 122 Physical address: 16 Woltemade Street, Jeffreys Bay Identification details: Bid reference number, Title and the closing date and time.
C.2.13.9	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted.
C.2.15	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.
C.2.16	The tender offer validity period is 90 days.
C.2.20	The Tenderer is required to submit with his tender a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part C1.3 of this procurement document. The form as per Part T2.2.9 can be used for this purpose.
C.2.23	The tenderer is required to submit with his tender the following: 1) an original Tax Clearance Certificate issued by the South African Revenue Services; 2) CIDB grading certificate; 3) Documents as listed in the List of Returnable Documents in Part T2.1.
C.3.4	Tenders will be opened immediately after the closing time for tenders at 12h05.
C.3.5	A two-envelope system will not be followed.
C.3.11.1	Points will be awarded to Tenderers who are eligible for preferences in terms of the Preference Points Claim Form in terms of the Preferential Procurement Regulations, 2022, which is included under Part T2.2. The terms and conditions of the Preference Points Claim Form shall apply in all respects to the tender evaluation process and any subsequent contract.

C.3.13	Tender offers will only be accepted if: a) the tenderer submits a tax compliance status certificate issued by the South African Revenue Services or has made arrangements to meet outstanding tax obligations; b) the tenderer submits a letter of intent from an approved insurer undertaking to provide the Performance Bond to the format included in Part T2.2 of this procurement document c) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; d) the tenderer or any of its directors/shareholders is not listed on the Register of Tender Defaulters in terms of the Prevention and Combating of Corrupt Activities Act of 2004 as a person prohibited from doing business with the public sector; e) the tenderer has not: i) abused the Employer's Supply Chain Management System; or ii) failed to perform on any previous contract and has been given a written notice to this effect; f) the tenderer has completed the Compulsory Enterprise Questionnaire and there are no conflicts of interest which may impact on the tenderer's ability to perform the contract in the best interests of the employer or potentially compromise the tender process and persons in the employ of the state are permitted to submit tenders or participate in the contract; g) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; h) the employer is reasonably satisfied that the tenderer has in terms of the Construction Regulations, 2014, issued in terms of the Occupational Health and Safety Act, 1993, the necessary competencies and resources to carry out the work safely. i) the Tenderer has not failed to perform on any previous contracts and has not been given written notice to the effect. j) the Tenderer is not in arrears for more than 30 days with municipal rates and taxes and service charges.
C.3.13	The appointment of a Contractor will be subject to the availability of funding. The Employer reserves the right to accept a tender in whole or in parts with certain items being added, or in whole with the provision that certain items of work may be omitted at a later date.
C.3.17	The number of paper copies of the signed contract to be provided by the employer is one (1).

Notice No. 167/2025

T2.1 LIST OF RETURNABLE DOCUMENTS

CMB Copyright
Y:\Documents\10600-10699\10676\Specification\6. PartT2.1 List of Returnable Documents.docx

T2.1.2

Part No.	The tenderer must ensure that the following documents are completed and included with his tender.	Tenderer to confirm in this column by inserting a tick that document has been completed and returned.
C1.1 C1.2 C2.1 C2.2 C3 C4 -	3. Returnable Schedules that will be incorporated into the Contract: All schedules as per Item 1 above. 4. Other documents that will be incorporated into the Contract: Form of Offer and Acceptance Contract Data Pricing Instructions Bill of Quantities Scope of Work Site information Annexures	☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

T2.2 RETURNABLE SCHEDULES**T2.2.1 RECORD OF ADDENDA TO TENDER DOCUMENTS**

We confirm that the following communications received from the Employer before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer:

	Date	Title or Details
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		

Copies of Addenda received to be attached hereafter.

Signed

Date

Name

Position

Tenderer

The Tenderer's attention is drawn to clause C.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the Employer's handling of material deviations and qualifications.

Page	Clause or item	Proposal

Tenderer

T2.2.3 SCHEDULE OF PARTICULARS / INFORMATION

- Note: 1. This schedule must be completed for all items offered, stating where appropriate, the size or capacity of equipment, type or catalogue no, country of origin and any other detail he considers necessary. Failure to comply with this requirement may render the tender invalid.
2. Information in amplification of that given below may be submitted in the form of published literature, technical sheets, etc. and must be attached immediately after this page, otherwise same will not be considered.
3. Acceptance of a Tender, with this Schedule complete, does not relieve the Tenderer of the responsibility of complying with the Specification for the items listed.

1.0 PV MODULE

Refer attached Section A.

2.0 INVERTER

Refer attached Section B.

3.0 DC SYSTEM

Refer attached Section C.

4.0 CARPORT

Refer attached Section D.

5.0 BATTERY

Refer attached Section E.

6.0 GROUND MOUNT

Refer attached Section F.

7.0 GENERAL

- (a) Name and experience of Construction Manager the Tenderer intends using on this project:

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.....

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T2.2.3.2

- (b) Name and experience of the Site Supervisor the Tenderer intends using on this project:
-
-
-
-
-
-
-
-
-
-
-

An organogram of the tendering company / entity shall be included with the tender submission, clearly indicating the positions of all nominated personnel for this tender.

- (c) Organogram of tendering company / entity included: YES/NO

SIGNATURE:
(for the Tenderer)

PRINT NAME:
(for the Tenderer)

DATE:

Section A

PV Module Particular Specification / Data Sheet Information

Note: Where the "REQUIRED" column states "Information by Supplier", the Tenderer shall enter their preferred specifications for the equipment offered in the "OFFERED" column. Where specifics are stipulated, the tenderer shall confirm compliance in the "OFFERED" column by stating "Comply" or repeating the specification. This applies to Sections A-E.

ITEM	DESCRIPTION	REQUIRED	OFFERED
1.	PV Manufacturer	Information by Supplier	
2.	PV Module code	Information by Supplier	
3.	PV module country of man	Information by Supplier	
4.	Panel Dimensions (l x b x h)	Information by Supplier	
5.	PV Module Power STC (W)	Information by Supplier	
6.	PV Power NOCT (W)	Information by Supplier	
7.	Power NOCT/STC (%)	Information by Supplier	
8.	Power tolerance (%)	Information by Supplier	
9.	Temp Coefficient of Pmax (%/°C)	Information by Supplier	
10.	Positive power tolerance	Information by Supplier	
11.	Efficiency (%)	Information by Supplier	
12.	Manufacturer tier (pu)	Tier 1	
13.	Module Technology	Monocrystalline	
14.	<u>Module Features</u>		
14.1	Specific Features (e.g. PERC)	Information by Supplier	
14.2	Bifacial / Monofacial	Information by Supplier	
14.3	Other	Information by Supplier	
15.0	<u>Module Performance and Warrantee</u>		
15.1	1st year operation power degradation	Max 2.5% of rated power (module should produce min. 97.5% of rated output)	
15.2	25year Linear Power Degradation	max. 0.65%	
15.3	Minimum power output at 25year operation	min. 83% of rated power	
15.4	Material Warrantee (years)	>10	
15.5	Linear Power Warrantee (years)	>24	
16.0	PID Resistance	Yes	
17.0	Nominal Cell temperature (°C)	>40°C	
18.0	Maximum System Voltage (V)	Information by Supplier	
19.0	STC (irradiance/Cell Temp/Spectra) (W/m ² /°C/p.u)	Information by Supplier	
20.0	NOCT (irradiance/Cell Temp/Spectra) W/m ² /°C/p.u)	Information by Supplier	

Section A

PV Module Particular Specification / Data Sheet Information

Note: Where the "REQUIRED" column states "Information by Supplier", the Tenderer shall enter their preferred specifications for the equipment offered in the "OFFERED" column. Where specifics are stipulated, the tenderer shall confirm compliance in the "OFFERED" column by stating "Comply" or repeating the specification. This applies to Sections A-E.

ITEM	DESCRIPTION	REQUIRED	OFFERED
21.0	Front side Maximum static loading (pa)	Information by Supplier	
22.0	Rear Side maximum static loading (pa)	Information by Supplier	
23.0	Module Mass (kg)	Information by Supplier	
24.0	Junction Box IP rating	IP68 or better	
25.0	<u>Certifications</u>		
25.1	IEC 61215 / SANS 61215– Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval	Required	
25.2	IEC 61730 Photovoltaic (PV) Module Safety Qualification	Required	
25.3	IEC TS 60904-13 - Part 13: Electroluminescence of photovoltaic modules	Required	
26.0	<u>Documents Required</u>		
26.1	Technical Data Sheet / Specifications	Document required with tender	
26.2	Warrantee Documentation	Document required with tender	
26.3	O & M Manual	Document required after Tender award.	
26.4	Recycling strategy	Document required after Tender award.	
26.5	Factory Flash Test Report	Document required after Tender award.	
26.6	Potential Induced Degradation (PID) free test report	Document required after Tender award.	
26.7	Electroluminescence of photovoltaic modules test certificate	Document required after Tender award.	

Section B

Inverter Particular Specification / Data Sheet Information

ITEM	DESCRIPTION	REQUIRED	OFFERED
	<u>Note:</u> Should inverters of different capacities be offered, this document shall be completed for each inverter type		
1.0	Inverter Make	Similar or equal approved to SMA / Huawei / Sunsynk/ Sungrow / Victron	
2.0	Inverter Country of Origin	Information by Supplier	
3.0	<u>ENVIRONMENT CONDITIONS: Inverter must be capable of operating under these conditions</u>		
3.1	Altitude	10 m a.s.l	
3.2	Ambient temperature	-5 to 40 degrees C	
3.3	Relative Humidity	up to 90%	
3.4	Installation area	outdoor, exposed to weather	
3.5	Atmosphere	Severely corrosive, area prone to sea salt residue	
4.0	<u>SYSTEM DETAILS: Inverter must be capable of operating under these conditions</u>		
4.1	Nominal Voltage	400V Line / 230 V Phase	
4.2	Existing THD Voltage	as per NRS 048	
4.3	Configuration	3-phase, 4 wire system (3 L+ N)	
4.4	Earthing	TN-S	
4.5	Nominal Frequency	50Hz	
4.6	Phase Sequence	Standard (R-Y-B)	
4.7	Upstream Transformer	500 kVA	
4.8	System Fault Level	25 kA	
5.0	<u>Input (DC)</u>		
5.1	Max Input Power (kW)	Information by Supplier	
5.2	Max Input Voltage (V)	≥ 1000V dc	
5.3	MPP Voltage Range (V)	Information by Supplier	
5.4	Rated Input Voltage (V)	Information by Supplier	
5.5	Minimum Input Voltage (V)	Information by Supplier	
5.6	Number of independent MPP Trackers	Information by Supplier	
5.7	Number of Strings per MPP Traker	Information by Supplier	
5.8	DC Surge Protection Device	Type 1 + 2 required	

Section B

Inverter Particular Specification / Data Sheet Information

ITEM	DESCRIPTION	REQUIRED	OFFERED
6.0	<u>Output (AC)</u>		
6.1	Rated Output Power (kW) at Nominal Voltage	Information by Supplier	
6.2	Rated Apparent Power (kVA)	Information by Supplier	
6.3	Nominal Output Voltage (V)	400V Line / 230 V Phase	
6.4	Output Voltage Range	320V to 460V (line to line)	
6.5	Frequency	50 Hz	
6.6	Rated Current Output (A)	Information by Supplier	
6.7	Inverter Fault Current Contribution (kA or % of nominal current)	Information by Supplier	
6.8	Power Factor Range	Comply with requirements of Grid Code for System Class	
7.0	<u>Inverter Protection System</u>		
7.1	Input side disconnecting device	Required	
7.2	Ground Fault monitoring	Required	
7.3	DC reverse Polarity Protection	Required	
7.4	PV Array String Fault Protection	Required	
7.5	AC Short Circuit Protection	Required	
7.6	AC and DC overvoltage Protection	Required	
7.7	Residual Current monitoring	Required	
7.8	Anti-islanding Protection	Required	
8.0	<u>General Characteristics</u>		
8.1	Efficiency	min. 97%	
8.2	THD and Individual Current and Voltage harmonics	Comply with requirements of Grid Code for System Class	
8.3	Protection type IP for inverter installed outdoor (IEC 60529)	≥IP65	
8.4	Controllability of inverter output per remote control / energy management system or station manager.	Required. Comply with requirements of Grid Code for System Class	
8.5	Operating Temperature range	Information by Supplier	
8.6	Noise emission (db/A)	Information by Supplier	
8.7	Self Consumption (at Night)	Information by Supplier	
8.8	Topology	Transformerless	
8.9	Warranty	10 years	

Section B

Inverter Particular Specification / Data Sheet Information

ITEM	DESCRIPTION	REQUIRED	OFFERED
9.0	<u>Communication / Data Management</u>		
9.1	Data Manager	Central / Intergrated	
9.2	Remote Monitoring	Web based	
9.3	Data Logging	Required	
9.4	3rd Party Information trasnfer	Required	
9.5	Grid Operator Control receive / Ripple Control Reciever	Required	
9.6	Ethernet interface	Required	
9.7	LED Display	Required (display Status, fault, communication etc.)	
9.8	Weather Monitor	Required, can be through a standalone system or data manager (Data required: Solar irradiance, ambient temperature, back of panel PV temp sensor, wind speed and wind direction)	
10.0	<u>Certifications and Compliance</u>		
10.1	NRS-097-2-1: latest Edition	Comply	
10.2	Grid connection code for renewable power Plants (RPPS) connected to the electricity Transmission system (TS) or the distribution System (DS) in south africa	Comply	
10.3	IEC 62109 : Safety of power converters for use in photovoltaic power systems: all Parts	Comply: Certification to be provided after award	
10.4	IEC 62116: Utility-interconnected photovoltaic inverters - Test procedure of islanding prevention measures	Comply: Certification to be provided after award	
10.5	IEC 61727: Photovoltaic (PV) Systems - Characteristics of the Utility Interface	Comply: Certification to be provided after award	
10.6	IEC 60068: Environmental Testing	Comply: Certification to be provided after award	
10.7	IEC 61683: Photovoltaic Systems - Power Conditioners - Procedure for Measuring Efficiency	Comply: Certification to be provided after award	

Section C

DC System Particular Specification

ITEM	DESCRIPTION	REQUIRED	OFFERED
1.0	<u>DC Cables</u>		
1.1	<u>Environmental Conditions</u>		
1.1.1	Ambient temperature	-5 to 40 degrees C	
1.1.2	Relative Humidity	up to 90%	
1.1.3	Installation area	outdoor, exposed to weather	
1.1.4	Atmosphere	Severely corrosive, area prone to sea salt residue	
1.2	Cable Make	Information by Supplier	
1.3	Cable cross section (mm²)	Information by Supplier	
1.4	Conductor type	copper, tin coated	
1.5	DC Voltage Rating	min. 1500V	
1.6	Number of cores	single core	
1.7	Type	Cross-linked insulated power cables with cross linked sheath	
1.8	IEC 61140 protection class	min. Class II (double insulated)	
1.9	Fire / Smoke Properties	Fire resistant, Halogen free and low smoke	
1.10	Continuous Conductor Temperature	min. 90 °C	
1.11	Maximum Conductor Temperature	min. 120 °C limited to 20 000h	
1.12	UV and Weather Resistance	required	
1.13	Cable Life	25 years	
1.14	<u>Conductor Colour designation</u>		
1.14.1	Positive	Red	
1.14.2	Negative	Black	
1.14.3	Earth	Yellow and Green	
1.15	Cable Certification	Information by Supplier	
1.16	IEC 62930: Electric cables for photovoltaic systems with a voltage rating of 1,5 kV DC (SANS 62930)	Required: Test Certificate to be provided at tender award (Note: cable complying to EN 50618 will also be accepted) refer to clause 12 of the Technical specification	
2.0	<u>Cable Connectors</u>		
2.1	Make	Information by Supplier	
2.2	Type	MC4 or similar	
2.3	Rated Voltage	min. 1500Vdc	

Section C

DC System Particular Specification

ITEM	DESCRIPTION	REQUIRED	OFFERED
2.4	Rated Current	Information by Supplier	
2.5	IP Rating	min. IP 65 (cable connected to be rated for outdoor/ exposed to weather conditions)	
2.6	Snap lock mechanism	required	
2.7	Touch proof safety design	required	
2.8	<u>Certification</u>		
2.8.1	IEC 62852 / SANS 62852: Connectors for DC-application in photovoltaic systems - Safety requirements and tests	Required. TUV or UL certification required	

Section D

Carport Particular Specification

ITEM	DESCRIPTION	REQUIRED	OFFERED
1.0	Atmosphere	Windy and Severely corrosive, area prone to sea salt residue	
2.0	Carport Make	Information by Supplier	
3.0	Carport Span	Max. 10m (2 parking bays)	
4.0	Minimum Height	2.4 m	
5.0	Inclination Agle	Information by Supplier	
6.0	Purlin Material	Aluminium (Material to be corrosion resistant)	
7.0	Girder Material	Aluminium (Material to be corrosion resistant)	
8.0	Strut Material	Aluminium (Material to be corrosion resistant)	
9.0	Foundations	Information by supplier	
10.0	Module Clamps	Information by supplier (Material to necorrosion resistant)	
11.0	Connections	Information by supplier (Material to corrosion resistant)	

Section E

Battery Particular Specification / Data Sheet Information

ITEM	DESCRIPTION	REQUIRED	OFFERED
	Note: should Batteries of different capacities be offered, this document shall be completed for each type		
1.0	<u>BATTERY PARTICULARS</u>		
1.1	Battery Make	Information by Supplier	
1.2	Model Number	Information by Supplier	
1.3	Nominal capacity (kWh)	as specified	
1.4	Battery Country of Origin	Information by Supplier	
1.5	Mounting	Cabinet / rack	
1.6	Dimensions (W x D x H mm)	Information by Supplier	
1.7	Cell Technology	Lithium / LiFePO4	
1.8	Cycle Life	Information by Supplier	
1.9	Warranty	Information by Supplier	
2.0	<u>ENVIRONMENT CONDITIONS : Inverter must be capable of operating under these conditions</u>		
2.1	Altitude	10 m a.s.l	
2.2	Ambient temperature	-5 to 40 degrees C	
2.3	Relative Humidity	up to 90%	
2.4	Installation area	Indoor	
2.5	Atmosphere	Indoor	
3.0	<u>Performance</u>		
3.1	Nominal DC Voltage	Information by Supplier	
3.2	Charge Voltage	Information by Supplier	
3.3	Discharge Voltage	Information by Supplier	
3.4	Nominal Charge / Discharge Current (A)	Information by Supplier	
3.5	Nominal Charge / Discharge Power (kW)	Information by Supplier	
3.6	Max Charge / Discharge Current (A)	Information by Supplier	
3.7	Max Charge / Discharge Power (kW)	Information by Supplier	
3.8	Cycle Life	Information by Supplier	
4.0	<u>Certifications and Compliance</u>		
4.1	NRS-097-2: latest Edition	Comply	
4.2	Relevant IEC Certification for battery type	Information by Supplier	

Section F

Ground Mount Particular Specification

[illegible]

T.2.2.4 COMPULSORY ENTERPRISE QUESTIONNAIRE

The following particulars must be furnished. In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted.

