

TENDER

SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER

HO5-24/25-0011

NAME OF COMPANY:

CSD Nr:

CRS Nr (CIDB):

CLOSING DATE: 05 JUNE 2024

TIME: 11:00 am



Department of Public Works and
Infrastructure
Independence Avenue
Qhasana Building
Bhisho

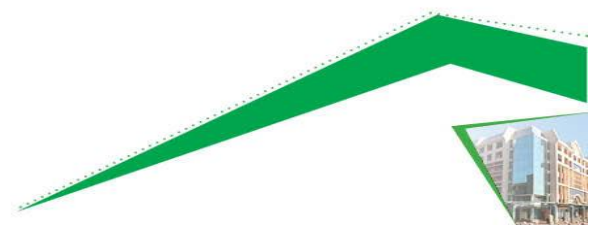
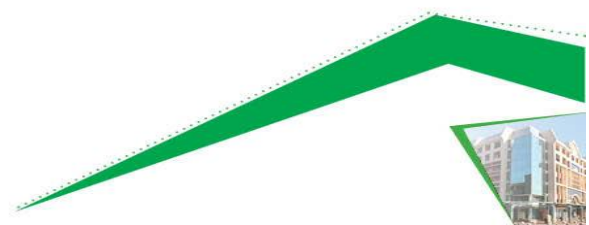
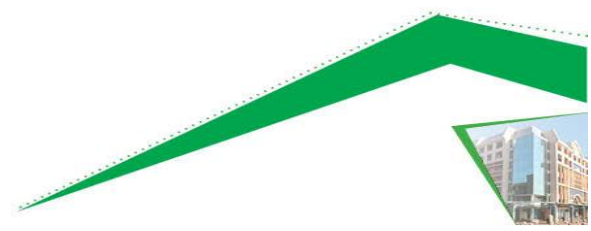


TABLE OF CONTENTS

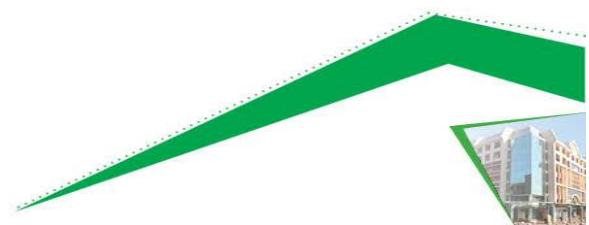
THE TENDER	3
PART T1 – TENDERING PROCEDURES	4
T1.1 TENDER NOTICE AND INVITATION TO TENDER	5
T1.2 TENDER DATA	8
PART T2 RETURNABLE DOCUMENTS	22
T2.1 LIST OF RETURNABLE DOCUMENTS	23
SBD 1 – PART A INVITATION TO BID	25
SBD 1 – PART B TERMS AND CONDITIONS FOR BIDDING	26
COMPULSORY ENTERPRISE QUESTIONNAIRE (A)	27
SBD 4 – DECLARATION OF INTEREST	28
SBD 6.1 – PREFERENCE POINT CLAIM	30
PROOF OF REGISTRATION ON THE NATIONAL TREASURY CENTRAL SUPPLIER DATABASE	35
VALID CIDB CERTIFICATE OF A TENDERER	36
PROTECTION OF PERSONAL INFORMATION: CONSENT (POPIA)	37
THE CONTRACT	39
PART C1 – AGREEMENTS AND CONTRACT DATA	40
PART C1.1 – FORM OF OFFER AND ACCEPTANCE	41
PART C1.1 A – J	45
PROJECT REFERENCE FORMS – 1 (K)	54
PROJECT REFERENCE FORMS – 2	56
PROJECT REFERENCE FORMS – 3	58
PART C1.2 CONTRACT DATA	60
PART C2.1 – PRICING INSTRUCTIONS	71
PART C2.2 – BILL QUANTITIES	74
PART C3 – SCOPE OF WORKS	84
C3.1 – SCOPE OF WORKS	85
PART C4 – SITE INFORMATION	95
C4.1 – SITE INFORMATION	96



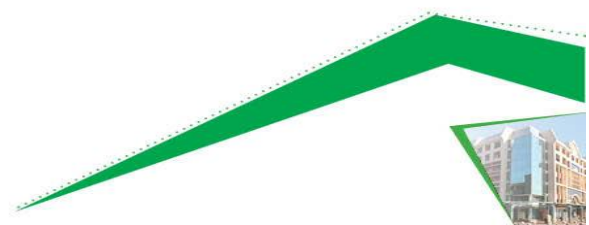
THE TENDER



PART T1 TENDERING PROCEDURES



PART T1.1: TENDER NOTICE AND INVITATION TO TENDER



T1.1 Tender Notice and Invitation to Tender

The Eastern Cape Department of Public Works and Infrastructure invites contractors with a CIDB Grading of **2EB/EP or higher** in the following Class of works (**EB/EP**) to tender for the **“SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER”** for a **4 Months’** contract. The contract will be based on the NEC 3 of April 2013 and the Eastern Cape Public Works and Infrastructure will enter into a contract with the successful tenderer.

Only tenderers who have suitable experience and suitably qualified personnel in providing similar services to those that are required are eligible to submit tenders.

Bid documents are downloadable free of charge from Department of Public Works and Infrastructure website (www.ecdpw.gov.za/tenders) or from National Treasury’s tender portal (<http://www.etender.gov.za/content/advertised-tenders>). Bid documents will be available on **22 May 2024**. No bid documents will be available at departmental offices.

There will be a **compulsory** briefing meeting on **28 May 2024**, at **Old Disaster Building**. Prospective bidders to meet **at the main entrance of the site at 10h00. Old Disaster Building is the building that is next to TRU FM building in Bisho.**

Queries relating to the issue of these documents may be addressed in writing to SCM email: supply.chain@ecdpw.gov.za **Technical enquiries:** may be addressed in writing to **Mr V.Mpondo**– email: Vukile.mpondo@ecdpw.gov.za

The closing time for receipt of tenders by the ECDPW is **11:00am on 05 June 2024**. Tender will be open in public and results to be further published on the departmental website (www.ecdpw.gov.za/tenders)

It is the responsibility of the tenderer/s to ensure that bid documents /proposals are submitted on or before closing time and the correct location as the department will not take responsibility of wrong delivery. Tenderers using courier services for delivery of their bid documents must ensure the delivery is at the correct place / location and time as the department will not be held responsible for wrong delivery. Not delivered to Departmental officials. The Department will not accept responsibility if bids received by officials are not timely deposited in the Bid Box.

Tenders may only be submitted on the tender documentation that is issued. Tenderers must be registered on the National Treasury Central Supplier Data Base and proof of registration must be submitted with the proposal (<https://secure.csd.gov.za>). Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data.

B. TENDER SUBMISSIONS:

Bids must be submitted in sealed envelopes clearly marked **HO5-24/25-0011: SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER:”** must be deposited in the bid box, **DEPARTMENT OF PUBLIC WORKS, FRONT CORNER OF QHASANA BUILDING ON THE WAY TO CIDB OFFICES LABELLED “TENDERS”, BISHO.**

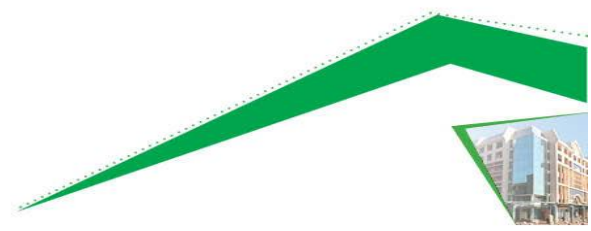
C. BID EVALUATION:

This bid will be evaluated in Three (3) phases as follows:

Phase One: Compliance, responsiveness to the bid rules and conditions, thereafter

Phase Two: Functionality - the minimum threshold to be further evaluated is 70 on the requirements

Phase Three: Preferential Procurement Policy Framework Act (PPPFA) and Preferential Procurement Regulations 2022



PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT (PPPFA) AND PREFERENTIAL PROCUREMENT REGULATIONS 2022 POINTS WILL BE AWARDED AS FOLLOWS:

Maximum points on price	-	80 points
Maximum points for Specific goals	-	20 points
Maximum points	-	100 points

D. BID SPECIFICATIONS, CONDITIONS AND RULES

- The minimum specifications, other bid conditions and rules are detailed in the bid document under Tender Data
- The Department of Public Works and Infrastructure SCM policy applies.
- Tender validity period is **120 days**.

E. ENQUIRIES WITH REGARD TO THIS ADVERT MAY BE DIRECTED TO:

- **SCM RELATED ENQUIRIES**

Email Address: supply.chain@ecdpw.gov.za

TECHNICAL ENQUIRIES

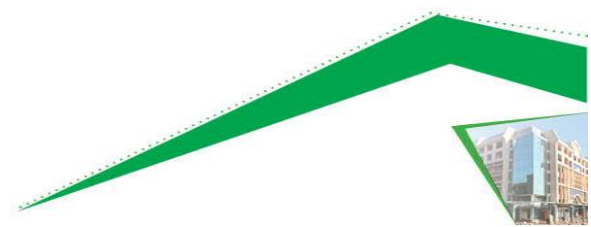
Mr V.Mpondo

Tel No: **0824186744**

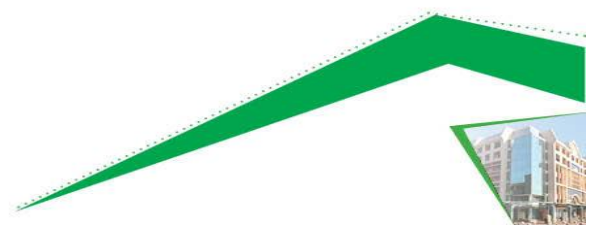
Email Address: Vukile.mpondo@ecdpw.gov.za

FOR COMPLAINTS, FRAUD, & TENDER ABUSE:

Call: 0800 701 701



PART T1.2: TENDER DATA

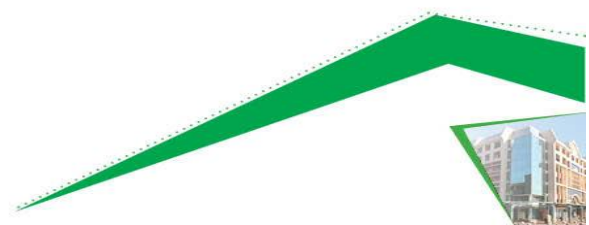


T1.2 Tender Data

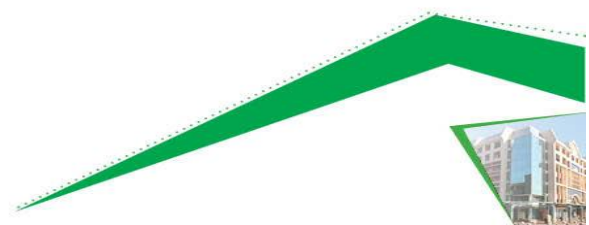
The conditions of tender are the latest edition of SANS 10845-3, *Standard conditions of tender*. SANS 10845-3 makes several references to the Tender Data for details that apply specifically to this tender. The Tender Data shall have precedence in the interpretation of any ambiguity or inconsistency between it and the provisions of SANS 10845-3 and as contained in **Annexure C of Standard for Uniformity in Construction Procurement (Board Notice 423 of 2009 Government Gazette No 42622 of August 2019)**.

Each item of data given below is cross-referenced to the clause in SANS 10845-3 to which it mainly applies.

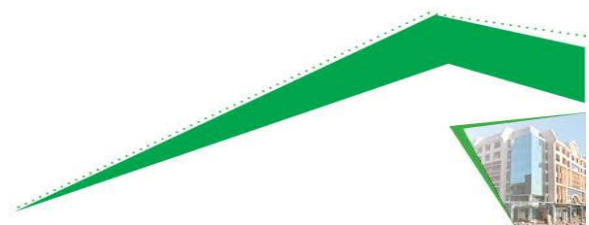
Clause number	Tender Data
3.1	The Employer is Public Works and Infrastructure – Eastern Cape
3.2	The tender documents issued by the employer comprise the following documents: THE TENDER Part T1: Tendering procedures T1.1 - Tender notice and invitation to tender T1.2 - Tender data Part T2: Returnable documents T2.1 - List of returnable documents T2.2 - Returnable schedules THE CONTRACT Part C1: Agreements and Contract data C1.1 - Form of offer and acceptance C1.2 - Contract data C1.3 - Dispute Resolution Mechanism Part C2: Pricing data C2.1 - Pricing Instructions C2.2 - Bills of Quantities Part C3: Scope of work C3 - Scope of work Part C4: Site information C4 - Site information
3.3	The tender documents issued by the employer comprise the documents listed on the contents page
3.4	The employer's agent is: Name: Mr. V. Mpondo Department of Public Works & Infrastructure Independence Avenue Qhasana Building Bhisho 5605 Tel: 0824186744 E-mail: yukile.mpondo@ecdpw.gov.za
3.5	The language for communications is English
3.6	The competitive negotiation procedure shall be applied.
3.7	Method 3: Three (3) stage procurement procedure shall be applied.