Section 1: Name of enterprise:

Section 2: VAT registration number, if any:

Section 3: CIDB registration number, if any:

Section 4: CSD number:

Section 5: Particulars of sole proprietors and partners in partnerships:

Name*	Identity number*	Personal income tax number*

* Complete only if sole proprietor or partnership and attach separate page if more than 3 partners.

Section 6: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 7: The MBD 4 form attached under Part T2.2.13 must be completed and be attached as a tender requirement.

Section 8: The MBD 6.1 form attached under Part T2.2.13 must be completed and be attached as a tender requirement.

Section 9: The MBD 8 form attached under Part T2.2.13 must be completed and be attached as a tender requirement.

Section 10: The MBD 9 form attached under Part T2.2.13 must be completed and be attached as a tender requirement.

T2.2.4.2

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the enterprise:

- i) authorizes the Employer to verify the Tenderer's tax clearance status from the South African Revenue Services that it is in order;
- ii) confirms that neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears on the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004;
- iii) confirms that no partner, member, director or other person, who wholly or partly exercises, or may exercise, control over the enterprise appears, has within the last five years been convicted of fraud or corruption;
- iv) confirms that I / we are not associated, linked or involved with any other tendering entities submitting tender offers and have no other relationship with any of the Tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- v) confirms that the contents of this questionnaire are within my personal knowledge and are to the best of my belief both true and correct.

Signed _____ Date _____

Name _____ Position _____

Enterprise name _____

T2.2.5 CERTIFICATE OF AUTHORITY FOR JOINT VENTURES

This Returnable Schedule is to be completed by joint ventures.

We, the undersigned, are submitting this tender offer in Joint Venture and hereby authorise Mr/Ms, authorised signatory of the company, acting in the capacity of lead partner, to sign all documents in connection with the tender offer and any contract resulting from it on our behalf.

NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner		
CIDB registration no		Signature Name Designation
CIDB registration no		Signature Name Designation
CIDB registration no		Signature Name Designation
CIDB registration no		Signature Name Designation

Employer, contact person and telephone number.	Description of contract	Value of work inclusive of VAT (Rand)	Date completed

Y:\Documents\10600-10699\10676\Specification\12. PartT2.2.6 Schedule of Tenderers Experience.docx

T2.2.7 SCHEDULE OF SUB-CONTRACTORS

We notify you that it is our intention to employ the following Sub-contractors for work in this contract.

If we are awarded a contract we agree that this notification does not change the requirement for us to submit the names of Sub-contractors in accordance with requirements in the contract for such appointments. If there are no such requirements in the contract, then your written acceptance of this list shall be binding between us. The following supporting documentation must be submitted for each of the Sub-Contractors:

- CV of the proposed Sub-Contractor/s.
- A valid B-BBEE status level verification certificate or sworn affidavit.

	Name and address of Sub-contractor	B-BBEE Status	Nature, extent and % of work to be sub-contracted	Previous experience with Sub-contractor.
1.				
2.				
3.				
4.				

Signed

Date

Name

Position

Tenderer

T2.2.8 SCHEDULE OF PLANT AND EQUIPMENT

The following are lists of major items of relevant equipment that I / we presently own or lease and will have available for this contract or will acquire or hire for this contract if my / our tender is accepted.

(a) Details of major equipment that is owned by and immediately available for this contract.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

(b) Details of major equipment that will be hired, or acquired for this contract if my / our tender is accepted.

Quantity	Description, size, capacity, etc.

Attach additional pages if more space is required.

Signed _____ Date _____

Name _____ Position _____

Tenderer _____

T2.2.9 UNDERTAKING TO PROVIDE PERFORMANCE BOND

It is noted that a performance bond would not necessarily be required for all probable work instructions. A performance bond can, however, be requested from the Employer depending on the final scope of work on a specific work instruction.

In the event of the Employer requesting a performance bond, the Tenderer to provide details of the Insurance company / bank nominated named below for a Guarantee in the exact terms of the Pro Forma Guarantee provided in Part C1.3 hereof.

We hereby declare that the insurance company/bank named below is aware of our financial position and commitments in terms of probable work instructions in this tender and is prepared to issue the Guarantee unconditionally, within the period called for in these tender documents, and until the issue of the Certificate of Completion.

Name of proposed Guarantee provider:
(Insurance Company/Bank)

Date: Signed on behalf
of the Tenderer:

Date: Signed on behalf
of the insurance
company/bank:

In their capacity as

T2.2.10 AUTHORITY FOR SIGNATORY

Details of person responsible for Tender process

Name

Contact number ()

Address of office submitting the Tender:

.....

.....

.....

Telephone no ()

Fax no ()

E-mail address

Signatories for close corporations and companies shall confirm their authority by attaching to this form a **duly signed and dated original or certified copy** of the relevant resolution of their members or their board of directors, as the case may be.

"By resolution of the board of directors passed on (date).....

Mr.

has been duly authorized to sign all documents in connection with the Tender for Contract Number and any Contract which may arise there from on behalf of:

(BLOCK CAPITALS)

.....

.....

SIGNED ON BEHALF OF THE COMPANY

IN HIS CAPACITY AS

DATE

FULL NAMES OF SIGNATORY

AS WITNESSES 1.

2.

T2.2.11 PREFERENCING SCHEDULE: BROAD BASED BLACK ECONOMIC EMPOWERMENT STATUS

PREFERENCE POINTS CLAIM FORM IN TERMS OF THE PREFERENTIAL PROCUREMENT REGULATIONS 2022

This preference form must form part of all bids invited. It contains general information and serves as a claim form for preference points for Broad-Based Black Economic Empowerment (B-BBEE) Status Level of Contribution

NB: BEFORE COMPLETING THIS FORM, TENDERERS MUST STUDY THE GENERAL CONDITIONS, DEFINITIONS AND DIRECTIVES APPLICABLE IN RESPECT OF THE TENDER AND PREFERENTIAL PROCUREMENT REGULATIONS, 2022

1. GENERAL CONDITIONS

1.1 The following preference point systems are applicable to invitations to tender:

- the 80/20 system for requirements with a Rand value of up to R50 000 000 (all applicable taxes included); and
- the 90/10 system for requirements with a Rand value above R50 000 000 (all applicable taxes included).

1.2 To be completed by the organ of state

(Delete whichever is not applicable for this tender).

a) The applicable preference point system for this tender is the 80/20 preference point system.

1.3 Points for this tender (even in the case of a tender for income-generating contracts) shall be awarded for:

- (a) Price;
- (b) BBBEE; and
- (c) Specific Goals.

1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
BBBEE	10
SPECIFIC GOALS	10
Total points for PRICE and SPECIFIC GOALS	100

1.5 Failure on the part of a tenderer to submit proof or documentation required in terms of this tender to claim points for specific goals with the tender, will be interpreted to mean that preference points for specific goals are not claimed.

1.6 The organ of state reserves the right to require of a tenderer, either before a tender is adjudicated or at any time subsequently, to substantiate any claim regarding preferences, in any manner required by the organ of state.

2. DEFINITIONS

- (a) **“tender”** means a written offer in the form determined by an organ of state in response to an invitation to provide goods or services through price quotations, competitive tendering process or any other method envisaged in legislation;
- (b) **“price”** means an amount of money tendered for goods or services, and includes all applicable taxes less all unconditional discounts;
- (c) **“rand value”** means the total estimated value of a contract in Rand, calculated at the time of bid invitation, and includes all applicable taxes;
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“the Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 OR 90/10 PREFERENCE POINT SYSTEMS

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc}
 \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\
 \\
 \mathbf{Ps} = \mathbf{80} \left(\mathbf{1} - \frac{\mathbf{Pt} - \mathbf{Pmin}}{\mathbf{Pmin}} \right) & \mathbf{or} & \mathbf{Ps} = \mathbf{90} \left(\mathbf{1} - \frac{\mathbf{Pt} - \mathbf{Pmin}}{\mathbf{Pmin}} \right)
 \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmin = Price of lowest acceptable tender

3.2. FORMULAE FOR DISPOSAL OR LEASING OF STATE ASSETS AND INCOME GENERATING PROCUREMENT

3.2.1. POINTS AWARDED FOR PRICE

A maximum of 80 or 90 points is allocated for price on the following basis:

$$\begin{array}{ccc}
 \mathbf{80/20} & \mathbf{or} & \mathbf{90/10} \\
 \\
 \mathbf{Ps} = \mathbf{80} \left(\mathbf{1} + \frac{\mathbf{Pt} - \mathbf{Pmax}}{\mathbf{Pmax}} \right) & \mathbf{or} & \mathbf{Ps} = \mathbf{90} \left(\mathbf{1} + \frac{\mathbf{Pt} - \mathbf{Pmax}}{\mathbf{Pmax}} \right)
 \end{array}$$

Where

Ps = Points scored for price of tender under consideration

Pt = Price of tender under consideration

Pmax = Price of highest acceptable tender

4. POINTS AWARDED FOR BBBEE AND SPECIFIC GOALS

- 4.1. In terms of Regulation 4(2); 5(2); 6(2) and 7(2) of the Preferential Procurement Regulations, preference points must be awarded for specific goals stated in the tender. For the purposes of this tender the tenderer will be allocated points based on the goals stated in table 1 below as may be supported by proof/ documentation stated in the conditions of this tender:

4.1.1 Points awarded for B-BBEE Level of Contributor

In terms of the Specific Goals as per the Kouga Municipality Preferential Procurement Policy, preference points must be awarded to a tenderer for attaining the B-BBEE status level of contribution in accordance with the table below:

B-BBEE Status Level of Contributor	Number of Points for Preference (80/20)
1	10
2	9
3	7
4	6
5	4
6	3
7	2
8	1
Non-compliant contributor	0

Bidder MUST submit a valid BBBEE certificate, failure to attach no points will be awarded for BBBEE points.

4.1.2 Points awarded for Specific Goals

In terms of the Specific Goals as per the Kouga Municipality Preferential Procurement Policy, preference points must be awarded to a Tenderer for Locality in accordance with the table below:

No	Specific Goals Categories	Max points allocation	Evaluation Indicators
1	B-BBE Status Level Contributor	10	As for B-BBEE points allocation table above.
2	The promotion of enterprises located in a specific province for work to be done or services to be rendered in that province.	10	10 Points- Located within the boundaries of the Kouga Local Municipality 6 Points- Located within the boundaries of Sarah Baartman District Municipality 4 Points- Located within the boundaries of the Eastern Cape 1 Point- Outside of the boundaries of the Eastern Cape
Bidders MUST submit valid B-BBEE sworn affidavit / certificate AND Latest Municipal Billing Clearance Certificate / Copy of Municipal Account / Rental Documentation in the name of the bidding entity, to claim points for specific goals. Virtual offices will not be accepted.			

- 4.2. In cases where organs of state intend to use Regulation 3(2) of the Regulations, which states that, if it is unclear whether the 80/20 or 90/10 preference point system applies, an organ of state must, in the tender documents, stipulate in the case of—
- (a) an invitation for tender for income-generating contracts, that either the 80/20 or 90/10 preference point system will apply and that the highest acceptable tender will be used to determine the applicable preference point system; or
 - (b) any other invitation for tender, that either the 80/20 or 90/10 preference point system will apply and that the lowest acceptable tender will be used to determine the applicable preference point system,
- then the organ of state must indicate the points allocated for specific goals for both the 90/10 and 80/20 preference point system.

5. BID DECLARATION

Tenderers who claim points in respect of BBBEE must complete the following:

B-BBEE STATUS LEVEL OF CONTRIBUTOR CLAIMED IN TERMS OF PARAGRAPHS 4.1 AND 4.1.1

5.1. Contribution to BBBEE: =(maximum 10 points)
--

(Points claimed in respect of paragraph 5.1 must be in accordance with the table reflected in paragraph 4.1.1 and **must be substantiated by relevant proof of B-BBEE status level of contributor.**)

LOCALITY OF TENDERERS OFFICE CLAIMED IN TERMS OF PARAGRAPHS 4.1 AND 4.1.2

5.2. Contribution to specific Goals: =(maximum of 10 points)
--

(Points claimed in respect of paragraph 5.2 must be in accordance with the table reflected in paragraph 4.1.2 and **must be substantiated by relevant proof of address of a company office.**)

DECLARATION WITH REGARD TO COMPANY/FIRM

5.3. Name of company/firm.....

5.4. Company registration number:

5.5. TYPE OF COMPANY/ FIRM

Partnership/Joint Venture / Consortium
 One-person business/sole propriety
 Close corporation
 Public Company
 Personal Liability Company
 (Pty) Limited
 Non-Profit Company
 State Owned Company

[TICK APPLICABLE BOX]

5.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:

- i) The information furnished is true and correct;
- ii) The preference points claimed are in accordance with the General Conditions as indicated in paragraph 1 of this form;

- iii) In the event of a contract being awarded as a result of points claimed as shown in paragraphs 5.1 and 5.2, the contractor may be required to furnish documentary proof to the satisfaction of the organ of state that the claims are correct;
- iv) If the specific goals have been claimed or obtained on a fraudulent basis or any of the conditions of contract have not been fulfilled, the organ of state may, in addition to any other remedy it may have –
 - (a) disqualify the person from the tendering process;
 - (b) recover costs, losses or damages it has incurred or suffered as a result of that person's conduct;
 - (c) cancel the contract and claim any damages which it has suffered as a result of having to make less favourable arrangements due to such cancellation;
 - (d) recommend that the tenderer or contractor, its shareholders, and directors, or only the shareholders and directors who acted on a fraudulent basis, be restricted from obtaining business from any organ of state for a period not exceeding 10 years, after the *audi alteram partem* (hear the other side) rule has been applied; and
 - (e) forward the matter for criminal prosecution, if deemed necessary.

.....
SIGNATURE(S) OF TENDERER(S)

SURNAME AND NAME:

DATE:

ADDRESS:
.....

**B-BBEE EXEMPTED AFFIDAVIT FOR EXEMPTED MICRO ENTERPRISES
(ISSUED IN TERMS OF THE AMENDED CONSTRUCTION SECTOR CODE)**

(Gazette Vol. 630 No. 41287)

Issued in terms of paragraph 3.6.2.4.1 (B)

I, the undersigned,

Full names and surname	
Identity number	

Hereby declare under oath as follows:

1. The contents of this statement are to the best of my knowledge a true reflection of the facts.
2. I am a Member / Director / Owner of the following enterprise and am duly authorized to act on its behalf:

Enterprise Name:			
Trading Name (If Applicable):			
Registration Number:			
Physical Address:			
Type of Entity (CC, (Pty) Ltd, Sole Prop etc.):			
Nature of Construction Business: <i>Indicate the applicable category with a tick.</i>	BEP (Built Environment Professional)	Contractor	Supplier
Definition of "Black People"	As per the Broad-Based Black Economic Empowerment Act 53 of 2003 as Amended by Act No 46 of 2013 "Black People" is a generic term which means Africans, Coloureds and Indians – who are citizens of the Republic of South Africa by birth or descent; or who became citizens of the Republic of South Africa by naturalization before 27 April 1994; or after 27 April 1994 and who would have been entitled to acquire citizenship by naturalization prior to that date;"		
Definition of "Black Designated Groups"	"Black Designated Groups" means: (a) unemployed black people not attending and not required by law to attend an educational institution and not awaiting admission to an educational institution; (b) Black people who are youth as defined in the National Youth Commission Act of 1996; (c) Black people who are persons with disabilities as defined in the Code of Good Practice on employment of people with disabilities issued under the Employment Equity Act; (d) Black people living in rural and under developed areas; (e) Black military veterans who qualifies to be called a military veteran in terms of the Military Veterans Act 18 of 2011;"		

- 3) I hereby declare under Oath that as per Amended Code Series 100 of the Amended Codes of Good Practice issued under section 9 (1) of B-BBEE Act No 53 of 2003 as Amended by Act No 46 of 2013,

- The Enterprise is _____ % Black Owned
- The Enterprise is _____ % Black Female Owned
- The Enterprise is _____ % Owned by Black Designated Group (provide Black Designated Group Breakdown below as per the definition in the table above)

o Black Youth % _____ %

o Black Disabled % _____ %

T2.2.11.7

- o Black Unemployed % _____ %
- o Black People living in Rural areas % _____ %
- o Black Military Veterans % _____ %

Construction Sector Affidavit

1. Based on the Financial Statements/Management Accounts and other information available on the latest financial year-end of _____, the annual Total Revenue was less than the applicable amount confirmed **by ticking the applicable box below.**

BEP	R1.8 million	
Contractor	R3.0 million	
Supplier	R3.0 million	

If the turnover exceeds the applicable amount in the table above then this affidavit is no longer applicable and an EME certificate must be obtained from a rating agency accredited by SANAS or when applicable a B-BBEE Verification Professional Regulator appointed by the Minister of Trade and Industry.

2. Please Confirm on the below table the B-BBEE Level Contributor, **by ticking the applicable box below.**

100% Black Owned	Level One (135% B-BBEE procurement recognition level)	
At least 51% Black Owned	Level Two (125% B-BBEE procurement recognition level)	
At least 30% Black Owned	Level Four (100% B-BBEE procurement recognition level)	
Less than 30% Black Owned	Level Five (80% B-BBEE procurement recognition level)	

3. I know and understand the contents of this affidavit and I have no objection to take the prescribed oath and consider the oath binding on my conscience and on the Owners of the Enterprise which I represent in this matter.

4. The sworn affidavit will be valid for a period of 12 months from the date signed by commissioner.

Deponent Signature: _____

Date: _____

COMMISSIONER OF OATHS
SIGNATURE & STAMP

T2.2.12 COMPULSORY DECLARATION

The following particulars must be furnished. In the case of a joint venture, separate declaration in respect of each partner must be completed and submitted.

Section 1: Enterprise Details

Name of enterprise:	
Contact person:	
Email:	
Telephone:	
Cell no	
Fax:	
Physical address	
Postal address	

Section 2: Particulars of companies and close corporations

Company / Close Corporation registration number	
--	--

Section 3: SARS Information

Tax reference number	
VAT registration number:	<i>State Not Registered if not registered for VAT</i>

Section 4: CIDB registration number

CIDB Registration number (if applicable)	
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Section 5: National Treasury Central Supplier Database

Supplier number	
Unique registration reference number	

Section 6: Particulars of principals

principal: means a natural person who is a partner in a partnership, a sole proprietor, a director of a company established in terms of the Companies Act of 2008 (Act No. 71 of 2008) or a member of a close corporation registered in terms of the Close Corporation Act, 1984, (Act No. 69 of 1984).

Full name of principal	Identity number	Personal tax reference number

Attach separate page if necessary

Section 7: Record in the service of the state

Indicate by marking the relevant boxes with a cross, if any principal is currently or has been within the last 12 months in the service of any of the following:

- | | |
|--|--|
| ☐ a member of any municipal council | ☐ an employee of any department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act of 1999 (Act No. 1 of 1999) |
| ☐ a member of any provincial legislature | |
| ☐ a member of the National Assembly or the National Council of Province | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ a member of the board of directors of any municipal entity | ☐ an employee of Parliament or a provincial legislature |
| ☐ an official of any municipality or municipal entity | |

If any of the above boxes are marked, disclose the following:

Name of principal	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 8: Record of family member in the service of the state

family member: a person's spouse, whether in a marriage or in a customary union according to indigenous law, domestic partner in a civil union, or child, parent, brother, sister, whether such a relationship results from birth, marriage or adoption

Indicate by marking the relevant boxes with a cross, if any family member of a principal as defined in section 5 is currently or has been within the last 12 months been in the service of any of the following:

- | | |
|--|---|
| ☐ a member of any municipal council | ☐ an employee of any provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act 1 of 1999) |
| ☐ a member of any provincial legislature | |
| ☐ a member of the National Assembly or the National Council of Province | ☐ a member of an accounting authority of any national or provincial public entity |
| ☐ a member of the board of directors of any municipal entity | ☐ an employee of Parliament or a provincial legislature |
| ☐ an official of any municipality or municipal entity | |

Name of family member	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		Current	Within last 12 months

*insert separate page if necessary

Section 9: Record of termination of previous contracts with an organ of state

Was any contract between the tendering entity including any of its joint venture partners terminated during the past 5 years for reasons other than the employer no longer requiring such works or the employer failing to make payment in terms of the contract.

☐ Yes ☐ No (Tick appropriate box)

If yes, provide particulars (interest separate page if necessary)

Section 10: Declaration

The undersigned, who warrants that he / she is duly authorised to do so on behalf of the tendering entity confirms that the contents of this Declaration are within my personal knowledge, and save where stated otherwise in an attachment hereto, are to the best of my belief both true and correct, and:

- i) neither the name of the tendering entity or any of its principals appears on:
 - a) the Register of Tender Defaulters established in terms of the Prevention and Combating of Corrupt Activities Act of 2004 (Act No. 12 of 2004)
 - b) National Treasury's Database of Restricted Suppliers (see www.treasury.gov.za)
- ii) neither the tendering entity or any of its principals has within the last five years been convicted of fraud or corruption by a court of law (including a court outside of the Republic of South Africa);
- iii) any principal who is presently employed by the state has the necessary permission to undertake remunerative work outside such employment (attach permission to this declaration);
- iv) the tendering entity is not associated, linked or involved with any other tendering entities submitting tender offers
- v) has not engaged in any prohibited restrictive horizontal practices including consultation, communication, agreement, or arrangement with any competing or potential tendering entity regarding prices, geographical areas in which goods and services will be rendered, approaches to determining prices or pricing parameters, intentions to submit a tender or not, the content of the submission (specification, timing, conditions of contract etc) or intention to not win a tender;
- vi) has no other relationship with any of the tenderers or those responsible for compiling the scope of work that could cause or be interpreted as a conflict of interest;
- vii) neither the tenderer or any of its principals owes municipal rates and taxes or municipal service charges to any municipality or a municipal entity and are not in arrears for more than 3 months;
- viii) SARS may, on an on-going basis during the term of the contract, disclose the tenderer's tax compliance status to the Employer and when called upon to do so, obtain the written consent of any subcontractors who are subcontracted to execute a portion of the contract that is entered into in excess of the threshold prescribed by the National Treasury, for SARS to do likewise.

Signed

Date

Name

Position

Enterprise name

T.2.2.13 MUNICIPAL DECLARATION AND RETURNABLE DOCUMENTS

The following particulars must be furnished in relation to tenders for municipalities and municipal entities:

- a) where consultancy services are required; and
- b) goods, services or a combination thereof, where the estimated total of the prices exceeds R10 million, including VAT.

In the case of a joint venture, separate municipal declarations and returnable documents shall be submitted in respect of each partner.

Section 1: Enterprise details

Name of enterprise	
Contact person	
Email	
Telephone	
Cell	
Fax	
Physical address	
Postal address	

Section 2: Declaration for consultancy services

The enterprise has been awarded the following consultancy services by an organ of state during the last five years:

Name of organ of state	Estimated number of contracts	Nature of service, e.g. quantity surveying	Service similar to required service (yes/no)?

Attach separate page as necessary

Section 3: Goods, services, or a combination thereof, where the estimated total of the prices exceeds R10 million, including VAT

I/we certify that

1) (tick one of the boxes):

- ☐ the enterprise **is not** required by law to prepare annual financial statements for auditing
- ☐ the enterprise **is** required by law to have audited annual financial statements (attached herewith for the past three financial years or the years for which the enterprise has been in operation)

2) the enterprise and its directors have no undisputed commitments for municipal services towards a municipality or other service provider in respect of which payment is overdue for more than 30 days (i.e. all municipal accounts are paid up to date);

3) source of goods and/or services :

(tick one of the boxes and insert percentages if applicable)

☐ goods and/or services are sourced only from within the Republic of South Africa

☐ % of the total cost of goods and/or services will be sourced from outside the Republic of South Africa, and the percentage of payment from the municipality or municipal entity which is expected to be transferred out of the Republic is %.

I furthermore confirm that the following contracts were awarded to the enterprise by an organ of state during the last five years and attached particulars of any material non-compliance or dispute concerning the execution of such contracts:

Name of organ of state	Estimated number of contracts	Nature of contracts

Attach separate page as necessary

I, the undersigned who warrants that I am duly authorised on behalf of the tendering entity, hereby declare that the contents of this Declaration are within my personal knowledge, and save where stated otherwise, are to the best of my belief both true and correct.

Signed

Date

Name

Position

Tenderer

THE CONTRACT**PART C1 – AGREEMENTS AND CONTRACT DATA****C1.1 FORM OF OFFER AND ACCEPTANCE (Agreement)****OFFER**

The Employer, identified in the Acceptance signature block, has solicited offers to enter into a contract in respect of the following works:

Kouga Municipality: Notice No. 167/2025: Rates Tender for Solar Photovoltaic (PV) Generation and Battery Energy Storage System (BESS) for a Period of Twelve (12) Months: Specification No. G/10676/E

The Tenderer, identified in the Offer signature block, has examined the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, 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.

THE OFFERED TOTAL OF THE PRICES INCLUSIVE OF VALUE ADDED TAX IS:

.....

..... Rand (in words)

R (in figures).

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 to the Tenderer before the end of the period of validity stated in the Tender Data whereupon the Tenderer becomes the party named as the Contractor in the Conditions of Contract identified in the Contract Data.

For the Tenderer:

Signature

Name

Capacity

Name and address of organisation:

.....

.....

Signature and name of witness:

Signature

Name

Date:

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 Agreement)
Part C2	Pricing Data
Part C3	Scope of Work
Part C4	Site Information

and drawings and documents or parts thereof, which may be incorporated by reference into Parts C1 to C4 above.

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 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 Agreement. No amendments to or deviations from said documents are valid unless contained in this Schedule, which must be duly signed by the authorised representative(s) of both parties.

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 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 of this document, including the Schedule of Deviations (if any). Unless the Tenderer (now Contractor) within five 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.

For the Employer:

Signature

Name

Capacity

Name and address of organisation:

.....

.....

Signature and name of witness:

Signature

Name

Date:

SCHEDULE OF DEVIATIONS**Notes:**

1. 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.
2. A Tenderer's covering letter shall not be included in the final contract document. Should any matter in such letter, which constitutes a deviation as aforesaid, become the subject of Agreements reached during the process of offer and acceptance, the outcome of such Agreement shall be recorded here.
3. Any other matter arising from the process of offer and acceptance either as a confirmation, clarification or change to the tender documents and which it is agreed by the Parties becomes an obligation of the contract shall also be recorded here.
4. Any change or addition to the tender documents arising from the above Agreements and recorded here, shall also be incorporated into the final draft of the Contract.

(i)	Subject	
	Details	
(ii)	Subject	
	Details	
(iii)	Subject	
	Details	
(iv)	Subject	
	Details	
(v)	Subject	
	Details	
(vi)	Subject	
	Details	

C1.1.4

By the duly authorised representatives signing this Schedule of Deviations, the Employer and the Tenderer agree to and accept the foregoing Schedule of Deviations as the only deviations from and amendments to the documents listed in the Tender Data and addenda thereto as listed in the Tender Schedules, as well as any confirmation, clarification or change 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 Agreement shall have any meaning or effect in the contract between the parties arising from this Agreement.

For the Tenderer:

..... Signature

..... Name

..... Capacity

Name and address of organisation:

.....

.....

.....

..... Witness Signature

..... Witness Name

..... Date

For the Employer:

.....

.....

.....

Name and address of organisation:

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CONFIRMATION OF RECEIPT

The Tenderer, (now Contractor), identified in the Offer part of this Agreement hereby confirms receipt from the Employer, identified in the Acceptance part of this Agreement, of one fully completed original copy of this Agreement, including the Schedule of Deviations (if any) today:

the (day)

of (month)

20 (year)

at (place)

For the Contractor:

Signature

Name

Capacity

Signature and name of witness:

Signature

Name

C1.2 CONTRACT DATA

The General Conditions of Contract for Construction Works, Third Edition (2015) published by the South African Institution of Civil Engineering, Private Bag X200, Halfway House, 1685, is applicable to this Contract and is obtainable from www.saice.org.za

The following contract specific data, referring to the General Conditions of Contract for Construction Works, Third Edition, 2015, are applicable to this Contract. Tenderers must read the abovementioned General Conditions of Contract in order to understand the implications of the Data provided by the Employer, as well as the Data which has to be completed by the Tenderer.

PART 1: DATA PROVIDED BY THE EMPLOYER

Clause	Data
1.1.1.13	The Defects Liability Period is 12 months measured from the date of the Certificate of Completion.
1.1.1.14	The time for achieving Practical Completion includes the days referred to under Clause 5.3.2 and the non-working days but excludes the special non-working days (Clauses 5.1.1 and 5.8.1).
1.1.1.15	The name of the Employer is Kouga Municipality.
1.1.1.26	The Pricing Strategy is a Re-measurement Contract.
1.2.1.2	The address of the Employer is: Address (physical): 33 Da Gama Road, JEFFREYS BAY, 6330 Address (postal): PO Box 21, JEFFREYS BAY, 6330 Telephone: 042-200 2200 Facsimile: 042-200 8606 E-mail: tenders@kouga.gov.za
5.1.1 and 5.8.1	The non-working days are Sundays, with the exception of work which must be undertaken during scheduled outages planned for Sundays. The special non-working days are: The public holidays. The year-end break commencing on about 16 December and ending on about the first Monday of the subsequent year, or the days on which the Contractor grants the majority of his permanent workforce leave.
5.3.1	The documentation required before commencing with the Works are: Health and Safety Plan (refer to Clause 4.3 of the GCC 2015 conditions). Initial programme (refer to Clause 5.6). Security (refer to Clause 6.2). Insurance (refer to Clause 8.6). Occupational Health and Safety Agreement (refer to Part C1.4 hereof). Letter of Good Standing from the Compensation Commissioner.
5.3.2	The time to submit the documentation required before commencement of the Works is 14 days .

C1.2.2

5.12.2.2	A delay caused by inclement weather conditions will be regarded as a delay only if, in the opinion of the Employer's Agent, all progress on an item or items of work on the critical path of the working programme of the Contractor has been brought to a halt. Delays on working days only (based on a five-day working week) will be taken into account for the extension of time, but the Contractor shall make provision in his programme of work for an expected delay of two (2) working days per month caused by normal rainy weather, for which he will not receive any extension of time. Extension of time during working days will be granted to the degree to which actual delays, as defined above, exceed the number of two (2) working days. It shall be further noted that where the critical path is not affected, no extension of time for abnormal climatic conditions or for any other reason will be entertained. Abnormal climatic conditions are conditions that occur less frequently than once in ten years.
5.13.1	The penalty for failing to complete a works instruction in the time as confirmed under Item 5.6.1 above is R 3 000.00 per day.
5.14.1	The requirements for achieving Practical Completion are that the Works must be in a state of readiness, fit for the intended purpose and occupation without danger or undue inconvenience to the Employer.
5.16.3	The latent defects period is five (5) years.
6.5.1.2.3	The percentage allowance on the net cost of materials actually used in the completed Works is 10%, unless specifically tendered otherwise in the Pricing Schedules. The percentage allowance on the gross remuneration of the workmen and foremen actually engaged is 10%, unless specifically tendered otherwise in the Pricing Schedules.
6.8.2	Contract Price Adjustment (CPA) will not be allowed. Tenderers must take cognisance of the contract duration and make allowance for escalation in the tendered rates. It must be taken that the contract can be awarded anytime within the tender validity period.
6.8.3	Price adjustments for variations in the costs of special materials are not allowed.
6.10.1.5	The percentage advance on materials not yet built into the Permanent Works is 80%. The percentage advance on Plant not yet supplied to Site is 80%. Documentary evidence of ownership and an indemnity against claims in respect of the plant and or materials shall be provided, and items shall be clearly marked and identified as being the property of the Employer. A Certificate of Ownership of Plant / Materials as per Part C1.5 shall be submitted to the Employer's Agent together with the claim for payment.
6.10.3	Retention of 10% will be withheld on progress payment, up to the limit of retention money which is 5% of the Contract Sum. A guarantee in lieu of retention is not permitted.
6.11	Failing agreement, between the Contractor and the Employer's Agent, both the Preliminary and General Fixed Charge and Time Related Items shall be adjusted on a pro-rata basis.
8.6.1.1.2	The value of Plant and material supplied by the Employer to be included in the insurance sum is R Nil
8.6.1.1.3	The amount to cover professional fees for repairing damage and loss to be included in the insurance sum is 5% of the contract sum.
8.6.1.3	The limit of indemnity for liability insurance is R10 million.