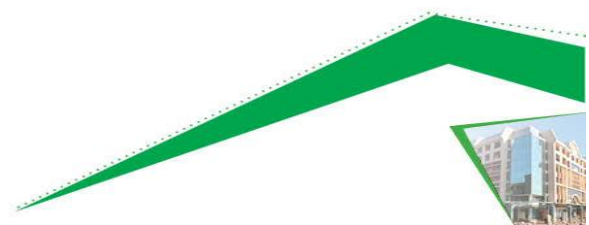
4	Tender's obligations
4.1	The following tenderers who are registered with the CIDB, or are capable of being so registered prior to the evaluation of submissions, are eligible to have their tenders evaluated: a) contractors who have a contractor grading designation equal to or higher than a contractor grading designation determined in accordance with the sum tendered, or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations, for a CIDB Grade 2EB/2EP or higher class of construction work; and 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 grade 2EB/2EP or higher class of construction work; 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 CIDB Grade 2EB/2EP or higher class of construction work or a value determined in accordance with Regulation 25 (1B) of 25(7A) of the Construction Industry Development Regulations. 4. Joint Venture Agreement
4.2	The employer will compensate the tender as follows as per the conditions of the NEC 3 of April 2013. The employer will not compensate the tenderer for any costs incurred in attending interviews or making any submissions in the office of the employer.
4.3	It is the responsibility of the tenderer to check the tender documents on receipt for completeness and notify the employer of any discrepancy or omission.
4.4	Confidentiality and copyright of documents Treat as confidential all matters arising in connection with the tender. Use and copy the documents issued by the employer only for the purpose of preparing and submitting a tender offer in response to the invitation.
4.5	Obtain, as necessary for submitting a tender offer, copies of the latest versions of standards, specifications, conditions of contract and other publications, which are incorporated into the tender documents by reference.
4.6	Acknowledge receipt of addenda to the tender documents, which the employer may issue, and, if necessary, apply for an extension to the closing time stated in the tender data, in order to take the addenda into account.
4.7	The arrangements for a compulsory clarification meeting are as stated in the Tender Notice and Invitation to Tender. Tenderers must sign the attendance list in the name of the tendering entity. Addenda will be issued to and tenders will be received only from those tendering entities appearing on the attendance list. Tender documents will not be made available at the clarification meeting
4.8	Seek clarification <i>Request clarification of the tender documents, if necessary, by notifying the employer at least 5 (Five) working days before the closing time stated in the tender data.</i>
4.9	Tenderers are required to state the rates and currencies in Rands. Include in the rates, prices, and the tendered total of the prices (if any), all duties, taxes which the law requires to be paid [except value added tax (VAT)], and other levies payable by the successful tenderer, that are applicable 14 days before the closing time stated in the tender data.



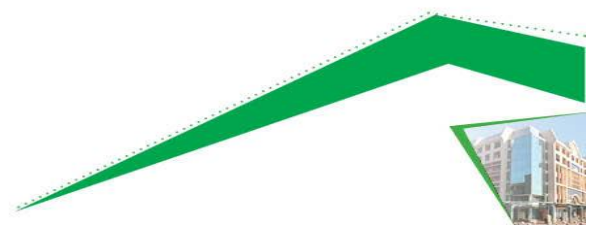
	Show the VAT payable by the employer separately as an addition to the tendered total of the prices. Provide rates and prices that are fixed for the duration of the contract and not subject to adjustment except as provided for in the conditions of contract identified in the contract data. State the rates and prices in monetary value of the contract unless otherwise instructed in the tender data.
4.10	Do not make any alterations or additions to the tender documents, except to comply with instructions issued by the employer or to correct errors made by the tenderer and ensure that all signatories to the tender offer initial all such alterations. Do not make erasures using masking fluid.
4.11	Main tender offers are not required to be submitted together with alternative tenders.
4.12	No alternative tender offers will be considered
4.13.1	Parts of each tender offer communicated on paper shall be submitted as an original. Submit a) the parts of the tender offer communicated on paper as an original plus the number of copies stated in the tender data, with a translation of any documentation in a language other than the language of communication established in 3.5, and b) The parts communicated electronically by the employer of its agents on paper format with the tender.
4.13.2	Sign the original and all copies of the tender offer where required in terms of the tender data. State in the case of a joint venture which of the signatories is the lead partner whom the employer shall hold liable for the purpose of the tender offer. NOTE The employer holds all authorized signatories liable on behalf of the tenderer.
4.13.3	A tender security in the amount of N/A is required and shall remain valid for a period not exceeding N/A days after the closing date for tender offers. The form of the tender security shall not differ substantially from the sample provided in Annex D of SANS 10845-3.
4.13.4	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: DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE, FRONT CORNER OF QHASANA BUILDING ON THE WAY TO CIDB OFFICES LABELLED "TENDERS", BISHO. Physical address: Independence Avenue, Ground Floor, Qhasana Building, Bhisho 5605 Identification details: "HO5-24/25-0011: SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER " Closing time and date: 05 June 2024 at 11:00
4.13.5	The tenderer is required to submit with his tender the following certificates: 1) A copy of the CSD report showing, amongst other things, that tax matters of the service provider are in order the South African Revenue Services. <i>In the case of a Joint Venture/Consortium/Sub-contractors each party must submit a separate CSD report showing, amongst other things, that tax matters of the service provider are in order the South African Revenue Services.</i> 2) CIDB Grading certificate or CRS number.
4.13.6	A two-envelope procedure will not be required.
4.13.7	Telephonic, telegraphic, telex, facsimile or e-mailed tender offers will not be accepted. The tenderer accepts that the employer does not assume any responsibility for the misplacement or premature opening of the tender offer if the outer package is not sealed and marked as stated.
4.14	The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender.



	Ensure that the employer receives the tender offer at the address specified in the tender data not later than the closing time stated in the tender data. Proof of posting shall not be accepted as proof of delivery. Accept that, if the employer extends the closing time stated in the tender data for any reason, the requirements of the standard conditions of tender in this part of SANS 10845 apply equally to the extended deadline.
4.15.1	The tender offer validity period is 120 days. Hold the tender offer(s) valid for acceptance by the employer at any time during the validity period stated in the tender data after the closing time stated in the tender data. If requested by the employer, consider extending the validity period stated in the tender data for an agreed additional period, with or without any conditions attached to such extension. Extend the period of the tender security, if any, to cover any agreed extension requested by the employer.
4.15.2	Placing of contractors under restrictions / withdrawal of tenders If any tenderer who has submitted a tender offer or a contractor who has concluded a contract has, as relevant: withdrawn such tender or quotation after the advertised closing date and time for the receipt of submissions; after having been notified of the acceptance of his tender, failed or refused to commence the contract; had their contract terminated for reasons within their control without reasonable cause; offered, promised or given a bribe in relation to the obtaining or the execution of such contract; acted in a fraudulent, collusive or anti-competitive or improper manner or in bad faith towards the Provincial Government; or, made any incorrect statement in any affidavit or declaration with regard to a preference claimed and is unable to prove to the satisfaction of the Provincial Government that the statement was made in good faith or reasonable steps were taken to confirm the correctness of the statements, such tenderer/s may be placed under restriction from tendering with the state. Procedures are outlined in the EC SCM Policy for Infrastructure procurement and Delivery Management and also on CIDB Inform Practice Note #30. Excerpts of the policy can be availed on request of any interested tenderer.
4.16	Access shall be provided for the following inspections, tests and analysis: N/A
4.17	the preferred tenderer will be required to submit an approved insurer undertaking to provide the Performance Bond / Guarantee / Surety / Security to the format after 21 days of appointment.
5	Employer's undertakings
5.1	The Employer will respond to requests for clarification received up to Five (5) working days before the tender closing time. If, as a result of the issuing of addenda, it is necessary to extend the closing time stated in the tender data, grant such extension and notify all respondents accordingly.
5.2	The employer shall issue addenda until Five (5) working days before tender closing time.
5.3	Tenders will be opened immediately after the closing time for tenders at 11:00am hours .
5.4	Do not disclose to tenderers, or to any person not officially concerned with such processes, information relating to the evaluation and comparison of tender offers, the final evaluation price and recommendations for the award of a contract, until after the award of the contract to the successful tenderer.
5.5	Determine, after opening and before detailed evaluation, whether each tender offer that was properly received a) complies with the requirements of the standard conditions of tender in this part of SANS 10845, b) has been properly and fully completed and signed, and c) is responsive to the other requirements of the tender documents.



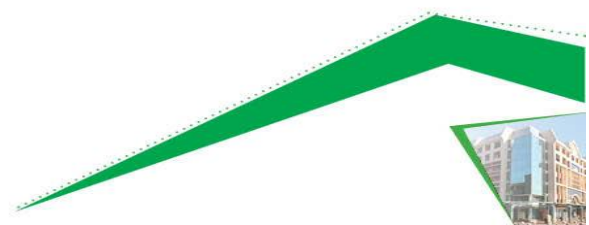
	A responsive tender is one that conforms to all the terms, conditions, and scope of work of the tender documents, without material deviation or qualification. A material deviation or qualification is one which, in the employer's opinion, would d) detrimentally affect the scope, quality, or performance of the works, services or supply identified in the scope of work, e) significantly change the employer's or the tenderer's risks and responsibilities under the contract, or f) affect the competitive position of other tenderers presenting responsive tenders, if it were to be rectified. Reject a non-responsive tender offer, and do not allow it to be subsequently made responsive by correction or withdrawal of the non-conforming deviation or reservation.																
5.6	Arithmetical errors, omission and discrepancies Check responsive tenders for discrepancies between amounts in words and amounts in figures. Where there is a discrepancy between the amounts in figures and the amount in words, the amount in words shall govern. For Vat related discrepancies, National and Provincial Treasury prescripts in relation to VAT procedures apply.																
5.7.1	The financial offer will be reduced to a comparative basis using the Tender Assessment Schedule. Table F.1: Formulae for calculating the value of A <table><tr><th>Formula</th><th>Comparison aimed at achieving</th><th>Option 1^a</th><th>Option 2^a</th></tr><tr><td>1</td><td>Highest price or discount</td><td>$A = \left(1 + \frac{(P - P_m)}{P_m} \right)$</td><td>$A = P / P_m$</td></tr><tr><td>2</td><td>Lowest price or percentage commission / fee</td><td>$A = \left(1 - \frac{(P - P_m)}{P_m} \right)$</td><td>$A = P_m / P$</td></tr><tr><td>a</td><td colspan="3">P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.</td></tr></table>	Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a	1	Highest price or discount	$A = \left(1 + \frac{(P - P_m)}{P_m} \right)$	$A = P / P_m$	2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{(P - P_m)}{P_m} \right)$	$A = P_m / P$	a	P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.		
Formula	Comparison aimed at achieving	Option 1 ^a	Option 2 ^a														
1	Highest price or discount	$A = \left(1 + \frac{(P - P_m)}{P_m} \right)$	$A = P / P_m$														
2	Lowest price or percentage commission / fee	$A = \left(1 - \frac{(P - P_m)}{P_m} \right)$	$A = P_m / P$														
a	P_m is the comparative offer of the most favourable comparative offer. P is the comparative offer of the tender offer under consideration.																
5.7.2	The procedure for the evaluation of responsive tenders is Method 3: Administrative Compliance, Price and Preference Phase 1: Administrative requirements and Mandatory requirements Phase 2: Functionality Phase 2: Price and preference (80/20 system)																
	1. <u>PHASE ONE: RESPONSIVENESS TO THE BID REQUIREMENTS AND RULES</u> Bidders' proposals must meet the following minimum requirements and supporting documents must be submitted with the completed bid document in a sealed envelope in the bid box at the closing date and time. Failure to comply will automatically eliminate the bid for further consideration: 1. Bid Document (This Document must be submitted in its original format) 2. Bids which are late, incomplete, unsigned or submitted by facsimile or electronically, will not be accepted. 3. Bidder must be registered with CIDB in the correct grading and class of works as per the tender notice and requirements. The status on CIDB must be active. It is the responsibility of the bidder to keep the status on CIDB active throughout bidding process (advert till award stage). 4. Certified copies of Wireman's licence and Green Card licence must be submitted. 5. Bidders must be a legal entity or partnership or consortia.																