C1.2.3

10.3.2	Amicable settlement in terms of Clause 10.4 shall be contemplated for all disputes prior to referring any dispute to adjudication or arbitration.
10.5.3	The number of Adjudication Board Members to be appointed is one (1).
10.7.1	The determination of disputes which are unresolved in terms of Clause 10.4.2 shall be by arbitration.

C1.2 CONTRACT DATA**PART 2: DATA PROVIDED BY THE CONTRACTOR**

The Tenderer shall provide the following information:

Clause	Data								
1.1.1.9	The name of the Contractor is								
1.2.1.2	The address of the Contractor is: Address (physical): Address (postal): Telephone: Facsimile: E-mail:								
1.1.1.14	The time for achieving Practical Completion measured from the Contract Commencement Date is shall be agreed between Employer and Contractor.								
6.2.1	The security to be provided by the Contractor shall be one of the following: <table border="1"> <tr> <th>Type of security (Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)</th><th>Contractor's Choice (Indicate "Yes" or "No")</th></tr> <tr> <td>Cash deposit of 10% of the Contract Sum plus retention of 5% of the value of the Works</td><td>No</td></tr> <tr> <td>Performance guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works.</td><td>.....</td></tr> <tr> <td>Variable Performance guarantee of 10% of the Contract Sum for the first period and 5% of the Contract Sum for the second period plus retention of 5% of the value of the Works.</td><td>No</td></tr> </table>	Type of security (Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)	Contractor's Choice (Indicate "Yes" or "No")	Cash deposit of 10% of the Contract Sum plus retention of 5% of the value of the Works	No	Performance guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works.		Variable Performance guarantee of 10% of the Contract Sum for the first period and 5% of the Contract Sum for the second period plus retention of 5% of the value of the Works.	No
Type of security (Value Added Tax is excluded from the Contract Sum and the value of the Works for calculating the percentages)	Contractor's Choice (Indicate "Yes" or "No")								
Cash deposit of 10% of the Contract Sum plus retention of 5% of the value of the Works	No								
Performance guarantee of 10% of the Contract Sum plus retention of 5% of the value of the Works.									
Variable Performance guarantee of 10% of the Contract Sum for the first period and 5% of the Contract Sum for the second period plus retention of 5% of the value of the Works.	No								

C1.3 PRO FORMA PERFORMANCE GUARANTEE

For use with the General Conditions of Contract for Construction Works, Third Edition (2015)

GUARANTOR DETAILS AND DEFINITIONS

“Guarantor” means:

Physical Address:

“Employer” means:

“Contractor” means:

“Employer’s Agent” means:

“Works” means:

“Site” means:

“Contract” means: The Agreement made in terms of the Form of Offer and Acceptance and such amendments or additions to the Contract as may be agreed in writing between the parties.

“Contract Sum” means: The accepted amount inclusive of tax of R

Amount in words:

“Guaranteed Sum” means: The maximum aggregate amount of R

Amount in words:

Type of Performance Guarantee: (*Insert Variable or Fixed*)

“Expiry Date” means:(*Give date*) or any other later date set by the Contractor and/or Employer provided such instruction is received prior to the Expiry Date as indicated here.

CONTRACT DETAILS

Employer’s Agent issues: Interim Payment Certificates, Final Payment Certificate and the Certificate of Completion of the Works as defined in the Contract.

1. VARIABLE PERFORMANCE GUARANTEE

1.1 Where a Variable Performance Guarantee has been selected, the Guarantor’s liability shall be limited during the following periods to diminishing amounts of the Guaranteed Sum as follows:

1.1.1 From and including the date of signing the Performance Guarantee up to and including the date of the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum:

R (Amount in words)

1.1.2 From the day following the date of the said interim payment certificate up to and including the Expiry date, or the date of issue by the Employer’s Agent of the Certificate of Completion of the Works, whichever occurs first:

R (Amount in words)

- 1.2 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the interim payment certificate certifying, for the first time, more than 50% of the Contract Sum, has been issued and the date on which the Certificate of Completion of the Works has been issued.

2. FIXED PERFORMANCE GUARANTEE

- 2.1 Where a Fixed Performance Guarantee has been selected, the Guarantor's liability shall be limited to the amount of the Guaranteed Sum.
- 2.2 The Guarantor's period of liability shall be from and including the date on which the Performance Guarantee is signed, up to and including the Expiry Date, or the date of issue by the Employer's Agent of the Certificate of Completion of the Works, or the date of payment in full of the guaranteed Sum, whichever occurs first.
- 2.3 The Employer's Agent and/or the Employer shall advise the Guarantor in writing of the date on which the Certificate of Completion of the Works has been issued.

3. CONDITIONS APPLICABLE TO VARIABLE & FIXED PERFORMANCE GUARANTEES

- 3.1 The Guarantor hereby acknowledges that:
 - 3.1.1 Any reference in this Performance Guarantee to the Contract is made for the purpose of convenience and shall not be construed as any intention whatsoever to create an accessory obligation or any intention whatsoever to create a suretyship.
 - 3.1.2 Its obligation under this Performance Guarantee is restricted to the payment of money.
- 3.2 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor hereby undertakes to pay the Employer the sum certified upon receipt of the documents identified in 3.2.1 to 3.2.3:
 - 3.2.1 A copy of a first written demand issued by the Employer to the Contractor stating that payment of a sum certified by the Employer's Agent in an Interim or Final Payment Certificate has not been made in terms of the Contract and failing such payment within seven (7) calendar days, the Employer intends to call upon the Guarantor to make payment in terms of 3.2.2;
 - 3.2.2 A first written demand issued by the Employer to the Guarantor at the Guarantor's physical address with a copy to the Contractor stating that a period of seven (7) days has elapsed since the first written demand in terms of 3.2.1 and the sum certified has still not been paid;
 - 3.2.3 A copy of the aforesaid payment certificate which entitles the Employer to receive payment in terms of the Contract of the sum certified in 3.2.
- 3.3 Subject to the Guarantor's maximum liability referred to in 1.1 or 2.1, the Guarantor undertakes to pay to the Employer the Guaranteed Sum or the full outstanding balance upon receipt of a first written demand from the Employer to the Guarantor at the Guarantor's physical address calling up this Performance Guarantee, such demand stating that:
 - 3.3.1 The Contract has been terminated due to the Contractor's default and that this Performance Guarantee is called up in terms of 3.3; or
 - 3.3.2 A provisional or final sequestration or liquidation court order has been granted against the Contractor and that the Performance Guarantee is called up in terms of 3.3; and
 - 3.3.3 The aforesaid written demand is accompanied by a copy of the notice of termination and/or the provisional/final sequestration and/or the provisional liquidation court order.
- 3.4 It is recorded that the aggregate amount of payments required to be made by the Guarantor in terms of 3.2 and 3.3 shall not exceed the Guarantor's maximum liability in terms of 1.1 or 2.1.
- 3.5 Where the Guarantor has made payment in terms of 3.3, the Employer shall upon the date of issue of the Final Payment Certificate submit an expense account to the Guarantor showing how all monies received in terms of this Performance Guarantee have been expended and shall refund to the Guarantor any resulting surplus. All monies refunded to the Guarantor in terms of this Performance Guarantee shall bear interest at the prime

C1.3.3

overdraft rate of the Employer's bank compounded monthly and calculated from the date payment was made by the Guarantor to the Employer until the date of refund.

- 3.6 Payment by the Guarantor in terms of 3.2 or 3.3 shall be made within seven (7) calendar days upon receipt of the first written demand to the Guarantor.
- 3.7 Payment by the Guarantor in terms of 3.3 will only be made against the return of the original Performance Guarantee by the Employer.
- 3.8 The Employer shall have the absolute right to arrange his affairs with the Contractor in any manner which the Employer may consider fit and the Guarantor shall not have the right to claim his release from this Performance Guarantee on account of any conduct alleged to be prejudicial to the Guarantor.
- 3.9 The Guarantor chooses the physical address as stated above for the service of all notices for all purposes in connection herewith.
- 3.10 This Performance Guarantee is neither negotiable nor transferable and shall expire in terms of 1.1.2 or 2.2, where after no claims will be considered by the Guarantor. The original of this Guarantee shall be returned to the Guarantor after it has expired.
- 3.11 This Performance Guarantee, with the required demand notices in terms of 3.2 or 3.3, shall be regarded as a liquid document for the purposes of obtaining a court order.
- 3.12 Where the Performance Guarantee is issued in the Republic of South Africa the Guarantor hereby consents in terms of Section 45 of the Magistrate's Courts Act No 32 of 1944, as amended, to the jurisdiction of the Magistrate's Court of any district having jurisdiction in terms of Section 28 of the said Act, notwithstanding that the amount of the claim may exceed the jurisdiction of the Magistrate's Court.

Signed at

Date

Guarantor's signatory (1)

Capacity

Guarantor's signatory (2)

Capacity

Witness signatory (1)

Witness signatory (2)

C1.4 OCCUPATIONAL HEALTH AND SAFETY AGREEMENT

AGREEMENT MADE AND ENTERED INTO BETWEEN

Kouga Municipality (Employer)

and

..... (Contractor / Mandatory)

IN TERMS OF SECTION 37(2) OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, ACT No. 85 OF 1993 AS AMENDED.

I, representing

the Contractor / Mandatory as an employer in its own right, do hereby undertake to ensure, as far as is reasonably practicable, that all work will be performed, and all equipment, machinery or plant used in such a manner as to comply with the provisions of the Occupational Health and Safety Act (OHSA) and the Regulations promulgated there under.

I furthermore confirm that we are registered with the Compensation Commissioner and that all registration and assessment monies due to the Compensation Commissioner have been fully paid or that we are insured with an approved licensed compensation insurer.

COID ACT Registration Number:

OR Compensation Insurer: Policy No.:

I undertake to appoint, where required, suitable competent persons, in writing, in terms of the requirements of OHSA and the Regulations and to charge him/them with the duty of ensuring that the provisions of OHSA and Regulations as well as the Employer's Special Conditions of Contract, Way Leave, Lock-Out and Work Permit Procedures are adhered to as far as reasonably practicable.

I further undertake to ensure that any subcontractors employed by me will enter into an occupational health and safety agreement separately, and that such subcontractors comply with the conditions set.

I hereby declare that I have read and understand the Occupational Health and Safety Conditions and undertake to comply therewith at all times.

I hereby also undertake to comply with the Occupational Health and Safety Specification and Plan.

Signed at on the day of 20....

Witness

Contractor / Mandatory

Signed at on the day of 20

Witness

Employer

C1.5 CERTIFICATE OF OWNERSHIP OF PLANT / MATERIALS

NAME OF CONTRACTOR:

ADDRESS:

.....

.....

.....

NAME OF EMPLOYER:

ADDRESS:

.....

.....

.....

CONTRACT DESCRIPTION:

CONTRACT NO:

The undersigned Contractor (duly authorised hereto by virtue of a resolution of the Board of Directors/Members on) hereby certifies the following in accordance with the terms of Clause 6.10.1.5 of the General Conditions of Contract:

- (i) The plant and or materials listed hereunder, which are the Contractor's sole and exclusive property and to which no third party has any rights will upon payment be lawfully acquired by the Employer.
- (ii) The Employer is indemnified against any claim to or in respect of the plant and or materials by reason of the Contractor's sequestration or liquidation, or of any defect in the Contractor's title to the plant and or materials.
- (iii) Upon payment, effective delivery of the plant and or materials to the Employer will take place.
- (iv) Ownership of the plant and or materials will then vest in the Employer.
- (v) The plant and or materials are insured in accordance with the requirements of the Conditions of Contract.
- (vi) The Contractor shall be responsible for the care of the plant and or materials and clearly mark and identify same as being the property of the Employer.
- (vii) The plant and or materials are held by the Contractor in storage for and on behalf of the Employer at address: (the premises).
- (viii) The premises is:
 - *a) the property of the Contractor; or
 - *b) the property of of (address)

..... and are let to the Contractor by

..... of (address)

.....

* (delete whichever is not applicable)

SIGNATURE OF CONTRACTOR:

WITNESS:

DATE:

LIST OF PLANT / MATERIALS IN STORAGE OF CONTRACTOR

[illegible]

SIGNATURE OF CONTRACTOR:

WITNESS:

DATE:

PART C2 – PRICING DATA

C2.1 PRICING INSTRUCTIONS

- 1.0 The Bills of Quantities form part of and must be read in conjunction with the Specification. The Price Summary is to reflect the total price carried forward from the Bills of Quantities which need to be submitted with the tender documents.
- 2.0 The tender price must be based on the Bills of Quantities. The priced Bills of Quantities shall be submitted with the tender documents.
- 3.0 The completed Bills of Quantities shall detail the unit rate and total amount for material and labour respectively for each Item. Tenderers are advised to check their Item extensions and total additions since no claim for arithmetical errors will be considered.

“Material Rate” shall include the supply and delivery of all items of material and equipment (plant) to the site including all incidentals necessary for the completion of each Item, plus the profit thereon. Rates shall be exclusive of VAT.

“Labour Rate” shall include the cost of all labour, both skilled and unskilled, including supervision and profit required to complete the installation of all material covered by each Item. Rates shall be exclusive of VAT.

- 4.0 No alteration, erasure or addition is to be made in the text of the Bills of Quantities. Should any erasure or addition be made it will not be recognised but the original wording of the Bills of Quantities will be adhered to.
- 5.0 The quantities in the Bills are not to be considered as limiting or extending the amount of work to be done and materials to be supplied.
- 6.0 The Engineer will check the completed Bills of Quantities for arithmetical errors, omissions and discrepancies in accordance with the Standard Conditions of Tender.
- 7.0 Only major Items have been scheduled but the Tenderer shall nevertheless include for all things he considers necessary whether specified in detail or not to complete the work to specification and in a satisfactory and workmanlike manner, in order to provide a complete and working system. No extra price will be considered for the provision of materials which should have been allowed in order to provide the completed works unless detailed by the Contractor in the space provided elsewhere in the Specification.
- 8.0 Where alternative prices for equipment of different manufacture are offered, the lowest alternative price for equipment to specification must be included, against the relevant Item in the Bills of Quantities. The remaining alternative prices must be furnished separately.

Where such equipment is found not to comply with the Specification, the Contractor will be required to provide equipment which does comply, without adjustment to the price in the Bills of Quantities.

- 9.0 All items in the Bills of Quantities are deemed to include supply, delivery, installation and commissioning where appropriate, unless specifically stated otherwise. The unit rate must include for all things necessary, whether specified in detail or not, including all components, small installation materials, allowance for off-cuts, wastage etc., erection and fixings to complete the item to Specification in a satisfactory and workmanlike manner, in order to provide a complete and working system.

C2.1.2

- 10.0 In certain instances prices are requested for Items which may be required during the progress of the work, but which are not included in the known quantities of material / labour required. These Items are indicated by the designation "R/O" (rate only) in the "Quantity" column and the price is to be noted in the "Rate" columns only and must not be carried forward.
- 11.0 Where no rates are filled-in by the Tenderer, or the rate is indicated as Nil, it will be assumed that there is no charge for the particular item and that the cost thereof has been included in the other rates provided.
- 12.0 The Bills of Quantities shall not be used for ordering purposes. The Contractor shall check and measure the lengths of cables / conductors on site before ordering any of these materials.
- 13.0 The quantities and rates included for Daywork shall form part of the tender price, but Tenderers shall note that this item must be regarded as provisional and will only be payable to the Contractor if and when a written instruction to this effect has been issued.
- 14.0 Expenditure in connection with Provisional and Prime Cost Sums and under the Contingency Allowance (if any) shall be solely at the discretion and on the written instruction of the Engineer.
- 15.0 An Excel spreadsheet version of the Bill can be made available to Tenderers on request. The spreadsheet may be used for calculation purposes only. The Engineer or the Employer does not take responsibility for any arithmetical or other errors that may occur due to the use of the spreadsheet. The original wording and quantities of the Bills included in the tender document will be adhered to and this Bill must be completed by hand in black ink and submitted with the tender.

C2.2 BILLS OF QUANTITIES

	<u>INDEX TO BILLS OF QUANTITIES</u>	<u>Page No.</u>
1.0	BILL 1.0: PRELIMINARY AND GENERAL ITEMS	C2.2.2
2.0	BILL 2.0: SOLAR PV AND BESS INSTALLATIONS	C2.2.3
3.0	PRICE SUMMARY	C2.2.9

BILL 1.0: PRELIMINARY AND GENERAL ITEMS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL		LABOUR	
				RATE	TOTAL	RATE	TOTAL
1.0	<u>Preliminary and General Costs</u>						
1.0	The fixed P&G costs provided below shall include all overhead costs associated with the specific PV system. Major items shall include, inter alia, preparation of construction programme, construction drawings, health & safety requirements, accommodation, travelling, disbursements, compliance with the municipality's preferential procurement policy, liaison with municipality, scaffolding, test certificates, operating- and maintenance manuals, etc:						
1.1	Fixed P&G costs for 5-8kWp rooftop system.	Sum	1	R	-	R	-
1.2	Fixed P&G costs for 9-50kWp rooftop system.	Sum	1	R	-	R	-
1.3	Fixed P&G costs for 51-200kWp rooftop system.	Sum	1	R	-	R	-
1.4	Fixed P&G costs for 9-50kWp carport/ground mount system.	Sum	1	R	-	R	-
1.5	Fixed P&G costs for 51-200kWp carport/ground mount system.	Sum	1	R	-	R	-
2.0	<u>Day work</u>						
	The following rates are for any variations over and above a specific work instruction. The total price of the work instruction will already be fixed and the additional work required could then be added onto that using the following rates:						
2.1	Labour, Normal Time:						
2.1.1	Installation Electrician and Labourer.	hour	1	R	-	R	-
2.1.2	Artisan Electrician and Labourer.	hour	1	R	-	R	-
2.1.3	Labourer.	hour	1	R	-	R	-
2.2	Labour, Normal Overtime:						
2.2.1	Installation Electrician and Labourer.	hour	1	R	-	R	-
2.2.2	Artisan Electrician and Labourer.	hour	1	R	-	R	-
2.2.3	Labourer.	hour	1	R	-	R	-
2.3	Labour, Sundays and Public Holidays:						
2.3.1	Installation Electrician and Labourer.	hour	1	R	-	R	-
2.3.2	Artisan Electrician and Labourer.	hour	1	R	-	R	-
2.3.3	Labourer.	hour	1	R	-	R	-
2.4	Transport:						
2.4.1	Private car or light delivery vehicle.	km	1	R	-	R	-
2.4.2	5 tonne truck.	km	1	R	-	R	-
2.4.3	10 tonne truck.	km	1	R	-	R	-
2.4.4	10 tonne truck with crane.	hour	1	R	-	R	-
2.4.5	5 tonne mobile crane.	hour	1	R	-	R	-
Totals to Price Summary Item 1.0					R	-	R

BILL 2.0: SOLAR PV AND BESS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL				LABOUR			
				RATE		TOTAL		RATE		TOTAL	
(i)	<u>Notes:</u>										
(ii)	All rates must be exclusive of VAT.										
	All items to include for the supply and delivery thereof, unless specified otherwise.										
1.0	PV Modules										
1.1	PV Module. Tier 1 Supplier. Minimum 565Wp.	each	1	R	-	R	-	R	-	R	-
2.0	Mounting Systems. Rate to include all fixings and fasteners, including setting out, etc.										
2.1	Aluminium mounting rail, continuous, including stainless steel mounting brackets for tiled roof systems, priced per meter (single rail).	m	1	R	-	R	-	R	-	R	-
2.2	Aluminium mounting rail, continuous, including stainless steel mounting hardware for corrugated roof systems, priced per meter (single rail).	m	1	R	-	R	-	R	-	R	-
2.3	Splice set for aluminium rails.	each	1	R	-	R	-	R	-	R	-
2.4	Mini-rail for IBR roofing.	each	1	R	-	R	-	R	-	R	-
2.5	Aluminium ground mount system, complete, for fixed tilt array, including foundation for 4 x 2 modules in portrait. 600mm ground clearance.	each	1	R	-	R	-	R	-	R	-
2.6	Aluminium ground mount system, complete, for fixed tilt array, including foundation for 9 x 2 modules in portrait. 600mm ground clearance.	each	1	R	-	R	-	R	-	R	-
2.7	Carport structure - single bay approx 9000mm width, (7500mm between supports) for 8 x 3 = 24 modules mounted in portrait. Including foundations.	each	1	R	-	R	-	R	-	R	-
2.8	Structural certification on design and installation on ground mount and carport installation.	Sum	1	R	-	R	-	R	-	R	-
2.9	Mid clamps for PV Module fastening.	each	1	R	-	R	-	R	-	R	-
2.10	End clamps for PV Module fastening.	each	1	R	-	R	-	R	-	R	-
3.0	Inverters Grid tied										
3.1	125kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
3.2	100kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-

BILL 2.0: SOLAR PV AND BESS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL				LABOUR			
				RATE		TOTAL		RATE		TOTAL	
3.3	50kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
3.4	25kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
3.5	8kW Single Phase Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
3.6	5kW Single Phase Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
4.0	Inverters: Hybrid and Battery										
4.1	50kW Hybrid Inverter.	each	1	R	-	R	-	R	-	R	-
4.2	60kWh (nameplate) Li-Ion/LiFeO4 HV battery suitable for above inverters, including DC fused isolator.	each	1	R	-	R	-	R	-	R	-
4.3	Single Phase Hybrid Inverter:										
4.3.1	8kW.	each	1	R	-	R	-	R	-	R	-
4.3.2	5kW.	each	1	R	-	R	-	R	-	R	-
4.4	5kWh (nameplate) Li-Ion/LiFeO4 LV battery suitable for above inverter, including DC fused isolator.	each	1	R	-	R	-	R	-	R	-
5.0	Data Logger										
5.1	Data logger for single inverter. This must include as a minimum generation, export, alarms to a cloud platforms. (If this is not part of inverter). Including configuration.	each	1	R	-	R	-	R	-	R	-
5.2	Data logger for use where there is more than one inverter on a site. Including configuration.	each	1	R	-	R	-	R	-	R	-
5.3	Inverter interconnect shielded twisted pair communication cable.	m	1	R	-	R	-	R	-	R	-
5.4	LTE cellular modem, including 12 month's data.	each	1	R	-	R	-	R	-	R	-
5.5	Uninterruptable Power Supply (UPS) with Li-Ion battery back-up of 8 hours at 75% load:										
5.5.1	5kVA	each	1	R	-	R	-	R	-	R	-
5.5.2	8kVA	each	1	R	-	R	-	R	-	R	-
6.0	DC Cables										
6.1	DC cable 6mm ² Cu single core (solar cable).	m	1	R	-	R	-	R	-	R	-
6.2	DC cable 50mm ² Cu single core (battery cable).	m	1	R	-	R	-	R	-	R	-

BILL 2.0: SOLAR PV AND BESS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL				LABOUR			
				RATE		TOTAL		RATE		TOTAL	
7.0	DC Cabling terminations										
7.1	Staubli MC4 Male connector 1000V/30A/6mm ² .	each	1	R	-	R	-	R	-	R	-
7.2	Staubli MC4 Female connector 1000V/30A/6mm ² .	each	1	R	-	R	-	R	-	R	-
7.3	6mm ² termination on fuse, including cable gland.	each	1	R	-	R	-	R	-	R	-
7.4	50mm ² termination on battery/ fuse.	each	1	R	-	R	-	R	-	R	-
8.0	Fuse Boxes										
8.1	IP65 lockable fuse box, approximately 400x300 with DIN rail for mounting.	each	1	R	-	R	-	R	-	R	-
8.2	Single pole DC din rail mounted fuse.	each	1	R	-	R	-	R	-	R	-
8.3	Double pole DC surge protection	each	1	R	-	R	-	R	-	R	-
9.0	Cable Tray										
9.1	Medium Duty galvanised cable tray including all accessories and mounting hardware for roof or wall mounting:										
9.2	Straight 228x38mm with cover.	m	1	R	-	R	-	R	-	R	-
9.3	Riser/dropper 228x38mm with cover.	each	1	R	-	R	-	R	-	R	-
9.4	Horizontal bend 228x38mm with cover.	each	1	R	-	R	-	R	-	R	-
9.5	Straight 114x38mm with cover.	m	1	R	-	R	-	R	-	R	-
9.6	Riser/dropper 114x38mm with cover.	each	1	R	-	R	-	R	-	R	-
9.7	Horizontal bend 114x38mm with cover.	each	1	R	-	R	-	R	-	R	-
10.0	Galvanised Wiring Duct										
10.1	P9000 Straight duct with cover.	m	1	R	-	R	-	R	-	R	-
10.2	P9000 Riser/dropper with cover.	each	1	R	-	R	-	R	-	R	-
10.3	P9000 Horizontal bend with cover.	each	1	R	-	R	-	R	-	R	-
11.0	PV System Main AC DB										
11.1	For 125kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
11.2	For 100kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
11.3	For 50kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
11.4	For 25kW Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-

BILL 2.0: SOLAR PV AND BESS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL				LABOUR			
				RATE		TOTAL		RATE		TOTAL	
11.5	For 8kW Single Phase Grid-tied Inverter.	each	1	R	-	R	-	R	-	R	-
12.0	AC Cables										
12.1	120mm ² x 4c Aluminium PVCAS cable + 95mm ² BCEW.	m	1	R	-	R	-	R	-	R	-
12.2	95mm ² x 4c Aluminium PVCAS cable + 70mm ² BCEW.	m	1	R	-	R	-	R	-	R	-
12.3	95mm ² x 4c Cu PVCA/ECC cable.	m	1	R	-	R	-	R	-	R	-
12.4	70mm ² x 4c Cu PVCA/ECC cable.	m	1	R	-	R	-	R	-	R	-
12.5	25mm ² x 4c Cu PVCA/ECC cable.	m	1	R	-	R	-	R	-	R	-
12.6	10mm ² x 4c Cu PVCA/ECC cable.	m	1	R	-	R	-	R	-	R	-
12.7	6mm ² x 3c Cu PVCAS cable.	m	1	R	-	R	-	R	-	R	-
13.0	AC Cable Terminations										
13.1	120mm ² x 4c Aluminium PVCAS cable + 95mm ² BCEW termination.	each	1	R	-	R	-	R	-	R	-
13.2	95mm ² x 4c Aluminium PVCAS cable + 70mm ² BCEW termination.	each	1	R	-	R	-	R	-	R	-
13.3	95 x 4c Cu PVCA/ECC cable termination.	each	1	R	-	R	-	R	-	R	-
13.4	70 x 4c Cu PVCA/ECC cable termination.	each	1	R	-	R	-	R	-	R	-
13.5	25 x 4c Cu PVCA/ECC cable termination.	each	1	R	-	R	-	R	-	R	-
13.6	10 x 4c Cu PVCA/ECC cable termination.	each	1	R	-	R	-	R	-	R	-
13.7	6 x 3c Cu PVCAS cable termination.	each	1	R	-	R	-	R	-	R	-
14.0	Circuit Breakers installed in existing switchboards										
14.1	200A TP 15kA MCCB.	each	1	R	-	R	-	R	-	R	-
14.2	160A TP 15kA MCCB.	each	1	R	-	R	-	R	-	R	-
14.3	80A TP 5kA MCB.	each	1	R	-	R	-	R	-	R	-
14.4	40A TP 5kA MCB.	each	1	R	-	R	-	R	-	R	-
14.5	40A SP 5kA MCB.	each	1	R	-	R	-	R	-	R	-

BILL 2.0: SOLAR PV AND BESS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL				LABOUR			
				RATE		TOTAL		RATE		TOTAL	
15.0	Trenching and Slewing										
15.1	Including backfilling and compaction, for LV cable or data cable 300mm wide x 700mm deep:										
15.1.1	Earth. To be removed by hand/shovel/pick.	m	1	R	-	R	-	R	-	R	-
15.1.2	Hard Earth. To be removed by jack hammer or other pneumatic tool.	m	1	R	-	R	-	R	-	R	-
15.2	300mm wide x 150 micron PVC marker tape laid 300mm above LV cable.	m	1	R	-	R	-	R	-	R	-
15.3	110mm Ø Cableflex Sleeve pipe.	m	1	R	-	R	-	R	-	R	-
15.4	32mm Ø PVC Conduit.	m	1	R	-	R	-	R	-	R	-
15.5	Stamped concrete cable marker to mark LV cable route.	each	1	R	-	R	-	R	-	R	-
15.6	Cable sleeve brick built concrete slab covered manhole. (500mm x 500mm).	each	1	R	-	R	-	R	-	R	-
15.7	Extra over Item No. 15.1.0 for:										
15.7.1	Imported backfill material from off-site source.	m³	1	R	-	R	-	R	-	R	-
15.7.2	Disposal of surplus or unsuitable material including haulage up to 10km from site.	m³	1	R	-	R	-	R	-	R	-
16.0	Earthing										
16.1	Main bonding bar or box for earthing 120mm Busbar x 400mm.	each	1	R	-	R	-	R	-	R	-
16.2	6mm² insulated earth wiring for earthing system of substructure and modules.	m	1	R	-	R	-	R	-	R	-
16.3	50mm² bare copper conductor between plant and inverter.	m	1	R	-	R	-	R	-	R	-
16.4	Termination of 50mm² BCEC.	each	1	R	-	R	-	R	-	R	-
16.5	Earth Spike and Clamp.	each	1	R	-	R	-	R	-	R	-
16.6	Lightning Protection System for Carport structure - single bay approx 9000mm width, (7500mm between supports) for 8 x 3 = 24 modules mounted in portait. Including foundations.	each	1	R	-	R	-	R	-	R	-
17.0	Labelling										
17.1	Complete statutory required labelling.	Sum	1	R	-	R	-	R	-	R	-

BILL 2.0: SOLAR PV AND BESS INSTALLATIONS

ITEM	DESCRIPTION	UNIT	QTY	MATERIAL				LABOUR			
				RATE		TOTAL		RATE		TOTAL	
18.0	Testing and Commissioning										
18.1	Configuration of inverter on cloud reporting platform.	Sum	1	R	-	R	-	R	-	R	-
18.2	Commissioning of single inverter and related DC installation, including full test report on each string, earthing resistance, etc.	Sum	1	R	-	R	-	R	-	R	-
18.3	Certificate of Compliance for the AC Electrical Installation.	Sum	1	R	-	R	-	R	-	R	-
18.4	Certificate of Compliance for Lightning Protection System.	Sum	1	R	-	R	-	R	-	R	-
19.0	Operation and Maintenance										
19.1	12-month operations and maintenance for 5-8kWp rooftop system.	Sum	1	R	-	R	-	R	-	R	-
19.2	12-month operations and maintenance for 9-50kWp rooftop system.	Sum	1	R	-	R	-	R	-	R	-
19.3	12-month operations and maintenance for 51-200kWp rooftop system.	Sum	1	R	-	R	-	R	-	R	-
19.4	12-month operations and maintenance for 9-50kWp carport/ground mount system.	Sum	1	R	-	R	-	R	-	R	-
19.5	12-month operations and maintenance for 51-200kWp carport/ground mount system.	Sum	1	R	-	R	-	R	-	R	-
20.0	Lump sum allowance for any items not included in this schedule necessary to complete the installation in accordance with the specification. Brief description of such items to be entered hereunder.	Sum	1	R	-	R	-	R	-	R	-
Totals to Price Summary Item 2.0						R	-			R	-

PRICE SUMMARY

ITEM	DESCRIPTION	MATERIAL	LABOUR
1.0	BILL 1.0: PRELIMINARY AND GENERAL ITEMS	R -	R -
2.0	BILL 2.0: SOLAR PV AND BESS INSTALLATIONS	R -	R -
3.0	SUB-TOTALS	R -	R -
4.0	NET AMOUNT, excl. VAT.		R -
5.0	TOTAL NET AMOUNT, excl. VAT		R -
6.0	ADD VAT @ - 15%		R -
7.0	TOTAL GROSS TENDER AMOUNT, incl. VAT, TO BE CARRIED FORWARD TO FORM OF OFFER AND ACCEPTANCE IN PART C1.1 HEREOF		R -
Name of Tenderer:			
Signature of Tenderer: Date:			
Address:			
.....			
.....			
Tel. No:			
E-mail Address:			

PART C3: SCOPE OF WORK

C3.1: GENERAL SPECIFICATION

1.0 LOCATION AND DESCRIPTION

Any work instruction carried out under this contract could be undertaken in any of the towns located within the boundaries of the Kouga Municipality. The major towns include Jeffreys Bay, Humansdorp, St. Francis Bay, Cape St. Francis, Oyster Bay, Hankey and Patensie.