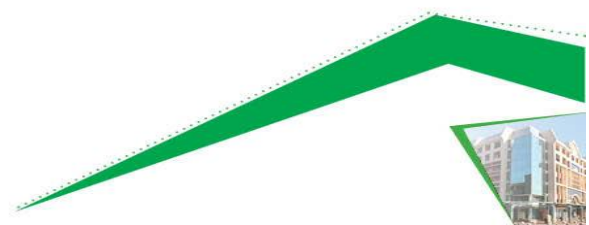
6. Form of offer and Acceptance (fully completed and signed).
7. SBD 4- Declaration of Interest (fully completed and signed). **SBD4 must be duly completed and signed. Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract, such interest must be disclosed on question 2.3.1.**
8. Incomplete or unsigned or poorly completed forms **SBD 4 will lead to a bidder being declared non-responsive.**
9. Compulsory Enterprise Questionnaire (Completed and signed) (JV partners must complete separate Questionnaire forms and submit).
10. If the offer is "Vat Inclusive", the VAT registration number of service provider must be indicated and if a service provider is not a VAT Vendor but include VAT in its prices, the successful service provider will be given 21 days to register as a VAT Vendor with SARS, after the issuing of an appointment letter. If a bidder is a VAT vendor/registered, the bidder is required to explicitly state the VAT amount. VAT vendors must include VAT at 15% in the bid offer(s).
11. If the Bid Sum (amount in words) differ from the Bid Sum (amount in figures), the Bid Sum (amount in words) will govern.
12. Resolution to Sign (must be completed, if applicable).
13. Declaration of Employees of the State or other State Institutions
14. Only one offer per bidder is allowed and alternative offers will not be considered. If more than one offer is received, none of the offers will be considered.
15. **Attendance of compulsory briefing meeting**

Other Conditions of bid (Non eliminating unless expressly mentioned in the document):

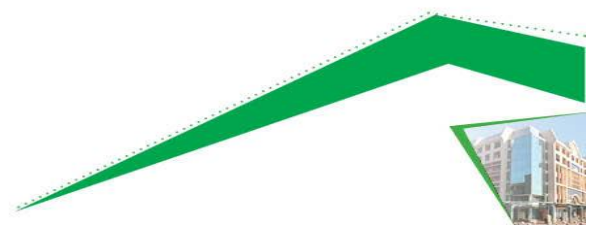
1. The bidder must be registered on the Central Supplier Database (CSD) prior the award
2. All bidders' tax matters must be in order prior to award. Bidders' tax matters will be verified through CSD. In cases where the bidder's status is found non-compliant, the bidder will be granted 7 days to correct the status. **A bidder that fails to rectify its tax matters with SARS will be declared non-responsive.**
3. The bidder has duly completed and signed the **SBD 1**, and **SBD 6.1**. Bidders need to complete and sign **SBD 6.1** to claim points for specific goals. **Failure will lead to the non-awarding of points for specific goals.**
4. Bidders must submit a minimum of three (3) written contactable references for projects successfully completed in the past (clearly indicating client name, contract value, contract term, and contact person, contact details). Refer to Annexure I and Annexure M. This is not an elimination factor, but important for the department to make a decision. Unless it is used for Quality/functionality Points.
5. Bidders must submit a list of projects where he or she has submitted tender offers but tender results have not been confirmed by the client. Refer to Annexure L. This is not an elimination factor, but important for the department to make a decision. Unless it is used for Quality/functionality Points.
6. Bidders must submit their company profiles, list of available resources, plant and machinery, and any other additional capacity with the bid. Refer to Annexures K and H. This is not an elimination factor, but important for the department to make a decision. Unless it is used for Quality/functionality Points.
7. The bidder must also list all projects where there are pending litigations or litigations that have been concluded. The form for this is also attached after Annexure J.



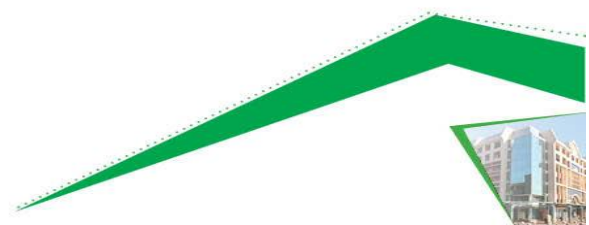
	8. The Department will contract with the successful bidder by signing a formal contract. 9. This tender will be awarded as a whole. All trades listed in the Bills of Quantities or Pricing schedule must be priced for (except provisional sums and allowances which also need to be added to the total), failure to do so will increase the commercial risk of the bid and may lead to elimination or passing over of the bidder. 10. Wherever a brand name is specified in this document (i.e. specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better. 11. DPWI Policy applies. 12. Protection of personal information: Consent (POPIA).			
	The successful tenderer (after being informed) will be required to bring along an unsigned copy of the form of contract to be signed by parties (e.g. NEC 3 of April 2013)			
	2. <u>PHASE TWO: FUNCTIONALITY</u> Functionality Evaluation Criteria The functionality evaluation will be conducted by the end-user/operations/the Bid Evaluation Committee which comprises of various skilled and experienced members from diverse professional disciplines. The evaluation process will be based on threshold criteria. The criteria will be as follows: Points allocated for Functionality shall be evaluated in accordance with the criteria as listed below. The criteria for functionality will be evaluated as follows: - The tenderer will be marked out of a total of 100 points. - Only tenderers scoring 70 points (and more) out of 100 points for functionality evaluation will be considered for further evaluation on Price and Specific goals A combined functionality score will be calculated from the construction and maintenance criteria as shown below			
	1	EXPERTISE OF PROPOSED KEY PERSONNEL - Maximum Points = 40		
		Criteria	Score	Points Scored
		CVs of proposed key personnel with experience in solar PV projects, the persons need not be in the current employ of the entity at the time of submission, but a commitment either of subcontract agreement between entity and subcontractor (person or entity) or consent between the entity and person whose CV is submitted shall be presented and signed by the proposed individual/subcontractor. NB: Proposed key personnel shall be qualified/registered in their respective trades/professions <u>Project Team</u> - Project Manager / Team Leader (Engineer/Technician) with 5 years or more experience - Design Engineer / Technician with 5 years or more experience		



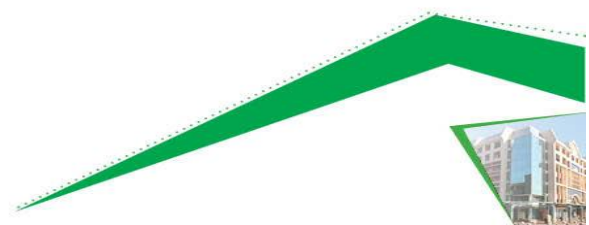
		Installation Electrician with 5 years or more and have a PV Green Card		
		Project team – all individuals have 5 years' experience or more	40	
		Project team – one or more individuals have over 3 years' experience but less than 5 years	30	
		Project team – one or more individuals have over 1 year' experience, but less than 3 years	20	
		Project team – one or more individuals have less than 1 year'	10	
	2	PROJECT EXPERIENCE AND REFERENCES - Maximum Points = 40		
		Criteria	Score	Points Scored
		Bidder has successfully supplied, constructed, and commissioned rooftop PV Solar plant of a minimum 10kWp plant size. Bidder to provide reference of projects completed within the last 10 years, that have valid Client references on a client letterhead, with valid contact details. Client reference letter to include, Project name, description of works (including plant size), location of works, start date, and completion date.		
		4 projects or more	40	
		3 projects	30	
		2 projects	20	
		1 Project	10	
	3	METHODOLOGY AND TIMEFRAMES - Maximum Points = 20		
		Criteria	Score	Points Scored
		Submit a Method Statement for the construction of a rooftop PV solar plant that contains: Construction Methodology, Quality Management plan and Safety plan, in-line with construction safety regulations and industry standards and requirements. Construction methodology submitted must include the following: PV Mounting Frame Structure installation, Mounting of PV modules, PV Module Stringing LV Electrical System installation. (NB: Points will not be awarded to method statements that do not contain the info stipulated above). Submit a Project Program on a Gantt Chart indicating timeline, deliverables and dependencies. Program must include the following: PV Mounting Frame Structure installation, Mounting of PV modules, Inverter, Battery, LV Electrical System installation. (NB: Points will not be		



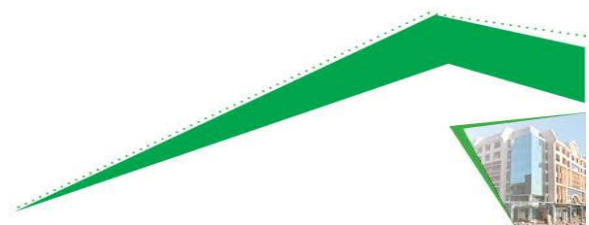
		awarded to method statements that do not contain the info stipulated above)										
		Submit both Methodology/Method Statement and Project Program	20									
		Submit either Methodology/Method Statement or Project program	10									
	<u>PHASE THREE: EVALUATION POINTS ON PRICE AND SPECIFIC GOALS</u> The 80/20 preference point system shall be applied for the purposes of this bid as per the requirements of the <i>Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000)</i> and Preferential Procurement Regulations 2022 (Price and Specific Goals) <table><tr><td>Criteria</td><td>Points</td></tr><tr><td>POINTS ON PRICE</td><td>80</td></tr><tr><td>SPECIFIC GOALS</td><td>20</td></tr><tr><td>TOTAL</td><td>100</td></tr></table> The 90/10 preference point system for acquisition of services, works or goods exceeding Rand value of R50 million: (a) The following formula must be used to calculate the points for price in respect of tenders (including price quotation) with a Rand value equal to, or above R 30 000 and up to Rand value of R 50 000 000 (all applicable taxes included): The financial offer will be scored using the following formula: $A = (1 - \frac{(P - P_m)}{P_m})$ The value of value of W_1 is: 1) 90 where the financial value inclusive of VAT of all responsive tenders received have a value in excess of R50 000 000 or 2) 80 where the financial value inclusive of VAT of one or more responsive tender offers have a value that equals or is less than R 50 000 000.				Criteria	Points	POINTS ON PRICE	80	SPECIFIC GOALS	20	TOTAL	100
Criteria	Points											
POINTS ON PRICE	80											
SPECIFIC GOALS	20											
TOTAL	100											
5.7.3	The procedure for the evaluation of responsive tenders is Method 3 (Administrative Compliance, Functionality, Price and Preference)											
5.7.4	The quality criteria and maximum score in respect of each of the criteria are as follows: N/A											
5.7.5	Each evaluation criteria will be assessed in terms of five indicators – N/A											
5.7.6	The prompts for judgment and the associated scores used in the evaluation of quality shall be as follows: N/A											
5.8	Tender offers will only be accepted if: a) the tenderer is registered on the Central Supplier Database (CSD) for the South African government (see https://secure.csd.gov.za/) unless it is a foreign supplier with no local registered entity b) the tenderer is in good standing with SARS according to the Central Supplier Database. Bidders must submit a CSD no. or tax status compliance pin.											



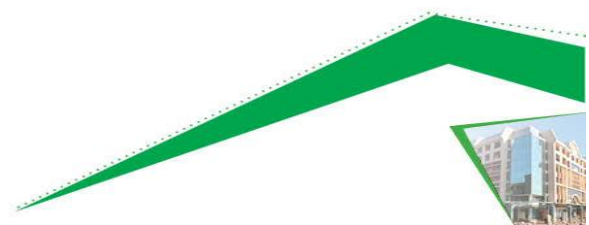
	c) the preferred tenderer will be required to submit an approved insurer undertaking to provide the Performance Bond / Guarantee / Surety / Security to the format after 21 days of appointment. d) the tenderer is registered with the Construction Industry Development Board in an appropriate contractor grading designation; e) 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. f) 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. g) the tenderer has completed the Compulsory Declaration 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.
	h) 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; i) the tenderer is registered and in good standing with the compensation fund or with a licensed compensation insurer; j) The tenderer undertakes to maximize the sourcing of building material or infrastructure input material from Eastern Cape based suppliers or manufacturers. k) 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. l) The tender has offered a market related offer. If the offer is believed not to be market related, the department through its Supply Chain Management bid committees will attempt to negotiate the offer with identified bidder/s to a reasonable amount. Bidders are not allowed to increase their tender offers during this process. m) A Resolution of signatory form has been completed and signed by director/s or a letter bearing a letterhead of the tenderer has been attached (specific to this bid) to the bid submission; it must be duly signed by all directors and submitted the bid. Only a duly authorized official can sign the bid. n) NOTE: The amount reflected on the Form of Offer and Acceptance takes precedence over any other total amount indicated elsewhere in bidder's tender submission. If the Form of Offer and Acceptance has no value or figure, the bidder will be regarded as having made no offer. o) The department reserves the right not to award the bid to the most favourable tenderer, if any of the situations occur: if it is not assisting in the advancement of designated groups; risk profile of the favourable firm is too high; the bidder has been awarded a considerable number of projects by the department or provincial government; has performed unsatisfactorily in the past, etc.
5.9	The number of paper copies of the signed contract to be provided by the employer is 1.



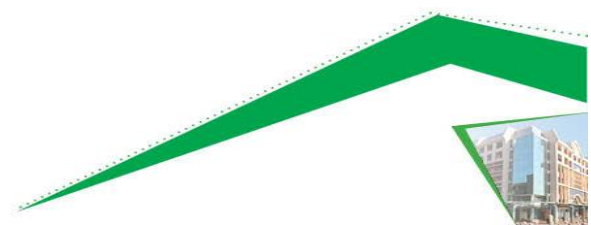
	The additional conditions of tender are: Wherever a brand name is specified in this document (i.e., specifications, pricing schedule, bill of quantities or anywhere), the department requires an item similar/equivalent or better.
T.2.1	A. List of returnable documents
1	Documentation to demonstrate eligibility to have tenders evaluated i.e. List all documentation to demonstrate eligibility to have a submission evaluated. Appropriate CIDB grading suitable for the works (as stated in 4.1).
2	Returnable Schedules required for tender evaluation purposes The tenderer must fully and appropriately complete and sign the following returnable schedules as relevant: - Record of Addenda to Tender Documents - Proposed amendments and qualifications - Compulsory Enterprise Questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted). - SBD 1, 4, 6.1 - Protection of personal content: Consent - Form of Offer and Acceptance - Complete priced Bills of Quantities, including Final Summary - Certificate of Authority for Joint Ventures
3	Other documents required for tender evaluation purposes The tenderer must provide the following returnable documents: - A CSD Report for a contractor with valid and correct information. - A letter of good standing from the Compensation Fund or a licensed insurer as contemplated in the Compensation for Occupational Injuries and Diseases Act 1993 (Act No. 130 of 1993)
4	Returnable Schedules that will be used for tender evaluation purposes and be incorporated into the contract The tenderer must complete the following returnable documents: A duly completed form of Offer and Acceptance (and any revision of prices if there are any).
5	Only authorized signatories may sign the original and all copies of the tender offer where required. - In the case of a ONE-PERSON CONCERN submitting a tender, this shall be clearly stated. - In the case of a COMPANY submitting a tender, include a copy of a <u>resolution by its board of directors</u> authorizing a director or other official of the company to sign the documents on behalf of the company. - In the case of a CLOSE CORPORATION submitting a tender, include a copy of a <u>resolution by its members</u> authorizing a member or other official of the corporation to sign the documents on each member's behalf. - In the case of a PARTNERSHIP submitting a tender, <u>all the partners</u> shall sign the documents, unless one partner or a group of partners has been authorized to sign on behalf of each partner, in which case <u>proof of such authorization</u> shall be included in the Tender.