2.0 EXTENT OF CONTRACT

The purpose of the contract is to obtain unit rates for Solar Photovoltaic (PV) and Battery Energy Storage System (BESS) installations for twelve (12) months. A specific project/s is yet to be identified, and the rates provided under Part C2.1, Bills of Quantities, will be used as basis work a work instruction as funding becomes available.

3.0 ADJUDICATION AND AWARD OF TENDERS

The Municipality reserves the right to appoint one or more Tenderer and would then be subject to the Municipality's Rotation Policy.

Tenders will only be considered if the requirements as stipulated under clause F.3.13.1 of Part T1.2 are met, and all the items required under the List of Returnable Documents under Part 2.1 have been satisfactorily provided.

4.0 LETTING OF CONTRACT

The contract will be let as a Direct Contract with Kouga Municipality for a period of one (1) year from the date of appointment.

5.0 EQUIPMENT AND MATERIALS SUPPLIED BY MUNICIPALITY

The appointed Electrical Contractor will generally be required to supply and install the equipment and materials as stipulated in the Bills of Quantities hereof.

The Municipality, however, reserves the right to supply certain material that is available at the stage of the project, as a free issue item to the Contractor for installation only. The labour rate of that specific item/s shall in such instance still govern. It is therefore important to note that all labour rates provided must include handling charges for the respective material.

6.0 SUPPLY VOLTAGES

The supply voltage can be either 66000, 22000, 11000 or 400/230 volt, 50 Hz, with a deviation up to $\pm 8\%$, and all equipment and material shall be suitable for these conditions. The phase rotation is to be checked and maintained throughout the network.

7.0 **SWITCHING SUPPLIES**

All switching of MV and LV supplies shall be arranged in advance with the Municipality's electro-technical department. The Contractor shall establish the department's requirements regarding advance notice, permits to work, etc at the start of any work requiring the supply to be switched off.

8.0 **PROGRAMME**

The construction programme for a work instruction shall be agreed between the Employer and the Contractor before work commences.

9.0 **REGISTRATION OF CONTRACTOR**

The Tenderer must be registered with the Electrical Contracting Board (ECA) as well as with the Construction Industry Development Board (CIDB). A minimum grading of 4EP is required for this tender as specified under Part 1.2, Tender Data.

10.0 **SITE STAFF**

The Contractor shall always have a competent person / supervisor on site to oversee the execution of the work required under this contract. This person shall be familiar and have undergone the necessary training to meet all the health and safety requirements stipulated in the Occupational Health and Safety Act (OHS Act) and where relevant environmental procedures and the requirements of the Municipality.

The person in charge will also ensure that the necessary quality control is applied. The Contractor shall also have an Installation Electrician in his employ to for example issue a Certificate of Compliance (COC).

11.0 **SITE FACILITIES**

The Contractor shall be responsible for negotiating with the Employer to obtain a location for erection of his site office and storage yard if required. The Contractor shall also arrange for the supply of water, electricity and telephone services to this site at his own cost.

12.0 **RE-MEASUREMENT**

All quantities in the Bills of Quantities are provisional and are subject to the actual quantities required per Works instruction.

13.0 **COST PRICE ADJUSTMENT**

All rates provided in this tender shall be fixed and firm for the duration of the contract period.

14.0 **CLEARANCE WITH OTHER SERVICES**

When relevant, it shall be the responsibility of the Contractor to obtain all necessary drawings and information of the existing and planned future underground services from the Municipality and Telkom to ensure that there is no damage to those services during the installation of electrical services and that all necessary clearances with their existing and future plant are allowed. Where necessary, the Contractor shall first locate existing underground services before commencing with the trenching for cables or the excavation of holes for poles.

Where and whenever tar, paving, concrete, grass and/or other existing road and pavement surfaces need to be lifted and removed for the installation of electrical services, then the Municipality should be consulted in advance to inspect same before any work commences. On completion of the work, the existing road and pavement surfaces shall be re-instated to its original state and also to the satisfaction of the Municipality.

15.0 **MONITORING WORKS**

Monitoring the works undertaken by the Contractor against the municipal requirements will be undertaken by staff from the Municipality's Electro-technical Department.

16.0 **WORK BY OTHERS**

Erf and road boundary pegs required will be placed by a Land Surveyor to be appointed by the Employer.

17.0 **WEEKENDS AND PUBLIC HOLIDAYS**

No work shall be carried out on weekends or public holidays or outside of normal working hours during weekdays, unless specifically required by the Municipality's Electro-technical Department.

18.0 **HEALTH AND SAFETY**

The Contractor and all sub-contractors used by the Contractor are required to adhere to the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended, and including the Construction Regulations (2014), as amended.

Where relevant, allowance has been made in the Bills of Quantities for the Tenderer to allow for the costs involved to compile a Health and Safety Plan as per the Construction Regulations and to implement it for the duration of a specific task. This Plan must be submitted to the Engineer for approval before such a task commences.

The Contractor is required to provide a Certificate of Health and Fitness from an Occupational H&S doctor for all OH employees.

19.0 **KOUGA SUPPLY CHAIN MANAGEMENT POLICY**

Tenders will be adjudicated in terms of Kouga Municipality's Supply Chain Management Policy of 30 May 2014. A copy of this document is available at the Municipality and on the Kouga website.

20.0 **PREFERENTIAL PROCUREMENT**

20.1 Requirements

Refer to Clauses C2.23 and C3.11.1 of the Tender Data, Part T1.2, and the Preferencing Schedule: Broad Based Black Economic Empowerment Status, Part T2.2.11, in terms of the Preferential Procurement Regulations 2022 (80/20 version).

20.2 Resources Standards pertaining to targeted procurement

Tenders will be evaluated in terms of the Employer's Procurement Points system. The criteria for allocation of procurement points are stated in Clauses C2.23 and C3.11.1 of the Tender Data.

21.0 **SUBCONTRACTING**

21.1 Scope of mandatory subcontract works.

The Contractor shall note that the Employer is committed to local Emerging Enterprise development and this forms part of this.

The sub-contracting of work is required for all CIDB-related projects in the following ranges:

- a) R 5M >, but < R 10M requires Bidder to sub-contract 10% of the value of the project
- b) R 10M >, but < R 15M requires Bidder to sub-contract 15% of the value of the project
- c) R 15M >, but < R 20 requires Bidder to sub-contract 20% of the value of the project
- d) R 20M >, but < R 30M requires Bidder to sub-contract 25% of the value of the project
- e) R 30M > requires Bidder to sub-contract 30% of the value of the project

The sub-contracting value will be based on the estimated value of the project either determined by the director or project manager.

Where the successful bidder's price falls within any other range, the sub-contracting range included in the Bid Document will be applied.

The municipality may include sub-contracting for any other none CIDB related project as may be requested by the Director of the Department to promote local development.

Community Based Suppliers or service providers/ward-based suppliers or service providers must be considered for subcontracting by the main contractor. The first preference for subcontracting must be given to community or ward-based suppliers of that particular ward where the project is taking place. If the required skill or expertise is not available from the ward / area where the project is taking place, the main contractor is permitted to accept service providers or suppliers within the KLM jurisdiction. Those service provider or suppliers would then contract directly with the main contractor.

21.2 Preferred subcontractors / suppliers

Local Emerging Enterprises registered on the Kouga Local Municipality Database and/or nominated by the municipality.

21.3 Subcontracting procedures

All matters pertaining to subcontractors and the work executed by them shall be dealt with directly between the Employer's Agent and the Contractor in the context of all subcontract work being an integral part of the Works for which the Contractor is responsible.

Subcontractors shall comply in full to all aspects of the Contract.

The Employer's Agent will not liaise directly with any subcontractors, nor will he issue instructions concerning the subcontract works directly to any subcontractor.

The Contractor shall remain responsible for providing the subcontracted portion of the works as if the work had not been subcontracted.

Subcontractors shall comply in full, to all aspects of the Contract.

21.4 Attendance on subcontractors

The Contractor shall guide, assist, advise and mentor the local EE subcontractor/s and guidance on how to establish and determine rates.

The Contractor shall be responsible for ensuring that the prospective local EE subcontractor/s fully comprehend the:

- Implications of the liabilities and responsibilities inherent in the contract into which the tenderer entered.
- Implications of the tendered rates.
- Scope and extent of the Works.
- Proper procedures for the submission of a tender.
- Procedures and basis on which tenders will be evaluated and awarded.

The Contractor shall closely manage, mentor, supervise, guide and assist the EE in all aspects of management, planning, execution and the completion of work.

The above shall include inter alia, but is not limited to, the following:

- (i) Planning and programming of the Works.
- (ii) The sourcing, ordering, purchasing, hiring all the necessary Construction Equipment, Materials, tools and accidentals necessary and required for the successful execution and completion of the Permanent as well as the Temporary Works.
- (iii) Labour relations and employment.
- (iv) Monthly measurements, costing and invoicing.
- (v) General safety, occupational health and safety matters.
- (vi) Functions of civil Employer's Agenting infrastructure, structures, services and systems.
- (vii) Interpreting and understanding the contract.
- (viii) Construction and maintenance methods and procedures.
- (ix) Communication.
- (x) Cash-flow control, submitting invoices and payment certificates.
- (xi) Planning, programming, scheduling, critical path control and acceleration.
- (xii) Maintenance planning.
- (xiii) Material procurement and control.

- (xiv) Risk limitation and management.
- (xv) Quality assurance and procedures.
- (xvi) Compliances with all applicable laws, regulations, statutory provisions and agreements.
- (xvii) General Conditions of Contract and Contract Data.
- (xviii) Contractual claims, if situations arise that entitle a contractor to claims in terms of the Conditions of Contract.
- (xix) Profit and loss.
- (xx) Replacement and running costs of Construction Equipment.

The extent and level of management, mentorship, supervision, guidance and assistance to be provided by the Contractor shall be in commensuration with the expertise of the relevant EE and should be so directed as to enable the EE to achieve the successful execution and completion of the respective works.

22.0 **SANCTIONS**

In the event that the Tenderer fails to substantiate that any failure to achieve the Contract Participation Goal (CPG) outcomes was due to quantitative under runs, the elimination of items, or any other reasons beyond the Contractor's control which may be acceptable to the Employer, the Contractor shall be liable to pay to the Employer a financial penalty calculated in the following manner:

$$P = \frac{0,50 \times (D - D_0) \times NA}{100}$$

, where D = tendered Contractor participation goal percentage.

D₀ = the Contract Participation Goal, which the Employer's Representative based on the credits passed, certifies as being achieved upon completion of the contract.

NA = Net Amount of the Tender.

P = Rand value of penalty payable.

The penalties will be calculated with each certificate, based on the information provided under the monitoring indicated in clause 14.0 below.

23.0 **MONITORING / REPORTING**

The reporting requirements below will be adhered to.

CPG attainment will be monitored on a monthly basis, and for this the Contractor will supply the relevant information at a time set by the Employer's Agent.

- 23.1 The Contractor shall submit all the documentation required in terms of details of his plan to achieve CPG, compliance with the contract and 14.2 timeously and, together with his programme of activities, a schedule which indicates clearly the expected commencement and completion dates of work and services to be performed by all the targeted enterprises engaged on the contract for the purpose of securing credits towards the contract participation goal. This schedule shall be updated by the Contractor whenever a change in date occurs.

C3.1.7

- 23.2 The Contractor shall prepare and attach to his claim for payment, in a form approved by the Employer, the following:
- a) a brief report which describes the commercially useful functions performed by the targeted enterprises in the performance of the contract, both over the interim period and on a cumulative basis;
 - b) a schedule reflecting the estimated total value of the contracts, the cumulative value of the contracts and the value of supplies provided or work and services performed (or both) over the period for which payment is claimed in respect of each and every targeted enterprise performing commercially useful functions;
- 23.3 Should random inspections conducted by the Employer's Agent on targeted enterprise activities indicate that such enterprises are not performing in accordance with the requirements of this part, the Contractor shall provide, in addition to the requirements of 14.2, separate weekly resource returns and any other relevant information in respect of such targeted enterprises in a format approved by the Employer's Agent.
- 23.4 The Employer's Agent shall certify the value of the credits counted towards the contract participation goal whenever a claim for payment is issued to the employer and shall notify the Contractor of this amount.
- 23.5 The Contractor shall, upon completion of each individual targeted enterprise's contract, issue a completion certificate and certify the amount paid to such targeted enterprises. He shall submit the certificates, counter-certified by the relevant targeted enterprise, to the Employer's Agent for record-keeping purposes. The Contractor shall furnish reasons to the Employer whenever it is not possible to obtain such counter certification.

24.0 **CONTRACTOR'S OBLIGATIONS TO SUBCONTRACTED EEs**

24.1 Dispute Avoidance and Resolution Procedures

The Contractor shall at all times

- (a) apply the terms and conditions of the subcontract fairly and justly, taking due cognisance of the level of sophistication and experience of the EE subcontractor concerned.
- (b) closely monitor all EE subcontracts and issue reasonable warnings when any contravention of the terms of the subcontract has occurred or appears likely to occur. The Contractor shall give EEs reasonable opportunity to avoid or make good any such contravention.

When taking any disciplinary actions or imposing any penalties provided for in the subcontract, the Contractor shall explain fully that such actions are in accordance with the conditions of subcontract.

Should any dispute arise between the Contractor and an EE, such dispute shall be resolved in accordance with the provisions of the subcontract.

Should an EE subcontractor be terminated, the Contractor shall replace such subcontractor with a local EE subcontractor listed on the KLM database.

24.2 Quality of Work and Performance of EE subcontractors

If, in the opinion of the Employer's Agent, an EE Subcontractor fails to comply with any of the criteria listed below, he/she shall issue a written warning to the Contractor stating all the areas of non-compliance.

- (a) Acceptable standard of work as set out in the subcontract specifications.
- (b) Progress in accordance with the time constraints in the subcontract.
- (c) Site safety.

The circumstances that may warrant the issue of a written warning are, however, not limited to those listed above. A copy of the letter of warning shall be forwarded to the Employer.

25.0 **ISSUING OF COMPLETION CERTIFICATE**

The Contractor shall, within 7 days of the completion of each subcontract completed in accordance with the provisions of this specification, issue free of charge to the EE a Certificate of Completion co-signed by the Employer's Agent and a senior representative of the Contractor who has been duly authorised to do so.

26.0 **MEASUREMENT AND PAYMENT**

No direct payment will be made for the cost of dealing with EEs. Payment will be deemed to be covered by the rates and sums tendered and paid for the various items of work included under the contract.

27.0 **CONSTRUCTION AND "AS-BUILT" DRAWINGS AND MANUALS**

The Electrical Contractor shall submit to the Engineer, within one month after appointment, construction drawings of all work to be undertaken under this project.

Before the date of the issue of the Certificate of Completion, the Electrical Contractor shall hand-over to the Engineer three sets of electronic and hard copies of "As-Builts" of the above-mentioned drawings. These drawings shall be complete in all respects, together with operational and maintenance manuals, test certificates, commissioning report, etc, where relevant. The manual shall include a description of the works, operating instructions, manufacturer's pamphlets, and catalogues on all the equipment supplied and a spares list for the same equipment.

These drawings shall clearly show, with measurement relative to the various structures where applicable, all cable routes and positions of cable markers, final details of all circuits, and revised schedules of equipment etc. The Contract will not be considered complete until these drawings and manuals have been received.

28.0 **DAMAGE TO STRUCTURES**

The Electrical Contractor shall be responsible for the making good of damage caused by his / her staff to any part of the structures / equipment. In the event of the occurrence of damage he/she shall arrange the repair of such damage to be carried out at his / her own expense to the satisfaction of the Engineer and Employer.

C3.2 HEALTH AND SAFETY

1.0 GENERAL

The principal Contractor and Contractors are required to adhere to the provisions of the Occupational Health and Safety Act, 1993 (Act No. 85 of 1993), as amended, and including the Construction Regulations 2014, as amended, forming part thereof. For the purposes of this part of the document, the terms principal Contractor and Contractor, and Client, shall have the meanings as defined in the abovementioned Regulations.

The principal Contractor, or Contractor shall undertake all the duties and activities required of him in terms of the abovementioned regulations. These may include but not necessarily be limited to the following:

- Notification of construction work.
- Preparation, liaison with and submission to the Client, and implementation and maintenance of a suitable and sufficiently documented health and safety plan which must include and involve all Contractors under a principal Contractor's control.
- Liaison and cooperation with all other Contractors.
- Supervision of construction work, including appointment of a construction supervisor in terms of the Regulations.
- Risk assessment.
- Fall protection.
- Structures, formwork and support work, excavation work, demolition work, scaffolding and suspended platforms, hoists of any type, and explosive powered tools.
- Electrical installations and machinery on construction sites.
- Use and storage of flammable liquids, water hazards, general housekeeping and stacking and storage, as well as fire precautions.

2.0 HEALTH AND SAFETY INFORMATION

The design described in this document has taken into account the hazards to persons which may occur during construction, commissioning and subsequent use and maintenance. However, the nature of the work is such that certain hazards are unavoidable and will be prevalent during the above operations and these must be taken into account by the Contractor when preparing and implementing the health and safety plan.

In order to assist the Contractor, certain hazards and aspects of health and safety are identified in this document and on the drawings and a Hazard Identification List is provided below to inform the Contractor of any known or anticipated dangers or hazards relating to the design or construction work. The information is provided in order to assist the Contractor to analyse and evaluate the risks and does not, in any way, relieve the Contractor of his/her responsibilities in terms of health and safety.

3.0 HEALTH AND SAFETY PLAN

The Contractor shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

The Contractor shall prepare a Health and Safety Plan in respect of the Works in accordance with the Act and Regulations, which shall cover inter-alia the following details:

- Management Structure, Site Supervision and Responsible Persons including a succession plan.
- Contractor's induction training programme for employees, sub-contractors and visitors to the Site.
- Health and safety precautions and procedures to be adhered to in order to ensure compliance with the Act, Regulations and Safety Specifications.
- Regular monitoring procedures to be performed.
- Regular liaison, consultation and review meetings with all parties.
- Site security, welfare facilities and first aid.
- Site rules and fire and emergency procedures.

The Contractor is required to ensure that all sub-contractors or others engaged in the performance of the contract also comply with the above requirements.

4.0 **HEALTH AND SAFETY CONDITIONS**

The Chief Executive Officer of the Contractor shall assume the responsibility in terms of Section 16(1) of the Occupational Health and Safety Act (as amended). Should the Contractor assign any duty in terms of Section 16(2), a copy of such assignment shall immediately be provided to the representative of the Employer as defined in the Contract.

All work performed on the Employer's premises shall be performed under the supervision of the construction supervisor who understand the hazards associated with any work that the Contractor performs on the site in terms of Construction Regulations 2014.

The Contractor shall appoint a Competent Person who shall be trained on any occupational health and safety aspect pertaining to them or to the work that is to be performed.

The Contractor shall ensure that he familiarises himself with the requirements of the Occupational Health and Safety Act and that he, his employees, and any sub-contractors, comply with them.

Discipline in the interests of occupational health and safety shall be strictly enforced.

Personal protective equipment shall be issued by the Contractor as required and shall be worn at all times where necessary.

Written safe work procedures and appropriate precautionary measures shall be available and enforced, and all employees shall be made conversant with the contents of these practices.

No substandard equipment/machinery/articles or substances shall be used on the site.

All incidents referred to in terms of Section 24 of the Occupational Health and Safety Act shall be reported by the Contractor to the Department of Labour and the Employer.

The Employer hereby obtains an interest in the issue of any formal inquiry conducted in terms of Section 32 of the Occupational Health and Safety Act and into any incident involving a Contractor and/or his employees and/or his sub-contractor/s.

No use shall be made of any of the Employer's machinery / plant / equipment / substance / personal protective equipment or any other article without prior arrangement and written approval.

C3.2.3

No alcohol or any other intoxicating substance shall be allowed on the site. Any person suspected of being under the influence of alcohol or any other intoxicating substance shall not be permitted access to, or allowed to remain on the site.

Prior to commencement of any work, verified copies of all documents mentioned in the agreement, must be presented to the Employer.

5.0 **HEALTH AND SAFETY HAZARD IDENTIFICATION LIST**

The following list highlights a list of items that have the potential of creating a hazard or danger to persons during construction and commissioning. It is very important that each item be checked and confirmed before a works instruction is carried out:

Item	Hazard Description	Applicable to the Project Yes / No / N/A	Hazard Rating (Low, Medium, High) *	Comment / Recommendation
	Are there any specific client H&S requirements for the work?			
	Have site archaeological issues been identified and evaluated (might be of historical importance)			
	Has a geotechnical survey been carried out, and if so do the results indicate hazards which require control measures?			
	Is the site adjacent to or over public transport (railways, taxi ranks, bus stops etc.)?			
	Is the site adjacent to or over water (eg. rivers, dams, sea, canals)?			
	Is the site adjacent to, over or under any services or drains etc.(eg. high voltage cables, municipal sewer lines)?			
	Is the site adjacent to, over or under any public buildings such as schools and hospitals?			
	Are there any other local hazards such as overhead power cables?			
	Will the ground contours present any construction problems?			
	Is there any asbestos removal involved?			
	Will excavation be close to live electrical cables or pressure pipes?			
	Will any excavation works take place?			
	Will any work be carried out close to live electrical apparatus?			
	Is there confined space or tank entry work involved?			
	Will any steel erection works be taking place?			
	Will tower cranes be used or heavy lifting operations taking place?			
	Will mobile work platforms, cradles or abseiling be necessary?			

C3.2.4

Item	Hazard Description	Applicable to the Project Yes / No / N/A	Hazard Rating (Low, Medium, High) *	Comment / Recommendation
	Is the access to the site adequate for vehicles and pedestrians? re there any special arrangements and/or requirements?			
	Will the public have access to the site?			
	Have arrangements been made or co-ordinated for temporary electric supplies?			
	Have site lighting needs been identified for all stages of the work?			
	Will any accommodation/ office units be located inside an existing structure?			
	Have arrangements been made or co-ordinated for temporary supplies such as water and sewage disposal?			
	What is the type of roof construction? Evaluate fall hazards			
	Are there any 'Hot Works' to be undertaken?			
	Are electrical items to be installed?			
	Will there be any lift installation works?			
	Will there be any escalators to install?			
	Is the project a fire risk?			
	Have all environmental issues been evaluated and controlled?			
	Are there any specific fall protection hazards not already assessed?			
	Are there any additional hazards which have been identified as being site specific and which are not covered by the foregoing? If YES, note here:			

- * The hazard rating considers the likely level of consequence (injury/death) to which workers are exposed, the likely number of workers exposed to the hazard, and the probability of occurrence on the site.

C3.3: PROJECT TECHNICAL SPECIFICATION

1.0 GENERAL

This part of the specification deals with the main items of material and equipment which will be the Contractor's responsibility to supply and install in accordance with this document and the drawings.

Sufficient information is provided in this document and on the drawings to enable the tenderer to accurately price the work. Tenderers must allow for all items, whether specified in detail or not, required to complete the installation in a neat and workmanlike manner.

2.0 STANDARDS

All materials used under this Contract shall be of a quality and class most suitable for working under the conditions specified and shall withstand the variations of temperature and atmospheric conditions that may arise without distortion, deterioration or the setting up of undue stresses in any part such as to affect the efficiency and reliability of the plant, and also without affecting the strength and suitability of the various parts for functions which they have to perform.

The system shall be designed to meet the following standards:

IEC 62116, Utility-interconnected photovoltaic inverters – Test procedure of islanding prevention measures.

SANS 60364-7-712/IEC 60364-7-712, Electrical installations of buildings –Part 7-712: Requirements for special installations or locations – Solar photovoltaic (PV) power supply systems.

SANS 61215/IEC 61215, Crystalline silicon terrestrial photovoltaic (PV) modules – Design qualification and type approval.

IEC 62109 : Safety of power converters for use in photovoltaic power systems: all Parts

IEC 61727: Photovoltaic (PV) Systems - Characteristics of the Utility Interface.

IEC 60068: Environmental Testing.

IEC 61683: Photovoltaic Systems - Power Conditioners - Procedure for Measuring Efficiency.

IEC 62446-2:2020 Photovoltaic (PV) systems - Requirements for testing, documentation and maintenance - Part 2: Grid connected systems - Maintenance of PV systems

IEC 62930: Electric cables for photovoltaic systems with a voltage rating of 1,5 kV DC (SANS 62930).

IEC 62852 / SANS 62852: Connectors for DC-application in photovoltaic systems - Safety requirements and tests.

OHS Act – Republic of South Africa Occupational Health and Safety Act, Act 85 of 1993.

NRS 097 Part 2: Small scale embedded generation (all part 2 series)

Grid connection code for renewable power Plants (RPPs) connected to the electricity Transmission system (TS) or the distribution System (DS) in South Africa (latest edition)

SANS10142-1: The wiring of premises

3.0 **CONNECTION POINT (PCC)**

Each system will be provided with a point of common coupling, which will be located next to each Solar AC DB.

The Contractor shall ensure that the system has a single point of isolation for each of the points of common coupling (PCC). The fault level of each LV Main Board will be indicated and the contractor shall ensure that appropriately rated equipment is used. The system voltage is 400V, 3 phase, 4 wire system with a dedicated neutral bar and earth bar. Alternately, the voltage will be 230V, single phase. The earthing system at each connection point is a TNS system.

4.0 **FIXED TILT PHOTOVOLTAIC (PV) SYSTEM**

Where required, the contractor shall design, supply, install and commission the new carport PV system and/or ground mount PV system. The contractor shall ensure that the system is optimised to provide a high energy yield and minimise losses. The structures shall be designed and signed off by a professionally registered structural engineer and the structure shall be designed to withstand the site environmental elements.

The PV system electrical design and the installed system shall be approved by a qualified Professional Engineer. The contractor shall ensure that method statements are submitted for the all the components of the system as part of the health and safety file.

5.0 **SIMULATIONS AND PERFORMANCE ANALYSIS**

The Contractor shall provide detailed Simulation Results for each system.

The system shall be designed and simulated with the aid of a reputable industry simulation software. The tenderer must supply, with the offer a complete design indicating the following:

- System size (DC side kWp and AC side kWp & kVA)
- System component parameters
- Complete simulation reports for energy yields
- Load Ratio
- kWh/kWp
- Performance Ratio
- System losses report e.g.:
 - o Incidence angle (IAM) losses.
 - o Soiling losses
 - o Irradiance losses
 - o Thermal losses
 - o LID losses
 - o Light soaking effect
 - o Module quality losses
 - o Mismatch losses
 - o Module degradation loss
 - o Ohmic wiring losses
 - o Auxiliaries' consumption

- o Inverter Losses
- o System Unavailability loss
- Shading analysis

The Contractor shall use site specific global horizontal irradiation data for the project location and the system must be designed in a manner that takes advantage of the available area for energy generation purposes.

The shading effect due to adjacent buildings shall be considered in the modelling.

The tenderer must complete a shading analysis and ensure heavily shaded modules are removed.

The simulation is required to calculate inverter clipping and quantify the effects of oversizing. The desired system DC/AC load factor is 1.15 to 1.25.

The system must be designed in a practical manner to allow for adequate access for maintenance and the distances required from support structure edges for safety regulations must be indicated.

6.0 **PHOTOVOLTAIC MODULE**

The Contractor shall complete and comply with the requirements of the Particular Specification for PV Modules attached as Section A in Part T2.2.3.

All PV Modules shall be transported, stored, handled, and installed in accordance with the manufacturer's standards, to ensure that the module manufacturer's warrantee is honoured. The PV Modules shall be from a tier 1 manufacturer (or tier 1 PV Module) and shall be of the Monocrystalline solar panel type. The panels shall carry a minimum 24-year linear power warrantee and a minimum 10-year material warrantee.

The PV Modules shall be compatible to the site environmental conditions related to weather and corrosion and all PV modules shall have anti-PID properties. All modules supplied shall be of the same type and from the same manufacturer.

The contractor shall ensure that PV modules are selected and arranged to minimise losses due to mismatching. Where the manufacturer's module flasher data show an IMPP deviation of more than 3%, PV modules shall be sorted into three groups to meet a set tolerance. Only modules from the same set shall be used in the same string.

All records of the testing and grouping of Modules must be kept and presented to the Client.

The final choice of PV module must be based on high quality, high efficiency, optimal performance, and long service life.

7.0 **INVERTERS**

The Contractor shall complete and comply with the requirements of the Particular Specification for Inverters attached as Section B in Part T2.2.3.

All Inverters shall be transported, stored, handled, and installed in accordance with the manufacturer's standards, to ensure that the module manufacturer's warrantee is honoured.

Inverters shall be string inverters and have a NRS 097-2-1 inverter compliance certificate from a third-party test institute.

Approved inverter manufacturers are Huawei and SMA, Sunsynk and Sungrow. The contractor shall ensure that inverters are not exposed to direct sunlight.

To enable ease of maintenance, training and spare parts, the contractor shall ensure that all inverters are of the same type and manufacturer. The inverters shall have communications control capabilities as indicated on the schematic drawing.

The inverters shall be suitable for outdoor installation and for coastal conditions with severely corrosive environment. The inverters shall carry a minimum 10-year warranty on performance and build.

The installation and wiring of inverters shall be strictly in accordance with manufacturers standards and must be suitable to site conditions. The inverter controls or the system control system shall meet the requirements of clause 9 below.

8.0 **SYSTEM CONTROLLER**

When more than one inverter is installed, all parallel inverters shall operate as one system to meet the requirements of RPP's Category A3 as per the grid connection code for renewable power plants RPPS's.

The PV System shall be able to perform as per grid codes, with regards to:

- Normal operating conditions
- Abnormal operating conditions
- Frequency response
- Reactive power capabilities
- Reactive Power and Voltage Control Functions
- Power Quality
- Protection
- Active Power Constant Functions
- Control functions
- RPP availability, supervisory control and data acquisition
- Testing and Compliance

The system shall be equipped with a monitoring and signalling functions to send signals to the Clients BMS or SCADA System. This system shall be able to report the following to the Client's monitoring system:

- Inverter DC Voltage
- Inverter DC Current
- Inverter DC Power
- Inverter Condition (operating, faults, alarms and errors)
- AC Power output (kW, kVAr, kVA and power factor)
- AC Power direction
- AC Voltages
- AC Currents
- Module Temperature
- Global solar irradiation on plane of array (kWh/m²)
- Global solar irradiation on horizontal surface (kWh/m²)
- Wind Speed and wind direction
- Any essential monitoring parameters essential for maintenance

The systems data manager shall be able to log the following data at averages of 15 minutes intervals, with sufficient storage for 1 year's data:

- Inverter DC Voltage
- Inverter DC Current
- Inverter DC Power
- Inverter Condition (operating, faults, alarms and errors)
- AC Power output (kW, kVAr, kVA and power factor)
- AC Power direction
- AC Voltages
- AC Currents
- Module Temperature
- Global solar irradiation on plane of array (kWh/m²)
- Global solar irradiation on horizontal surface (kWh/m²)
- Wind Speed and wind direction

9.0 **PV SYSTEM MAIN AC DB**

A PV system AC main panel (Solar AC DB) shall be provided for connection of all string inverters per system. The AC main panel shall have a dedicated side for control, signalling and monitoring system and a dedicated side for power distribution system circuit breakers (incomers and main feeder to PCC).

The board shall be of the minimum size to accommodate all the equipment indicated on the schematic diagram plus future circuit breakers (allow for 20% spare ways). The MCB and MCCB ratings and circuit numbering must correspond exactly to those shown on the contractors as built drawings. The layout of the board shall also comply with the relevant SANS standards.

The distribution board shall be surface mounted and shall be fitted with separate cover plates and hinged lockable doors. The colour of the boards shall be electric orange. The board shall be floor standing. The DB/Panel shall be fitted with gland plates at the bottom for bottom entry of cables.

Externally mounted boards shall be IP65 (min) and shall be made of 3CR12 Stainless steel or superior material.

Outgoing circuits shall be connected strictly in accordance with the contractors' approved drawings and both live and neutral conductors shall be numbered using numbering ferrules on the control, signalling and monitoring circuits.

The Solar AC DB shall have the following equipment:

- Main Switch Circuit Breaker: 4 Pole Lockable Circuit breaker (with phase failure protection, phase sequence protection, over/under voltage protection and Under/Over Protection Relay): The status of the circuit breaker shall be monitored by the system
- Circuit Breakers for each inverter: 4P Lockable
- Type 1 and 2 surge protection device
- Emergency stop power off button

Drawing of the distribution boards must be submitted to the Engineer for approval before manufacture. The Distribution Board shall comply with the requirements of the latest edition of SANS 10142-1.

10.0 **DC SYSTEM**

The Contractor shall complete and comply with the requirements of the Particular Specification for DC System attached as Section C in Part T2.2.3.

The PV System for each inverter must be equipped with string over current protection, over voltage protection and surge protection. All equipment used on the DC System must be rated to the highest operating DC Voltage and Current and should be able to handle the DC fault levels.

The DC System to each inverter should be isolatable in accordance with SANS 10142-1.

The DC circuits should be identified by colours and symbols as per clause 6.3.3.3 of SANS 10142-1. All parts of the DC installation shall also meet the requirements of clause 7.15 "DC Installations" in SANS 10142-1.

11.0 **CABLES AND WIRING**

All DC cables and AC cables should be installed in separate wire ways and all DC cables shall be clearly demarcated. All DC cables shall accommodate voltages drops and must withstand environmental condition. All DC cables shall be copper cored and shall be installed in heavy duty wire mesh cable tray or similar.

Earth cables on the DC system must be clearly demarcated and sized to handle earth fault currents, lightning protection and provide adequate bonding for the PV Panel supports. Flexible cables are acceptable for the DC circuits. Sun exposure to DC strings should be limited and DC cables shall not move due to weather conditions.