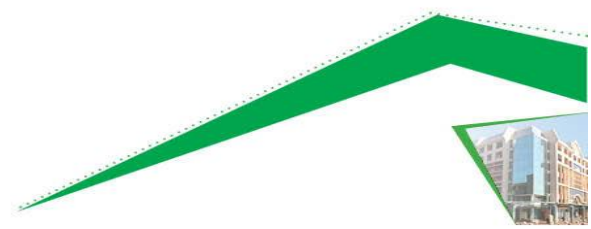
	In the case of a JOINT VENTURE/CONSORTIUM submitting a tender, include <u>a resolution of each company</u> of the joint venture together with a <u>resolution by its members</u> authorizing a member of the joint venture to sign the documents on behalf of the joint venture. <u>Accept that failure to submit proof of authorization to sign the tender shall result in the tender offer being regarded as non-responsive.</u>
6	Information and data to be completed in all respects Accept that tender offers, which do not provide all the data or information requested completely and, in the form, required, may be regarded by the employer as nonresponsive.
7	Canvassing and obtaining of additional information by tenderers The Tenderer shall not make any attempt either directly or indirectly to canvass any of the Employer's officials or the Employer's agent in respect of his tender, after the opening of the tenders but prior to the Employer arriving at a decision thereon. The Tenderer shall not make any attempt to obtain particulars of any relevant information, other than that disclosed at the opening of tenders.
8	Prohibitions on awards to persons in service of the state The Employer is prohibited to award a tender to a person - - who is in the service of the state; or - if that person is not a natural person, of which any director, manager, principal shareholder or stakeholder is a person in the service of the state; or - a person who is an advisor or consultant contracted with the Department or municipal entity. In the service of the state means to be - - a member of:- - any municipal council; - any provincial legislature; or - the National Assembly or the National Council of Provinces; - a member of the board of directors of any municipal entity; - an official of any Department or municipal entity; - an employee of any national or provincial department; - provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No.1 of 1999); - a member of the accounting authority of any national or provincial public entity; or - an employee of Parliament or a provincial legislature. In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
9	Awards to close family members of persons in the service of the state Accept that the notes to the Employer's annual financial statements must disclose particulars of any award of more than R2000 to a person who is a spouse, child, or parent of a person in the service of the state (defined in clause 8 above), or has been in the service of the state in the previous twelve months, including - the name of that person;



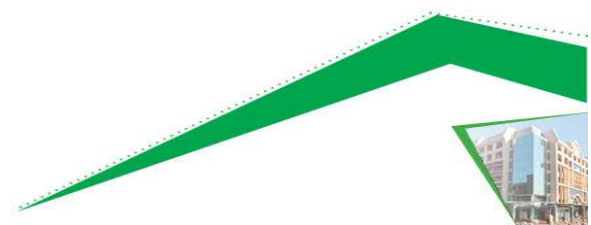
	b) the capacity in which that person is in the service of the state; and c) the amount of the award. In order to give effect to the above, the questionnaire for the declaration of interests in the tender of persons in service of state in part T2 of this procurement document must be completed.
10	Respond to requests from the tenderer The employer will respond to requests for clarification up to 7 (seven) working days before the tender closing time.
11	Opening of tender submissions Tenders will be opened immediately after the closing time for tenders
12	Scoring quality / functionality: N/A
13	Cancellation and re-invitation of tenders An organ of state may, prior to the award of the tender, cancel the tender if- (a) due to changed circumstances, there is no longer a need for the services, works or goods requested; or (b) funds are no longer available to cover the total envisaged expenditure; or (c) no acceptable tenders are received. (d) Tender validity period has expired. (e) Gross irregularities in the tender processes and/or tender documents. (f) No market related offer received (after attempts of negotiation processes) Where applicable, the decision to cancel the tender will be published in the CIDB website and in the Tender Bulletin or the media in which the original tender invitation as advertised.
14	Dispute resolution mechanism will be done through the Adjudication route.
15	The department must when be acting against the tenderer or person awarded the contract on a fraudulent basis, considers the provisions of Regulation 14: The remedies provided for in Preferential Procurement Regulations 2017 do not prevent an institution from instituting remedies arising from any other prescripts or contract.
16	Where the employer terminates the contract due to default of the contractor in whole or in part, the employer may decide to: a) Refer the breach in contract to the cidb for investigation as a breach of the cidb Code of Conduct in terms of the cidb Regulations; or b) may impose a restriction penalty on the contractor in terms of Section 14 of the Preferential Procurement Regulations. The outcomes of such investigations in terms of both the cidb Regulations and the Preferential Procurement Regulations may prohibit the contractor from doing business with the public sector for a period not exceeding 10 years.



PART T2
RETURNABLE DOCUMENTS



PART T2.1: LIST OF RETURNABLE DOCUMENTS



T2.1 List of Returnable Documents

The tenderer must complete the following returnable documents:

1 Returnable Schedules required for quotation evaluation purposes

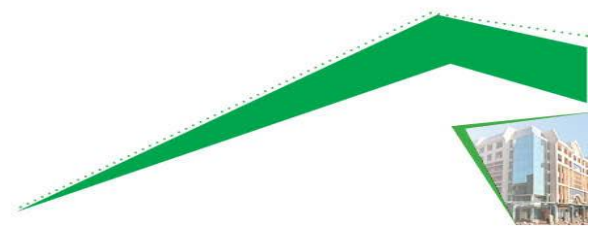
- Compulsory enterprise questionnaire (In the case of a joint venture, separate enterprise questionnaires in respect of each partner must be completed and submitted).
- Record of addenda issued (Only if addenda is issued)
- Certificate of authority for joint ventures (Only where the tender/ quotation is submitted by a joint venture)

2 Other documents required for quotation evaluation purposes

- Form of Offer and Acceptance
- Complete Priced Bills of Quantities & Final Summary

3 Returnable Schedules that will be incorporated into the contract

- Details of the Project Team and CV with Qualifications & Proof of Registration completed for each individual of proposed
- Schedule of Plant and Equipment
- Record of projects: current, past and on tender.
- Project References – at least 3
- SBD 1, 4, 6.1
- Protection of personal content: Consent

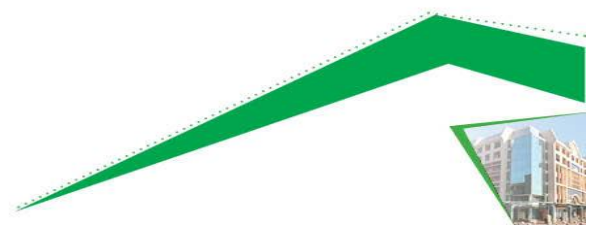


PART A

SBD 1

INVITATION TO BID

YOU ARE HEREBY INVITED TO BID FOR REQUIREMENTS OF THE DEPARTMENT OF PUBLIC WORKS AND INFRASTRUCTURE					
BID NUMBER:	HO5-24/25-0011		CLOSING DATE:	05 JUNE 2024	CLOSING TIME: 11:00
DESCRIPTION:	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER				
BID RESPONSE DOCUMENTS MAY BE DEPOSITED IN THE BID BOX SITUATED AT					
DEPARTMENT OF PUBLIC WORKS, FRONT CORNER OF QHASANA BUILDING ON THE WAY TO CIDB OFFICES LABELLED "TENDERS", BHISHO.					
BIDDING PROCEDURE ENQUIRIES MAY BE DIRECTED TO			TECHNICAL ENQUIRIES MAY BE DIRECTED TO:		
CONTACT PERSON			CONTACT PERSON	Vukile Mpondo	
TELEPHONE NUMBER			TELEPHONE NUMBER	0824186744	
FACSIMILE NUMBER			FACSIMILE NUMBER		
E-MAIL ADDRESS	supply.chain@ecdpc.gov.za		E-MAIL ADDRESS	vukile.mpondo@ecdpc.gov.za	
SUPPLIER INFORMATION					
NAME OF BIDDER					
POSTAL ADDRESS					
STREET ADDRESS					
TELEPHONE NUMBER	CODE		NUMBER		
CELLPHONE NUMBER					
FACSIMILE NUMBER	CODE		NUMBER		
E-MAIL ADDRESS					
VAT REGISTRATION NUMBER					
SUPPLIER COMPLIANCE STATUS	TAX COMPLIANCE SYSTEM PIN:		OR	CENTRAL SUPPLIER DATABASE No:	MAAA
TICK APPLICABLE BOX] ☐ Yes ☐ No		B-BBEE STATUS LEVEL SWORN AFFIDAVIT		TICK APPLICABLE BOX] ☐ Yes ☐ No	
(a) ARE YOU THE ACCREDITED REPRESENTATIVE IN SOUTH AFRICA FOR THE GOODS /SERVICES /WORKS OFFERED?		☐ Yes ☐ No [IF YES ENCLOSE PROOF]		a) ARE YOU A FOREIGN BASED SUPPLIER FOR THE GOODS /SERVICES /WORKS OFFERED?	
				☐ Yes ☐ No [IF YES, COMPLETE QUESTIONNAIRE BELOW]	
QUESTIONNAIRE TO BIDDING FOREIGN SUPPLIERS					
IS THE ENTITY A RESIDENT OF THE REPUBLIC OF SOUTH AFRICA (RSA)?			☐ YES ☐ NO		
DOES THE ENTITY HAVE A BRANCH IN THE RSA?			☐ YES ☐ NO		
DOES THE ENTITY HAVE A PERMANENT ESTABLISHMENT IN THE RSA?			☐ YES ☐ NO		
DOES THE ENTITY HAVE ANY SOURCE OF INCOME IN THE RSA?			☐ YES ☐ NO		
IS THE ENTITY LIABLE IN THE RSA FOR ANY FORM OF TAXATION?			☐ YES ☐ NO		
IF THE ANSWER IS "NO" TO ALL OF THE ABOVE, THEN IT IS NOT A REQUIREMENT TO REGISTER FOR A TAX COMPLIANCE STATUS SYSTEM PIN CODE FROM THE SOUTH AFRICAN REVENUE SERVICE (SARS) AND IF NOT REGISTER AS PER 2.3 BELOW.					



PART B

TERMS AND CONDITIONS FOR BIDDING

1. BID SUBMISSION:
1.1. BIDS MUST BE DELIVERED BY THE STIPULATED TIME TO THE CORRECT ADDRESS. LATE BIDS WILL NOT BE ACCEPTED FOR CONSIDERATION.
1.2. ALL BIDS MUST BE SUBMITTED ON THE OFFICIAL FORMS PROVIDED – (NOT TO BE RE-TYPED) OR IN THE MANNER PRESCRIBED IN THE BID DOCUMENT.
1.3. THIS BID IS SUBJECT TO THE PREFERENTIAL PROCUREMENT POLICY FRAMEWORK ACT, 2000 AND THE PREFERENTIAL PROCUREMENT REGULATIONS, 2022, THE GENERAL CONDITIONS OF CONTRACT (GCC) AND, IF APPLICABLE, ANY OTHER SPECIAL CONDITIONS OF CONTRACT.
1.4. THE SUCCESSFUL BIDDER WILL BE REQUIRED TO FILL IN AND SIGN A WRITTEN CONTRACT FORM (SBD7).
2. TAX COMPLIANCE REQUIREMENTS
2.1 BIDDERS MUST ENSURE COMPLIANCE WITH THEIR TAX OBLIGATIONS.
2.2 BIDDERS ARE REQUIRED TO SUBMIT THEIR UNIQUE PERSONAL IDENTIFICATION NUMBER (PIN) ISSUED BY SARS TO ENABLE THE ORGAN OF STATE TO VERIFY THE TAXPAYER'S PROFILE AND TAX STATUS.
2.3 APPLICATION FOR TAX COMPLIANCE STATUS (TCS) PIN MAY BE MADE VIA E-FILING THROUGH THE SARS WEBSITE WWW.SARS.GOV.ZA .
2.4 BIDDERS MAY ALSO SUBMIT A PRINTED TCS CERTIFICATE TOGETHER WITH THE BID.
2.5 IN BIDS WHERE CONSORTIA / JOINT VENTURES / SUB-CONTRACTORS ARE INVOLVED, EACH PARTY MUST SUBMIT A SEPARATE TCS CERTIFICATE / PIN / CSD NUMBER.
2.6 WHERE NO TCS IS AVAILABLE BUT THE BIDDER IS REGISTERED ON THE CENTRAL SUPPLIER DATABASE (CSD), A CSD NUMBER MUST BE PROVIDED.
2.7 NO BIDS WILL BE CONSIDERED FROM PERSONS IN THE SERVICE OF THE STATE, COMPANIES WITH DIRECTORS WHO ARE PERSONS IN THE SERVICE OF THE STATE, OR CLOSE CORPORATIONS WITH MEMBERS PERSONS IN THE SERVICE OF THE STATE."