"Please note: TÜV Rheinland's well established 2PFG 1169 and 2PFG 1990 have been withdrawn October 27th, 2017. PV cables with only these certificates can no longer be installed in PV systems. The international safety qualification standard for PV modules – IEC 61730 / SANS 61730 requires PV cables on PV modules to conform to EN 50618 / IEC 62930 (SANS 62930). As a consequence, all existing certificates have to be transferred to one of the valid norms (EN 50618 or IEC FDIS 62930)".

AC sub-main distribution from inverters to collector DB/Panel (Solar AC DB) and from the collector panel to the Solar PCC Kiosk shall be carried out using copper cored PVC ECC or PVCAS cables with bare copper earth conductors installed on cable ladder or buried in ground. All AC cables shall be designed and derated to handle full load currents, fault currents, multiple cables on cable ladder "touching", harmonics and environmental conditions.

All cable ends shall have labels that clearly indicate where the cable is supplied from and feeding to. If any doubt exists as to the method of installation for any cable, it shall be discussed with the Engineer prior to installation.

12.0 **EARTHING SYSTEM AND LIGHTING PROTECTION**

The earthing system on the AC System shall be TNS in accordance with the requirements of SANS 10142-1. The earthing system on the DC System shall comply with the requirements of SANS 10142-1 clause 7.15.2.

All structures, supports, wire-ways and equipment shall be adequately bonded. Carport systems must be supplied with a Lightning Protection system, including the design, installation, testing and commissioning the Lightning Protection System.

The lightning protection system shall be signed off by a specialist contractor. The cost of the required lightning protection upgrade shall be allowed in the price schedule.

13.0 **WIRE WAYS**

Cable Ladder

Heavy duty OL76 galvanised welded cable ladder of the sizes required for all cables and 20% spare, shall be allowed for power cables installed above ground. The cable ladders shall be suspended from or fixed to the main structures of the carport system or from floor mounted supports.

The cable ladders shall be galvanised and shall be supported at the spacings recommended by the manufacturer for fully loaded heavy duty OL76 cable ladder.

The completed racking systems shall form a structurally and electrically continuous path from the supply point to the equipment being fed, and all sections of the installation shall be firmly spliced or welded together to ensure this. All welds shall be cleaned, cold-galvanised and painted. The cable ladder shall be bonded to the electrical earthing system.

Cables shall be firmly strapped to racking along their entire length using PVC cable ties and, where necessary for bends on larger cables, stainless steel 'Bandit' strap.

The cable ladder routes shown on the layout drawing are provisional and the final positions must be checked with the Engineer before installation.

Cable Tray

Heavy duty galvanised wire mesh cable tray with a 50mm x 50mm aperture and of the sizes required for all cables and 20% spare, shall be installed to the extent indicated on the layout drawings for DC cables. The cable tray shall be supported on the carport structurers.

Wire mesh cable tray shall be supported at the spacings recommended by the manufacturer for fully loaded heavy duty galvanised wire mesh cable tray. Cables shall be firmly strapped to the tray along their entire length using PVC cable ties and, where necessary for bends on larger cables, stainless steel 'Bandit' strap.

The wire mesh cable tray routes shown on the layout drawing are provisional and the final positions must be checked with the Engineer before installation.

14.0 **PV MODULE MOUNTING SYSTEM AND CARPORT SYSTEM**

The Contractor shall complete and comply with the requirements of the Particular Specification for Carport System attached as Section D in Part T2.2.3.

The carport system must be designed, installed and commissioned by a specialist contractor. All materials used for the carport systems shall be suitable for a corrosive environment and carry a minimum warrantee of 10 years. The system shall be designed and signed off by a suitably qualified structural engineer.

Areas allocated for the carports will be indicated. The Contractor shall take responsibility for full structural design and mounting procedures for the mounting system and the system should withstand inclement weather conditions.

15.0 **DRAWINGS AND DOCUMENTATION**

The Contractor shall supply a full set of drawings for the Engineer and Client's approval. These drawings shall indicate:

- Cable routes for AC and DC circuits
- Single line diagrams for DC system
- Single line diagram for AC system
- Equipment position layouts
- General arrangements for Distribution Boards
- Control and monitoring system (including communication drawings)

Upon completion of the project the Contractor shall provide as built drawings and Operational and Maintenance documents for all system components. In addition, the Contractor shall supply a list of recommended spares.

16.0 **MUNICIPAL REQUIREMENTS**

The Contractor shall be responsible for the following:

- Registration of the system with the municipality
- Grid-studies required by the municipality
- Provision of all required documentation upon project completion (including test reports and commissioning data)
- Ensuring the system complies to municipal by-laws

17.0 **TESTING AND COMMISSIONING**

Testing and commissioning shall be done in accordance with the relevant Clauses of the Technical Specification and requirements of the Grid connection/Grid code standard.

Prior to the first delivery inspection of the completed installation, the Contractor shall satisfy himself that the works are complete **in every respect** fully in accordance with this specification and accompanying drawings. Only then shall he arrange for the inspection and commissioning of the installation in the presence of the Engineer and the Client.

The Contractor shall remove all his accumulated debris from the site.

The contractor shall ensure that all test certificates and commissioning data is provided to the Client before the remainder of the retention is released.

Level 1 operator training shall be provided to all relevant client personnel.

C3.4 STANDARD PRELIMINARY AND GENERAL INFORMATION**1.0 PREAMBLE**

This Part of the Tender Document deals with general requirements to be met and standards for plant and workmanship which shall be observed in the execution of the contract covered by this Tender Document. "Plant" is defined as machinery, apparatus, materials, articles and things of all kinds to be provided under the contract other than Construction Equipment.

When the requirements of this Part are at variance with any detailed requirement of any other Part hereof, or the Drawings, such other detailed requirements shall take precedence. All items of plant which are specified in this Tender Document or by nature of the installation are required, shall comply with this Part, unless stated otherwise elsewhere in this Tender Document. In the event of ambiguity the Engineer shall be asked for his clarification prior to submission of the Tender.

Any reference herein to "elsewhere in this Tender Document" shall be deemed to mean in any of the other Parts of this Tender Document or on the Drawings.

This Tender Document covers major items required for this installation but shall not limit the contractor's responsibility to provide everything necessary to complete the contract. The works shall be carried out with best quality items of plant and to a high class of workmanship. All items of plant shall be the best of their respective kinds, and the contractor shall, upon request of the Engineer, furnish him with proof to his satisfaction that they so comply.

This Tender Document and accompanying Drawings are copyright and are the property of the Engineer and must be returned to him whether a bona-fide tender is submitted or not.

2.0 ALTERNATIVE OFFERS

No alternative tender offers will be considered.

3.0 SPARE PARTS

Tenderers shall state in the Schedule of Particulars / Information, Part T2.2.3, the names of the accredited South African Agents from whom spare parts for all items of plant offered are obtainable and the place nearest to the Works from which such spare parts are available. Submission of a tender will be construed as confirmation that spare parts for all equipment offered are readily available, and the contractor will be held responsible for any costs involved if this should prove to be otherwise.

4.0 DELIVERY TIMES OF MANUFACTURED ITEMS

The Tenderer shall, if required in the Schedule of Equipment Offered, state the times quoted by suppliers for both dispatch and delivery of major items of plant which may contribute to an extension of the time for completion.

The contractor shall, during the continuance of the contract, keep the Engineer well and sufficiently informed regarding the placing of all orders for materials and the progress of manufacture of any plant so as to ensure that no extension of the time for completion may be occasioned because of non-delivery of plant within the time specified for delivery of same. A delivery status report on each major item of plant shall be submitted by the 7th of every second month.

The contractor shall at all times remain fully and solely responsible for the timeous delivery to site of all plant, equipment and materials in terms of this contract.

5.0 **PACKING AND DELIVERY**

Plant shall be carefully packed and protected to avoid mechanical or other damage during transport and off-loading. The contractor will be held responsible for any damage occurring prior to its acceptance in writing by the Employer.

Every item of plant is to be clearly labelled with its description and with the contract number.

All consignments shall be addressed to the contractor on site and he/she shall make prior arrangements for receipt and storage upon arrival. The employer will not accept delivery of items of plant for the contractor unless the contractor has made prior arrangements to this effect with the employer. The contractor will be required to make all arrangements for off-loading since no equipment for this will be available on site unless specifically stated to the contrary elsewhere herein.

6.0 **LAYOUT OF INSTALLATION**

The contractor is required to prepare detailed Drawings of pipework, fabricated plant, machine and plant rooms, ductwork, switchboards, transformers, sub-stations, etc.

All measurements specially marked on the drawings in connection with engineering services shall be strictly adhered to. Before work on any particular section is commenced, the position of all control equipment and plant shall be approved by the Engineer.

7.0 **DRAWINGS, CERTIFICATES AND OPERATING INSTRUCTIONS**

7.1 Tenderers shall submit with their tender, outline drawings and pamphlets showing principal dimensions of the plant offered together with a general description of its operation.

7.2 In instances where, for any reason, the contractor is required to prepare and/or submit detailed drawings of any portion of the contract works, the contractor shall, within one month of the date of acceptance of the contract tender, or on such other date as may be agreed with the Engineer to suit the contract programme, submit duplicate copies of such contractor's detailed drawings to the Engineer for approval. A further two copies of the finally approved drawings shall subsequently be supplied to the Engineer. The following drawings shall be submitted, as appropriate:

General arrangement details of all items of plant.

Schematic and wiring diagrams of all switchboards and control systems.

Detailed layout drawings of all pipework, ducting, cable racking etc.

Detailed layouts, sections and elevations of all plant rooms.

Rating plate details of all plant including inter alia- max. kW rating, speed, temperature limitations, no-load voltage, full load current, percentage impedance, etc.

Cable termination arrangements of all transformers, motors etc.:

Detailed drawings of all plinths, foundations or bases.

Failure to comply with this requirement may result in the Engineer instructing the contractor to place the order for the specific item of plant with another Manufacturer. Where failure of the Contractor to ensure that the proposed Manufacturer complies with this requirement necessitates the above action being taken, no increase in price will be considered.

- 7.3 The contractor shall, within one month of acceptance of the contract tender, or on such other date as may be agreed with the Engineer to suit the contract programme, submit triplicate copies of type test certificates issued by an authorised inspection authority or other approved testing agency in respect of all items of plant for which such certificates are required by the Engineer.
- 7.4 After completion of manufacture, all test certificates called for elsewhere in this Part shall be provided in duplicate.
- 7.5 Prior to the issue of the Practical Completion Certificate the following documents shall be provided, as appropriate, in duplicate, bound in a durable folder bearing the contract title and number:

Test certificates relating to tests done after completion of the installation as called for elsewhere in this Part.

Catalogue extracts of all major items of plant with performance curves marked to show operating duties.

List of spare part numbers and local Agents for these parts.

"As built" drawings, including layouts, sections, wiring and control diagrams and plant schematic diagrams. These are to show in detail the positions of poles, stays, cables, joints, sleeves, ducts, heating and cooling coils, dampers, pipes, control and regulating valves, air release valves, expansion joints, fixed equipment and all other pertinent items of plant. In the case of buried services, the route of such services and location of all cables, pipes, joints, valves, tees, access manholes, etc. are to be dimensioned relative to permanent and fixed objects, and the GPS coordinates must be provided. These drawings must depict the complete installation as finally commissioned.

Detailed instruction manuals covering the operation, maintenance and servicing of each item of major plant provided under this subcontract and, where the complete plant has been supplied under this subcontract, the operation of the plant as a whole.

In addition, one complete set of Engineer's Drawings clearly marked up to indicate all alterations made to the original drawings must be provided.

The contractor shall note that the Practical Completion Certificate may be withheld until the above has been complied with.

8.0 **STANDARDS AND CODES OF PRACTICE**

The installation shall comply with the following, and all amendments thereto, as appropriate:-

The Occupational Health and Safety Act and Regulations
SABS 0142 Code of Practice for the Wiring of Premises, as appropriate (referred to herein as the Wiring Regulations).

The Post Office Act.

The SAIEE Code of Practice for Overhead Power Lines.

The Local Authorities: Standard Electricity Supply By-Law and appropriate Additional By-Law or Regulations.

Any further Specification, Regulation or Code of Practice stated elsewhere in this Specification.

All items of plant supplied and/or installed, whether expressly specified herein or not, shall conform in respect of quality, manufacture, tests and performance with the requirements of the appropriate South African National Standards (SANS) Specifications and addenda thereto, or, if no such Specification exists covering any one or more of these requirements, with the relevant requirements of the appropriate British Standard Specifications and addenda thereto, except where elsewhere required by this Specification or approved by the Engineer. Where the South African Bureau of Standards has issued a licence for the use of its Mark on products complying with any of its Specifications, only such products which carry the Mark shall be supplied.

Preference will be given to plant manufactured in South Africa.

9.0 **WORKMANSHIP**

All work shall be carried out by qualified artisans or registered apprentices or, only where appropriate, labourers, under the constant supervision of a qualified artisan. At no stage during the construction programme shall any work be carried out without adequately qualified and experienced installation personnel being on site. If the contractor fails to comply with this requirement, the Engineer has the right to instruct the contractor to suspend the contract work. All costs incurred in so doing shall be for the account of the contractor.

10.0 **CO-ORDINATION OF SERVICES ON SITE**

The contractor will be required to work in close co-operation with other specialist direct contractors and subcontractors to ensure that no conflict arises between the various services, and to plan the progress of the various aspects of his work. It is imperative that such close liaison continues throughout the duration of the contract.

11.0 **INTERRUPTION OF EXISTING SERVICES**

No interruption of existing services will be permitted without the express permission of the Engineer and/or the Employer or his representative, given as a result of written notification by the contractor of the date, time and duration of such interruption. Any costs arising from the interruption of any service without such permission shall be for the contractor's account.

12.0 **BUILDER'S WORK**

All builders' work will be carried out as described in Part C3.1 of this Tender Document. The onus shall be on the contractor to ensure that all work carried out by others in this respect, is to the contractor's satisfaction.

Where builders work is to be carried out by others, the contractor shall notify the Engineer timeously of the positions where holes, cuts and recesses will be required and shall ensure that each is correctly located and that heavy-gauge draw-wires are supplied and installed in all sleeves.

13.0 **APPROVAL OF DRAWINGS**

All Drawings, circuit or schematic diagrams prepared by or on behalf of the contractor for submission to the Engineer in terms of the requirements of this Tender Document shall have been thoroughly checked, corrected where necessary and signed as approved by the subcontractor, prior to such submission.

14.0 OPERATING, MAINTENANCE AND SERVICING PROCEDURES

The contractor shall, by agreement with the Engineer, instruct the Employer's appointed Representative in routine operating, maintenance and servicing procedures of all items of plant supplied under this subcontract, and shall ensure that the Employer or his/her Representative, fully understands the documents provided in terms of Clause 7.5 hereof.

15.0 MAINTENANCE

During the defects liability period, up until issue of the Final Approval Certificate, the contractor shall, in addition to attending to any lists of work to be completed which may be issued by the Engineer, carry out full maintenance and servicing operations specifically recommended by the suppliers of any item of plant used in the contract works to maintain it in full and correct operation. Such maintenance shall include all attention necessary to comply with the suppliers' recommendations and shall include the provision of all necessary consumable items. The contractor will also be required to make any adjustments necessary during this period to ensure the satisfactory operation of the plant.

On completion of each such maintenance visit the contractor shall submit to the Engineer a schedule detailing the work done, which schedule shall have been countersigned by the Employer's representative, whereupon a certificate will be issued for moneys due, in respect of the particular maintenance service, as included in the original tender price.

Notwithstanding any maintenance and servicing which may be carried out during the defects liability period, the contractor shall carry out a full maintenance and servicing operation at the end of the defects liability period and before the Final Approval Certificate will be issued.

Allowance for all costs in relation to the above must be made in the tender price. It shall be noted that the Engineer reserves the right to omit partly or wholly the prices submitted for the maintenance of the contract works, should the installation not be adequately maintained within the stipulated maintenance period.

The Employer may request the contractor to enter into a Service/Maintenance Agreement for the contractor to continue to maintain and service the contract works, or a portion thereof, beyond the date of issue of the Final Approval Certificate. The terms and duration of such an Agreement shall be subject to mutual agreement between the Employer and Contractor and shall be concluded before the issue of the Final Approval Certificate.

Mutually agreeable conditions will be negotiated by the Engineer with the Contractor should the contract works not be put into operation immediately on issue of the Practical Completion Certificate.

C4: SITE INFORMATION

Any work instruction carried out under this contract could be undertaken in any of the towns located within the boundaries of the Kouga Municipality. The major towns include Jeffreys Bay, Humansdorp, St. Francis Bay, Cape St. Francis, Oyster Bay, Hankey and Patensie.

The site conditions are as follows:

Altitude above sea level	Varies between $\pm 20\text{m}$ to 300m
Max temperature	40°C
Min temperature	0°C
Max relative humidity	90%
Ambient atmosphere	Coastal climate with severely corrosive conditions