SIGNATURE OF BIDDER:

CAPACITY UNDER WHICH THIS BID IS SIGNED:
(Proof of authority must be submitted e.g. company resolution)

DATE:



Compulsory Enterprise Questionnaire



A 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: 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 5: Particulars of companies and close corporations

Company registration number

Close corporation number

Tax reference number

Section 6: The attached SBD 4 must be completed for each tender and be attached as a tender requirement.

Section 7: The attached SBD 6.1 must be completed for each tender and be attached as a requirement.

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

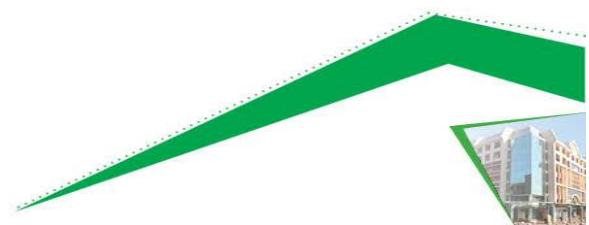
- authorizes the Employer to obtain a tax clearance certificate from the South African Revenue Services that my / our tax matters are in order;
- confirms that the neither the name of the enterprise or the name of any partner, manager, director or other person, who wholly or partly exercises, or may 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;
- 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; and
- 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



SBD 4

BIDDER'S DISCLOSURE

1. PURPOSE OF THE FORM

Any person (natural or juristic) may make an offer or offers in terms of this invitation to bid. In line with the principles of transparency, accountability, impartiality, and ethics as enshrined in the Constitution of the Republic of South Africa and further expressed in various pieces of legislation, it is required for the bidder to make this declaration in respect of the details required hereunder.

Where a person/s are listed in the Register for Tender Defaulters and / or the List of Restricted Suppliers, that person will automatically be disqualified from the bid process.

2. Bidder's declaration

- 2.1 Is the bidder, or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest¹ in the enterprise, employed by the state? **YES/NO**

- 2.1.1 If so, furnish particulars of the names, individual identity numbers, and, if applicable, state employee numbers of sole proprietor/ directors / trustees / shareholders / members/ partners or any person having a controlling interest in the enterprise, in table below.

Full Name	Identity Number	Name of State institution

- 2.2 Do you, or any person connected with the bidder, have a relationship with any person who is employed by the procuring institution? **YES/NO**

- 2.2.1 If so, furnish particulars:

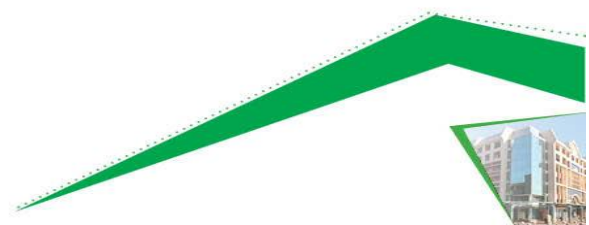
.....
.....

- 2.3 Does the bidder or any of its directors / trustees / shareholders / members / partners or any person having a controlling interest in the enterprise have any interest in any other related enterprise whether or not they are bidding for this contract? **YES/NO**

- 2.3.1 If so, furnish particulars:

.....
.....

¹ *the power, by one person or a group of persons holding the majority of the equity of an enterprise, alternatively, the person/s having the deciding vote or power to influence or to direct the course and decisions of the enterprise.*



3 DECLARATION

I, the undersigned, (name)..... in submitting the accompanying bid, do hereby make the following statements that I certify to be true and complete in every respect:

- 3.1 I have read and I understand the contents of this disclosure;
- 3.2 I understand that the accompanying bid will be disqualified if this disclosure is found not to be true and complete in every respect;
- 3.3 The bidder has arrived at the accompanying bid independently from, and without consultation, communication, agreement or arrangement with any competitor. However, communication between partners in a joint venture or consortium² will not be construed as collusive bidding.
- 3.4 In addition, there have been no consultations, communications, agreements or arrangements with any competitor regarding the quality, quantity, specifications, prices, including methods, factors or formulas used to calculate prices, market allocation, the intention or decision to submit or not to submit the bid, bidding with the intention not to win the bid and conditions or delivery particulars of the products or services to which this bid invitation relates.
- 3.4 The terms of the accompanying bid have not been, and will not be, disclosed by the bidder, directly or indirectly, to any competitor, prior to the date and time of the official bid opening or of the awarding of the contract.
- 3.5 There have been no consultations, communications, agreements or arrangements made by the bidder with any official of the procuring institution in relation to this procurement process prior to and during the bidding process except to provide clarification on the bid submitted where so required by the institution; and the bidder was not involved in the drafting of the specifications or terms of reference for this bid.
- 3.6 I am aware that, in addition and without prejudice to any other remedy provided to combat any restrictive practices related to bids and contracts, bids that are suspicious will be reported to the Competition Commission for investigation and possible imposition of administrative penalties in terms of section 59 of the Competition Act No 89 of 1998 and or may be reported to the National Prosecuting Authority (NPA) for criminal investigation and or may be restricted from conducting business with the public sector for a period not exceeding ten (10) years in terms of the Prevention and Combating of Corrupt Activities Act No 12 of 2004 or any other applicable legislation.

I CERTIFY THAT THE INFORMATION FURNISHED IN PARAGRAPHS 1, 2 and 3 ABOVE IS CORRECT.

I ACCEPT THAT THE STATE MAY REJECT THE BID OR ACT AGAINST ME IN TERMS OF PARAGRAPH 6 OF PFMA SCM INSTRUCTION 03 OF 2021/22 ON PREVENTING AND COMBATING ABUSE IN THE SUPPLY CHAIN MANAGEMENT SYSTEM SHOULD THIS DECLARATION PROVE TO BE FALSE.

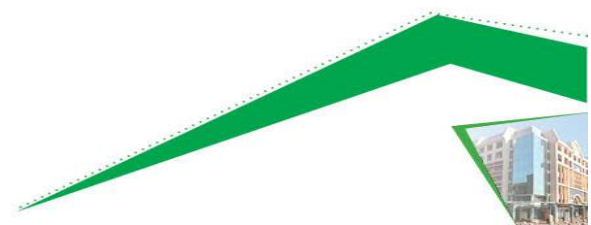
.....
Signature

.....
Date

.....
Position

.....
Name of bidder

² **Joint venture or Consortium means an association of persons for the purpose of combining their expertise, property, capital, efforts, skill and knowledge in an activity for the execution of a contract.**



SBD 6.1

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

This preference form must form part of all tenders invited. It contains general information and serves as a claim form for preference points for specific goals.

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

- a) The applicable preference point system for this tender is the 80/20 preference point system.
- b) The lowest acceptable tender will be used to determine the accurate system once tenders are received.

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

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

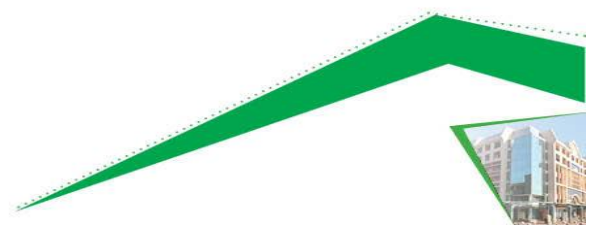
1.4 To be completed by the organ of state:

The maximum points for this tender are allocated as follows:

	POINTS
PRICE	80
SPECIFIC GOALS	20
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 in regard to 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. FORMULA 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:

80/20	or	90/10
$P_s = 80 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$	or	$P_s = 90 \left(1 - \frac{P_t - P_{min}}{P_{min}} \right)$

Where

P_s = Points scored for price of tender under consideration
 P_t = Price of tender under consideration
 P_{min} = Price of lowest acceptable tender

3.2. FORMULA 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:

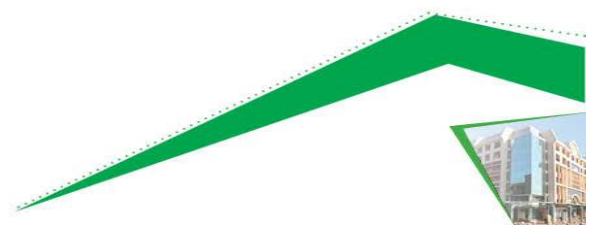
80/20	or	90/10
$P_s = 80 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$	or	$P_s = 90 \left(1 + \frac{P_t - P_{max}}{P_{max}} \right)$

Where

P_s = Points scored for price of tender under consideration
 P_t = Price of tender under consideration
 P_{max} = Price of highest acceptable tender

4. POINTS AWARDED FOR 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:

- 4.2. 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.

Table 1: Specific goals for the tender and points claimed are indicated per the table below.
(Note to organs of state: Where either the 90/10 or 80/20 preference point system is applicable, corresponding points must also be indicated as such.
Note to tenderers: The tenderer must indicate how they claim points for each preference point system.)

The specific goals allocated points in terms of this tender		Number of points allocated (80/20 system) (To be completed by the organ of state)	Number of points claimed (80/20 system) (To be completed by the tenderer)
Historically Disadvantaged Individual:-			
	(a) 100% black ownership	6	
	(b) 51% to 99% black ownership	4	
	(c) Less than 51% black ownership	0	
Black women ownership:-			
	(a) 100% black women ownership	4	
	(b) 30% to 99% black women ownership	2	
	(c) Less than 30% black women ownership	0	
Black youth ownership:-			
	(a) 100% black youth ownership	4	
	(b) 30% to 99% black youth ownership	2	
	(c) Less than 30% black youth ownership	0	
People with disability:-			
	(a) 20% or more disabled people ownership	4	
	(b) Less than 20% disabled people ownership	0	
Locality:-			
	(a) Within the Eastern Cape	2	
	(b) Outside the Eastern Cape	0	

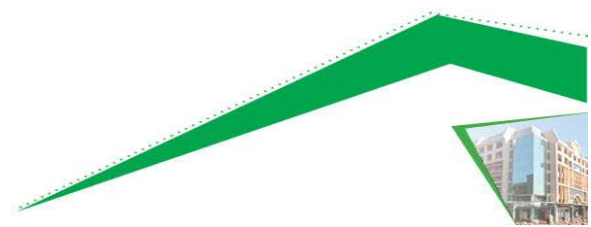
DECLARATION WITH REGARD TO COMPANY/FIRM

4.3. Name of company/firm.....

4.4. Company registration number:

4.5. TYPE OF COMPANY/ FIRM

☐ Partnership/Joint Venture / Consortium

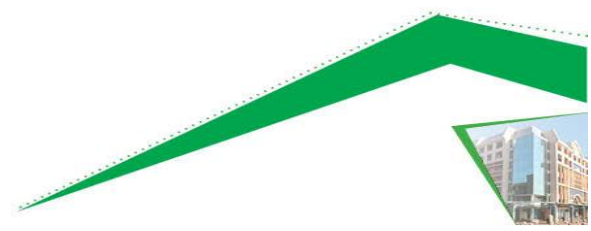


- ☐ One-person business/sole propriety
- ☐ Close corporation
- ☐ Public Company
- ☐ Personal Liability Company
- ☐ (Pty) Limited
- ☐ Non-Profit Company
- ☐ State Owned Company

[TICK APPLICABLE BOX]

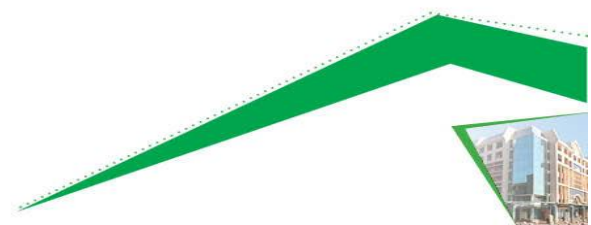
- 4.6. I, the undersigned, who is duly authorised to do so on behalf of the company/firm, certify that the points claimed, based on the specific goals as advised in the tender, qualifies the company/ firm for the preference(s) shown and I acknowledge that:
- i) The information furnished is true and correct;
 - 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 1.4 and 4.2, 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:	
	
	
	



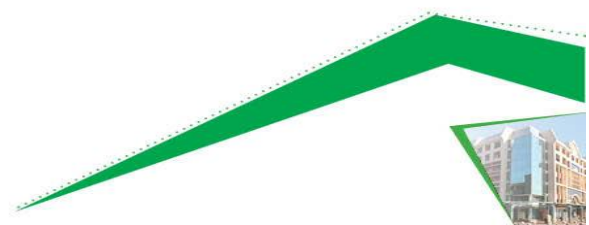
***PROOF OF REGISTRATION ON THE NATIONAL TREASURY CENTRAL SUPPLIER DATABASE
(CSD REPORT)***

(ATTACH HERE)



VALID CIDB CERTIFICATE OF A TENDERER

(ATTACH HERE)



PROTECTION OF PERSONAL INFORMATION: CONSENT (POPIA)

The introduction of The Protection of Personal Information Act (POPIA) ensures the regulation of personal information through its entire life cycle of collection, transfer, storing and deletion.

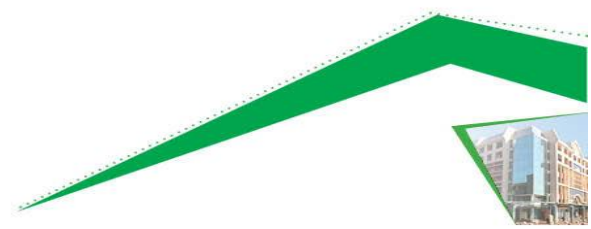
As part of its business activities, the Department of Public Works and Infrastructure obtains and requires access to personal data from a wide range of internal and external parties, including without limitation bidders who respond to requests for proposals that are published by the Department of Public Works and Infrastructure from time to time. The Department of Public Works and Infrastructure confirms that it shall process the information disclosed by Bidders for the purpose of evaluating and subsequently awarding/appointing a successful Bidder.

The Department of Public Works and Infrastructure hereby states that it does not and will never modify, amend, or alter any personal information submitted to it by a Bidder. Not unless directed to do so by an order of court, the Department of Public Works and Infrastructure does not disclose or permit the disclosure of any personal information to any Third Party without the prior written consent of the owner of the information.

Similarly, Bidders will from time-to-time access and be seized with information of a personal nature pertaining to the Department of Public Works and Infrastructure. Some of the information may because of legislative compliances be available in the public domain, whilst some is uniquely provided to bidders in pursuit of procurement or other business-related activities. In this regard, the Department of Public Works and Infrastructure requires that Bidders which receive or have access to its personal information, process any such information in a manner compliant with the requirements of the POPIA.

AGREEMENT

1. The Department of Public Works and Infrastructure and the Bidder (the Parties) agree and undertake that upon obtaining and having access to personal information relating to either of them, they shall always ensure that:
 - a) They process the information only for the express purpose for which it was obtained.
 - b) Information is provided only to designated and authorized personnel who require the personal information to carry out the Parties' respective obligations in terms of the Procurement processes.
 - c) They will introduce, and implement all reasonable measures ensure the protection of all personal information from unauthorized access and/or use.
 - d) They have taken appropriate measures to safeguard the security, integrity, and authenticity of all personal information in its possession or under its control.
 - e) The Parties agree that if personal information will be processed for any other purpose other than the one for which the accessing of the information was intended, explicit written consent will be obtained prior to the execution of such reason.
 - f) The Parties shall carry out regular assessments to identify all reasonably foreseeable internal and external risks to the interception of personal information in its possession or under its control and shall implement and maintain appropriate controls in mitigation of such risks.
2. The Parties agree that they will promptly return or destroy any personal data in their possession or control which belongs to the other Party once it no longer serves the purpose for which it was collected, subject



to any legal retention requirements. The information will be destroyed in such a manner that it cannot be reconstructed to its original form, linking it to any individual or organization.

3. Bidder's Obligations

- a) The Bidder is required to notify the Information Officer of Department of Public Works and Infrastructure, in writing as soon as possible after it becomes aware of or suspects any loss, unauthorized access or unlawful use of any of the Department of Public Works and Infrastructure's personal information.
- b) The Bidder shall, at its own cost, promptly and without delay take all necessary steps to mitigate the extent of the loss or compromise of personal data.
- c) The Bidder shall be required to provide the Department of Public Works and Infrastructure with details of the persons affected by the compromise and the nature and extent of the compromise, including details of the identity (if known) of the unauthorized person who may have accessed or acquired the personal data.
- d) The Bidder undertakes to co-operate with any investigation relating to security breach which is carried out by or on behalf of Department of Public Works and Infrastructure.

On behalf of the Bidder:

.....
Signature

.....
Date

.....
Position

.....
Name of the Bidder

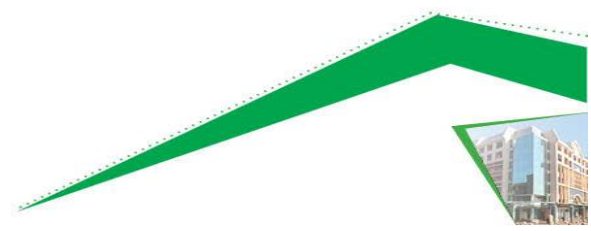
On behalf of the Client:

.....
Signature

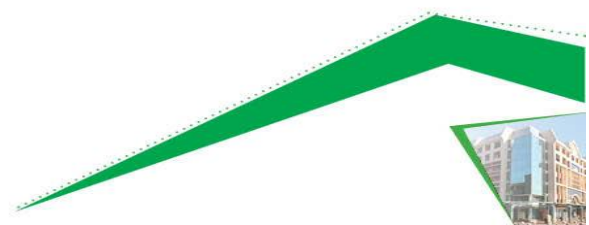
.....
Date

.....
Position

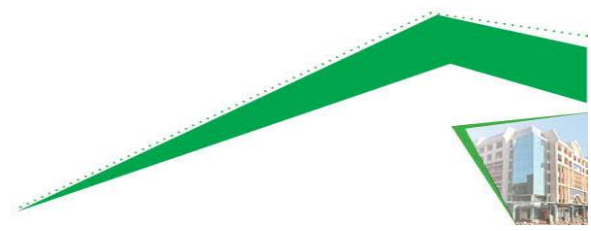
.....
Name of Client Representative



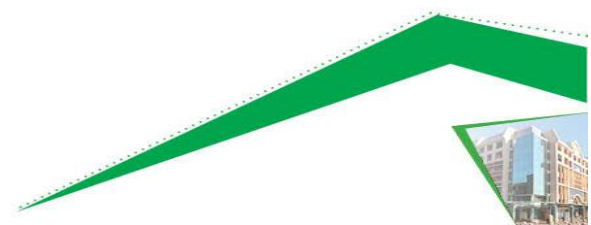
THE CONTRACT



PART C1
AGREEMENTS AND CONTRACT DATA



PART C1.1: FORM OF OFFER AND ACCEPTANCE



Annex C

(normative)

FORM OF OFFER AND ACCEPTANCE

PROJECT TITLE	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER	HO5-24/25-0011

OFFER

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

.....
The tenderer, identified in the offer signature block, has examined the documents listed in the tender data and addenda thereto as listed in the returnable schedules, and by submitting this offer has accepted the conditions of tender.

By the representative of the tenderer, deemed to be duly authorized, 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) (or other suitable wording)

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.

Signature

.....
Name

.....
Capacity

.....
for the tenderer

.....
(Name and address of organization)

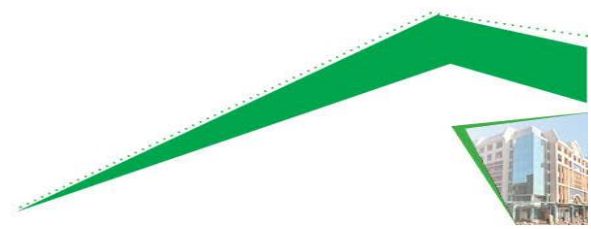
Name and signature

of witness 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 the above listed Parts.

Deviations from and amendments to the documents listed in the tender data and any addenda thereto as listed in the returnable schedules as well as any changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance, are contained in the schedule of deviations attached to and forming part of this form of offer and acceptance. No amendments to or deviations from said documents are valid unless contained in this schedule.

The tenderer shall within 3 weeks after receiving a completed copy of this agreement, including the schedule of deviations (if any), contact the employer's agent (whose details are given in the contract data) to arrange the delivery of any securities, bonds, guarantees, proof of insurance and any other documentation to be provided in terms of the conditions of contract identified in the contract data. 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 working days of the date of such receipt notifies the employer in writing of any reason why he cannot accept the contents of this agreement, this agreement shall constitute a binding contract between the parties.¹

Signature

.....
Name

.....
Capacity

.....
for the Employer

.....
(Name and address of organization)

Name and signature

of witness Date

Schedule of Deviations

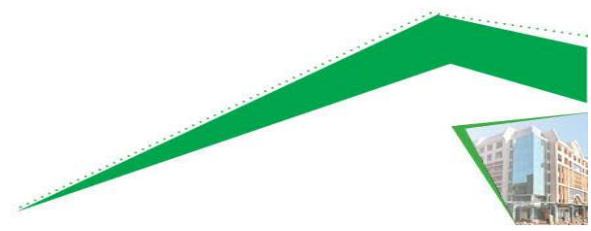
1 Subject
Details

2 Subject
Details

3 Subject
Details

4 Subject
Details

By the duly authorized representatives signing this agreement, 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,

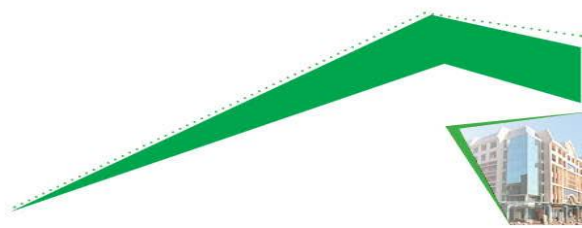


clarification or changes to the terms of the offer agreed by the tenderer and the employer during this process of offer and acceptance.

It is expressly agreed that no other matter whether in writing, oral communication or implied during the period between the issue of the tender/ quotation 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.

¹ As an alternative, the following wording may be used:

Notwithstanding anything contained herein, this agreement comes into effect two working days after the submission by the employer of one fully completed original copy of this document including the schedule of deviations (if any), to a courier-to-counter delivery / counter-to-counter delivery / door-to-counter delivery /door-to-door delivery /courier service (delete that which is not applicable), provided that the employer notifies the tenderer of the tracking number within 24 hours of such submission. Unless the tenderer (now contractor) within seven working days of the date of such submission 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 parti



A

RECORD OF ADDENDA TO BID DOCUMENTS

PROJECT TITLE	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER		
SCMU NUMBER	HO5-24/25-0011		
I / We confirm that the following communications received from the Department of Public Works before the submission of this tender offer, amending the tender documents, have been taken into account in this bid offer: (Attach additional pages if more space is required)			
Item	Date	Title or Details	No. of Pages
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Attach additional pages if more space is required.

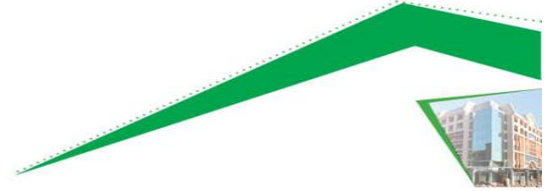
Signed

Date

Name

Position

Tenderer



B

PROPOSED AMENDMENTS AND QUALIFICATIONS

The Tenderer should record any deviations or qualifications he may wish to make to the tender documents in this Returnable Schedule. Alternatively, a tenderer may state such deviations and qualifications in a covering letter to his tender and reference such letter in this schedule.

The Tenderer's attention is drawn to clause 5.8 of SANS 10845-3 regarding the employer's handling of material deviations and qualifications.

PROJECT TITLE	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER	HO5-24/25-0011

Page	Clause /Item	Proposal
The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct		

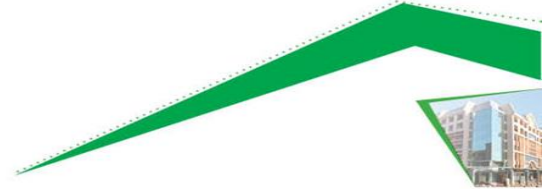
Signed

Date

Name

Position

Enterprise name



C

RESOLUTION FOR SIGNATORY

A: CERTIFICATE OF AUTHORITY FOR SIGNATORY

Signatory for companies shall confirm their authority hereto by attaching a duly signed and dated copy of the relevant resolution of the board of directors to this form or on company letter head.

An example is given below:

"By resolution of the board of directors passed at a meeting held on _____

Mr/Ms _____, whose signature appears below, has been duly authorised to

sign all documents in connection with the tender for Contract No. _____

and any Contract which may arise there from on behalf of (Block Capitals) _____

SIGNED ON BEHALF OF THE COMPANY: _____

IN HIS/HER CAPACITY AS: _____

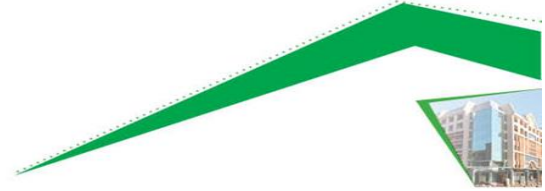
DATE: _____

SIGNATURE OF SIGNATORY: _____

WITNESSES:

DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	
DIRECTOR (NAMES)		SIGNATURE	

If you cannot complete this form, attach a separate sheet (in a company letter head, project specific and signed by all directors):

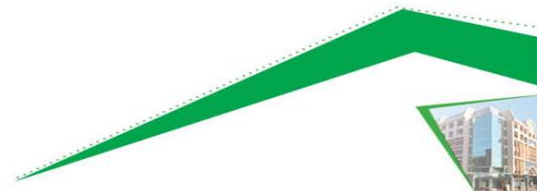


D

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 authorize Mr/Ms, authorized 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.		
PROJECT TITLE	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER	
SCMU NUMBER	HO5-24/25-0011	
NAME OF FIRM	ADDRESS	DULY AUTHORISED SIGNATORY
Lead partner:		Signature. Name Designation.....
..... .		Signature. Name Designation.....
..... .		Signature. Name Designation.....
..... .		Signature. Name Designation.....

E



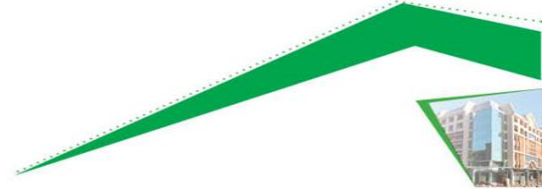
CAPACITY OF THE BIDDER

PROJECT TITLE	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER	HO5-24/25-0011
WORK CAPACITY: (The Bidder is requested to furnish the following capacity particulars and to attach additional pages if more space is required. Failure to furnish the particulars may result in the Bid being disregarded.) <i>Artisans and Employees: (Artisans and Employees to be, or are ,employed for this project)</i>	

Quantity / No. of Resources	Categories of Employee - Key Personnel (part of Business Enterprise)	Professional Registration No.	Date of Employment
	Project Manager / Team Leader		
	Design Engineer / Technician		
	Installation Electrician (Green Card)		
	Others		

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

Signed:		Date	
Name:		Position	
Enterprise Name:			



G

RELEVANT PROJECT EXPERIENCE – COMPLETED PROJECTS

Tenderers must submit a max one-page description of at least three projects successfully completed.

Attach a Completion Certificate for each of the project provided.

The description of each project must include the following information:

1. Essential introductory information:
 - 1.1. Name of project.
 - 1.2. Name of client.
 - 1.3. Contact details of client.
 - 1.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
 - 1.5. The period during which the project was performed, and also, if this is different, the period during which the tenderer's team members were contracted.
 - 1.6. Cost of works and/or contract value (making it clear in broad terms what this cost/value purchased, and to what extent (if any) this cost/value was part of a larger project budget or programme budget).

NO.	NAME OF PROJECT.	NAME OF CLIENT.	CONTACT DETAILS OF CLIENT.	PROJECT VALUE	DATE COMPLETED
1					
2					
3					

If there are more projects, attach a separate page to address this issue (the above table is just for reference purposes).

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

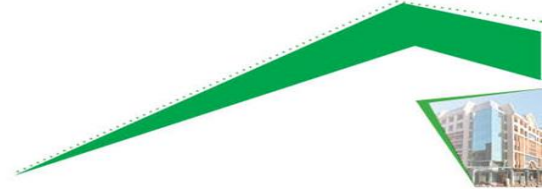
Signed.....

Date.....

Name.....

Position.....

Enterprise name.....



H

RELEVANT PROJECT EXPERIENCE – CURRENT PROJECTS

Tenderers must submit a max one-page description of at least three projects under construction/ on hold/ just handed over/ towards completion (if they exist). **Attach an Appointment letter for each of the project provided.**

The description of each project must include the following information:

2. Essential introductory information:

- 2.1. Name of project.
- 2.2. Name of client.
- 2.3. Contact details of client.
- 2.4. Contact details (including telephone numbers and email addresses) of currently contactable references.
- 2.5. The period during which the project was performed, and if this is different, the period during which the tenderer's team members were contracted.
- 2.6. Cost of works and/or contract value (making it clear in broad terms what this cost/value purchased, and to what extent (if any) this cost/value was part of a larger project budget or programme budget).

NO.		NAME OF PROJECT.	NAME OF CLIENT.	CONTACT DETAILS OF CLIENT.	PROJECT VALUE	STAGE OF PROJECT
1						
2						
3						

Attach a separate page to address this issue (the above table is just for reference purposes).

The undersigned, who warrants that she/ he is duly authorised to do so on behalf of the enterprise, confirms that the content of this schedule that presented by the tenderer are within my personal knowledge and are to the best of my knowledge both true and correct.

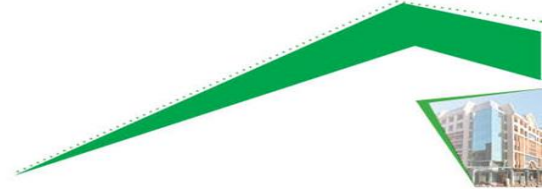
Signed

Date

Name

Position

Enterprise name



I

OTHER OFFERS SUBMITTED AT TIME OF THIS TENDER FOR WHICH RESULTS ARE PENDING (if they exist)

(Any other client's tender must also be included)

BID NO. / PROJECT NUMBER	PROJECT NAME	CLIENT NAME & CONTACT NO.	VALUE TENDERED IN RANDS	DATE SUBMITTED	CONTACT DETAILS (CLIENT)
1					
2					
3					
4					

If there are more projects, attach a separate page to address this issue (the above table is just for

Signed

Date

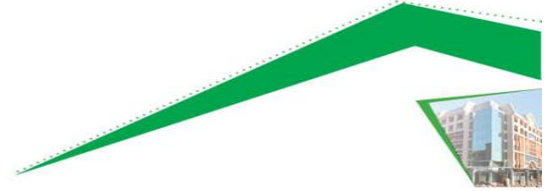
Name

Position

Enterprise name

reference purposes)

J



SCHEDULE OF TENDERER'S LITIGATION HISTORY

The tenderer shall list below details of any litigation with which the tenderer (including its directors, shareholders or other senior members in previous companies) has been involved with any organ of state or state department within the last ten years. The details must include the year, the litigating parties, the subject matter of the dispute, the value of any award or estimated award if the litigation is current and in whose favour the award, if any, was made.

NO.	NAME OF CLIENT.	OTHER LITIGATING PARTY	BRIEF DETAILS OF DISPUTE	PROJECT VALUE	DATE RESOLVED OR STATUS OF LITIGATION
1					
2					
3					



Signed

Date

.....

Name

Position

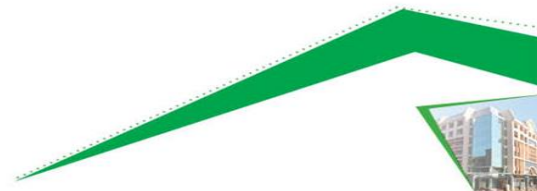
.....

Enterprise name

.....

K

Project Reference Forms – 1



PROJECT TITLE:	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER:	HO5-24/25-0011

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I, _____ (name and surname) of
_____ (company name) declare

that I was the Project Manager on the following building construction project successfully
executed by _____ (name of tenderer):

Project name: _____

Project location: _____

Construction period: _____ Completion date: _____

Contract value: _____

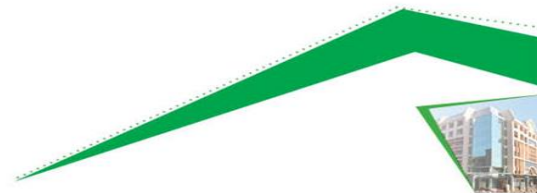
A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5	Total
1. Project performance / time management / programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:



D. My contact details are:

Telephone: _____ Cell Phone: _____ Fax: _____

E-mail: _____

Thus signed at _____ on this _____ day of _____ 2024.

Signature of principal agent

COMPANY STAMP

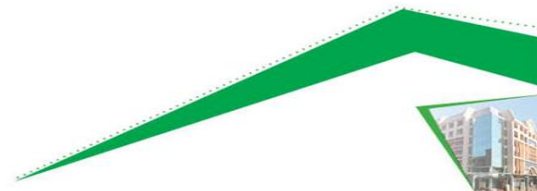
NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

Name of Tenderer

Signature of Tenderer

Date



Project Reference Forms – 2

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the

PROJECT TITLE:	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER:	HO5-24/25-0011

tenderer.

I, _____ (name and surname) of
_____ (company name) declare

that I was the Project Manager on the following building construction project successfully
executed by _____ (name of tenderer):

Project name: _____

Project location: _____

Construction period: _____ Completion date: _____

Contract value: _____

A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5	Total
1. Project performance / time management / programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc.						
TOTAL						

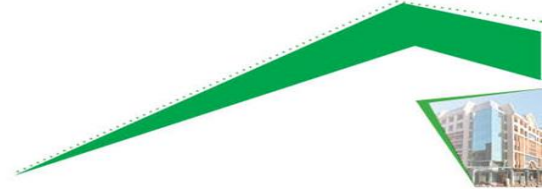
B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:

D. My contact details are:

Telephone: _____ Cell Phone: _____ Fax: _____



E-mail: _____

Thus signed at _____ on this _____ day of _____ 2024.

Signature of principal agent

COMPANY STAMP

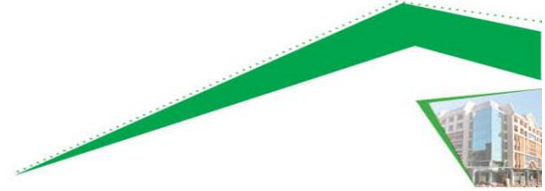
NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

Name of Tenderer

Signature of Tenderer

Date



Project Reference Forms – 3

PROJECT TITLE:	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER:	HO5-24/25-0011

NOTE: This returnable document must be completed by the person who was the Engineer/Project Manager on a project of similar value and complexity that was completed successfully by the tenderer.

I, _____ (name and surname) of
_____ (company name) declare

that I was the Project Manager on the following building construction project successfully
executed by _____ (name of tenderer):

Project name: _____

Project location: _____

Construction period: _____ Completion date: _____

Contract value: _____

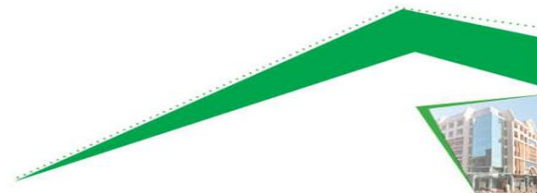
A. Please evaluate the performance of the Tenderer on the abovementioned project, on which you were the principal agent, by inserting "Yes" in the relevant box below:

Key Performance Indicators	Very Poor 1	Poor 2	Fair 3	Good 4	Excellent 5	Total
1. Project performance / time management / programming						
2. Quality of workmanship						
3. Resources: Personnel						
4. Resources: Plant						
5. Financial management / payment of subcontractors / cash flow, etc.						
TOTAL						

B. Would you consider / recommend this tenderer again:

YES	NO

C. Any other comments:



D. My contact details are:

Telephone: _____ Cell Phone: _____ Fax: _____

E-mail: _____

Thus signed at _____ on this _____ day of _____ 2024.

Signature of principal agent

COMPANY STAMP

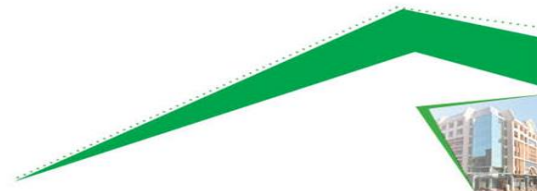
NOTE:

If reference cannot be verified due to the inability to get hold of the referee or failure on his/her part to respond to a written request to do so, that reference will not score any points. It is the responsibility of the tenderer to put referees who are reachable.

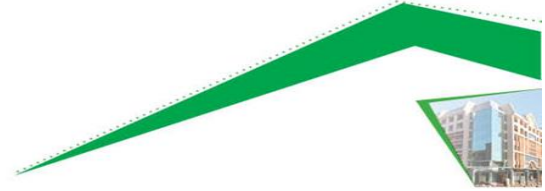
Name of Tenderer

Signature of Tenderer

Date



PART C1.2: CONTRACT DATA

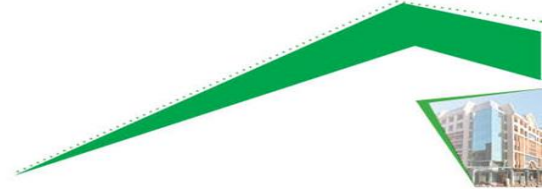


PART C1.2 CONTRACT DATA

PROJECT TITLE:	SUPPLY, INSTALL, TEST AND COMMISSION OF 13KW PHOTOVOLTAIC (PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER:	HO5-24/25-0011

Part 1– Data provided by the Employer

Clause	Statement	Data
1. General		
	The conditions of contract are the core clauses and the clauses for main Option:	B Priced contract with bill of quantities
	dispute resolution Option	W1 Dispute resolution procedure
	and secondary Options	X7 Delay Damages
		X13 Performance Bond
		X16 Retention
		X18 Limitation of liability
	of the NEC3 (April 2013)	

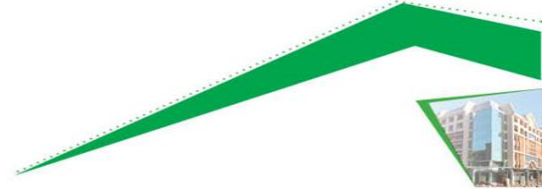


10.1	The Employer is (name):	Eastern Cape Department of Public Works & Infrastructure
	Address	Department of Public Works and Infrastructure 3 rd Floor. Office 3-46 Independence Avenue Qhasana Building 5605
	Represented by:	TBA
	Tel No.	
	Fax No.	

11.2(2)	The Affected Property is	Old Disaster Building, Independence Boulevard, Bisho (Next to Tru-FM)
11.2(13)	The works is	Supply, install and commission solar system
11.2(15)	The works information is	The Scope is in Part C3: Scope of Work in this document.
11.2(16)	The site information is	The site is as described in the Site Information of this document.
12.2	The law of the contract is the law of	the Republic of South Africa
13.1	The language of this contract is	English
13.2	The period for reply is	7 days

2. The Contractor's responsibility		
21.2	The contractor's design	The Contractor shall submit proposed solar installation layout that meets criteria for approval

3. Time		
30.1	The starting date is	Site Handover Meeting Date.
30.2	The completion date is	The completion date for the whole of the works is the date following 12 weeks after the starting date, which includes a period of 4 weeks for the Contractor to provide the Client with the necessary bonds, guarantees, insurance certificates, OHS plan, and other information required by this contract. The period of 4 weeks includes one week for the Client to assess and process the submitted documentation.



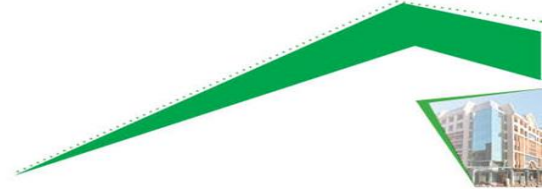
4. Testing and defects	
41.1	The defects date is 52 weeks after Completion.
42.3	The defect correction period is 2 weeks.

5. Payment	
50.1	The assessment interval is Monthly
51.1	Certify payment Delete the first sentence of Clause 51.1 and replace with the following: The Client certifies a payment within one week of the assessment day. The Contractor prepares a tax invoice for the exact amount certified by the Client. The Contractor submits the tax invoice together with the corresponding payment certificate to the Client for payment. Incomplete and incorrect payment submissions are returned within one week to the Contractor for correction. Payment is made within thirty days of receipt of a complete and correct Contractor's payment submission. The currency is South African Rand
51.2	The period with which payments are made is 30 Days after submission of a valid TAX Invoice to the Employer
51.4	The interest rate is (i) zero percent above the publicly quoted prime rate of interest (calculated on a 365-day year) charged by from time to time by the South African Reserve Bank (as certified, in the event of any dispute, by any manager of such bank, whose appointment it shall not be necessary to prove) for amounts due in Rands.

6. Compensation Events	(if the optional statement for this section is not used, no data will be required for this section)
These are additional compensation events	N/A

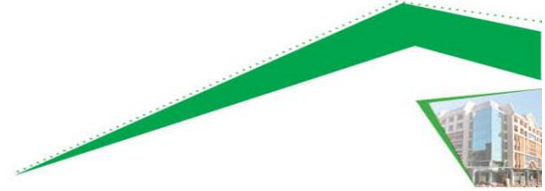
7. Use of Equipment Plant and Materials	No data is required for this section of the conditions of contract.
---	---

8. Risks and Insurance



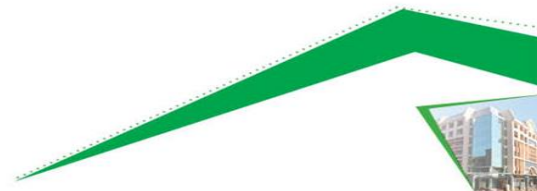
80.1	These are additional Employer's risks	N/A
83.1	The Employer provides these insurances from the Insurance Table	N/A
83.1	The Employer provides these additional insurances	N/A
83.1	The minimum amount of cover for insurance against loss and damage caused by the Contractor to the Employer's property is	R 5 000 000.00
83.1	The insurance against loss of or damage to the works, Plant and Materials is to include cover for Plant and Materials provided by the Employer to an amount of	R 5 000 000.00
83.1	The minimum amount of cover for insurance in respect of loss of or damage to property (except the Employer's property, Plant and Materials and Equipment) and liability for bodily injury to or death of a person (not an employee of the Contractor) arising from or in connection with the Contractor's Providing the Service for any one event is:	R 5 000 000.00
83.1	The Minimum limit of indemnity for insurance in respect of death of or bodily injury to employees of the Contractor arising out of and in course of their employment in connection with this contract for any one event is:	As prescribed by the Compensation for Occupational Injuries and Diseases Act No. 130 of 1993 and the Contractor's common law liability for people falling outside the scope of the Act with a limit of Indemnity of not less than R 5 000 000.00
9. Termination		No data is required for this section of the conditions of contract.

10. Data for Main Option Clauses		
A	Priced Contract with Price List	Option B
20.5	The Contractor prepares forecasts of the final total of the Prices for the whole of the service at intervals of no longer than	4 Weeks

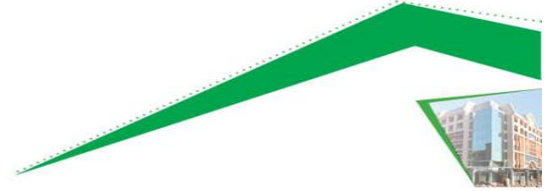


11. Data for Option W1		
W1.1	The Adjudicator is (Name)	The person selected from the ICE-SA Division (or its successor body) of the South African Institution of Civil Engineering Panel of Adjudicators by the party intending to refer a dispute to him. (See www.icesa.org.za)
	Address	
	Tel. No, Fax	
	No.	
	Email	
W1.2(3)	The Adjudicator nominating body is:	The Chairman of ICE-SA a joint Division of the South African Institution of Civil Engineering Arbitration
W1.4(2)	The Tribunal is:	
W1.4(5)	The Arbitration Procedure is	The latest edition of Rules for the Conduct of Arbitrations published by the Association of Arbitrators (South Africa) or its successor body.
	The place where arbitration is to be held is	South Africa
	The person or organization who will choose an arbitrator	The Chairman for the time being or his nominee of the Association of Arbitrators (South Africa) or its successor body.
	- If the Parties cannot agree a choice or	
	- If the procedure does not state who selects an arbitrator, is	

X7.	Delay Damages	
X7.1.	The Contractor pays delay damages	The delay damages are R1300 per day.
X13.	Performance Bond	
X13.1	The Contractor gives the Employer a performance bond	The Tenderer must provide a Performance Bond in the form of a Fixed Performance Guarantee by means of a Bank Guarantee, or from an Insurer approved by the Project Manager, in the amount of 2.5% of the Awarded Contract Value, once the Contract has been awarded to him. This Bond must be given to the Employer with in four (4) weeks of the Contract Date.



X16. Retention		
X16.1	The retention is	The retention is 5% (five percent) excluding VAT of the contract value, attained by payment reduction of 10% (ten percent) of the value certified in payment certificates until the retention amount is reached.
X18. Limitation of Liability		
X18.1	The Contractor's liability to the Employer for indirect or consequential loss is limited to	R0.0 (zero Rand)
X18.2	For any one event, the Contractor's liability to the Employer for loss of or damage to the Employer's property is limited to	R2 500 000.00
X18.3	The Contractor's liability for Defects due to his design of an item of Equipment is limited to	The greater of - the total of the Prices at the Contract Date And - R2 500 000
X18.4	The Contractor's liability to the Employer for all matters arising under or in connection with this contract, other than the excluded matters, is limited to	N/A
X18.5	The end of liability date is	12 Months after the completion date.

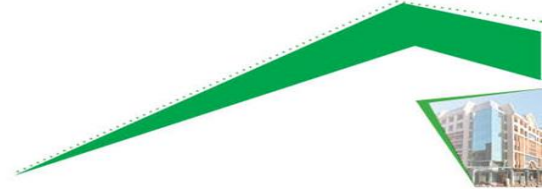


Part Two – Data provided by the Contractor

Clause	Statement	Data
10.1	The Contractor is (Name): Address: Tel No. Fax No.	
11.2(14)	The following matters will be included in the Risk Register	
21.2	The proposal for the implementation of the works	
24.1	The Key Persons are: Name : Job : Responsibilities : Qualifications : Experience	
	Name : Job : Responsibilities : Qualifications : Experience	
	Name : Job : Responsibilities : Qualifications : Experience	



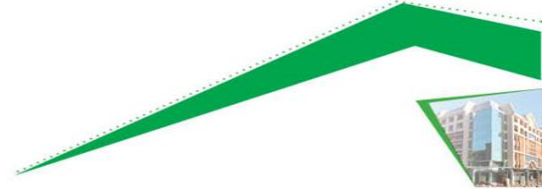
CV's and further key person's data are in _____	
B	Priced Contract with Method Statement and Timeframes
11.2(12)	The price list is in
11.2(19)	The tendered total of the Prices is



PART C2
PRICING DATA



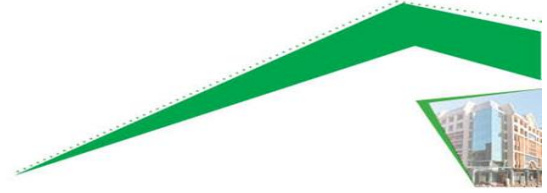
PART C2.1: PRICING INSTRUCTIONS



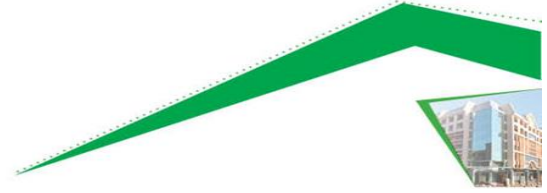
C2.1 Pricing Instructions

Pricing Instructions mean the criteria as set out below, read together with all Parts of the contract document, which it will be deemed in the contract that the Tenderer has taken into account when developing his prices.

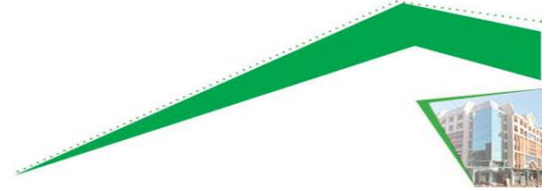
1. For the purpose of the Pricing Schedule, the following words shall have the meanings hereby assigned to them:
 - Unit: The unit of measurement for each item of work.
 - Quantity: The number of units of work for each item.
 - Rate: The agreed payment per unit of measurement.
 - Amount: The product of the quantity and the agreed rate for an item.
 - Sum: An agreed lump sum payment amount for an item, the extent of which is described in the Scope of Work, but the quantity of work which is not measured in any units.
2. A rate, sum, and/or price as applicable, is to be entered against each item in the Pricing Schedule. An item against which no price is entered will be considered to be covered by the other prices or rates in the Pricing Schedule.
3. The rates, sums, and prices in the Pricing Schedule are to be fully inclusive prices for the work described under the several items. Such prices and rates are to cover all costs and expenses that may be required in and for the execution of the work described in accordance with the provisions of the Scope of Work, and shall cover the cost of all general risks, liabilities, and obligations set forth or implied in the Contract Data, as well as overhead charges and profit.
4. Where quantities are given in the Pricing Schedule, these are provisional and do not necessarily represent the actual amount of work to be done. The quantities of work accepted and certified for payment will be used for determining payments due and not the quantities given in the Activity Schedule.
5. All other rates, sums, or prices (as applicable) tendered in the Pricing Schedule shall be final and binding and shall **not** be subject to any variation throughout the period of the contract.
6. While the Employer has every intention to complete the full scope of works, the Employer reserves the right to reduce or increase the scope of works according to the dictates of the budget, or to terminate this contract, without adjustment to the agreed rates, sums and without payment of any penalty or surcharge in this regard. The Service Provider shall however be entitled to pro-rata payment for all services carried out in terms of any adjustment to the Scope of Work.
7. All Prices in the Price List exclude VAT, while the total of Prices reflected in the Contractor's Offer includes VAT.



8. Where the Scope requires detailed shop drawings and designs or other information to be provided, all costs associated therewith are deemed to have been provided for and included in the unit rates and Prices tendered for such items.

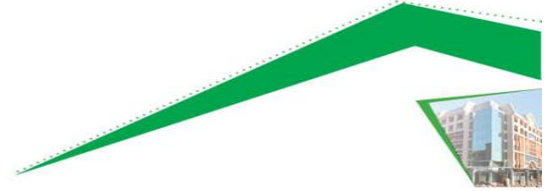


PART C2.2
BILL OF QUANTITIES

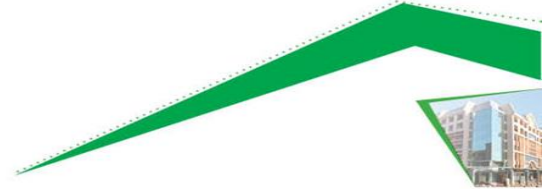


Bill of Quantities

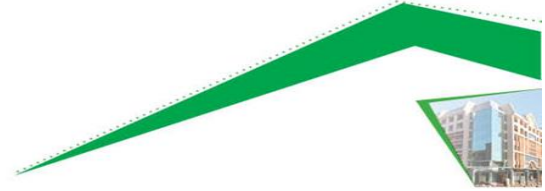
Item	Description	Unit	Qty.	Rate	Total amount
1	<u>Preliminaries & General:</u> - The system is designed to cover the loads at Old Disaster Building, Bisho. - System design to be approved by suitably qualified Electrical Engineer prior to commencement of work. - The system will be grid interactive connected with battery backup system, which will allow multiple power source options. The system will be required to import from the grid when required (e.g. when loads are greater than what can be supplied via the PV and Battery) and export surplus electricity when required. The PV should generate enough electricity to charge the batteries and supply power to the site. When required, the batteries must be able to be charged using the grid. - Contractor shall submit engineering drawings for all architectural, civil, electrical and a complete photovoltaic solar system works, including a single line diagram showing all the components of the PV system, DC and AC distribution boards, PV Arrays lay out and battery backup systems, connections and cables, wires. - Contractor shall submit the catalogues of each component showing the requested specifications stated on the bill of quantity. - The contractor shall submit the Manufacture testing certificate, country of origin, certified characteristics, test performance curves, spare parts regular (as recommended by manufacturer, maintenance manuals and manufacturer's warranty for all relevant components of the system. - As-built drawings shall be submitted after handing over the work. - All junction boxes and DBs will be lockable type. - Upon completion of the installation, the contractor shall organize an on-site training program involving nominated employer's staff. Such a program shall be carried out during the commissioning phase. The cost of the training shall be	Sum	1		



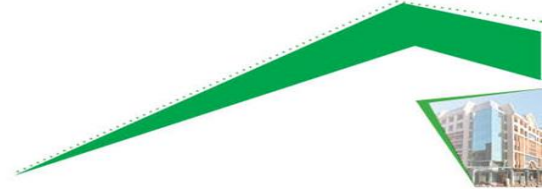
	deemed to have been included in the tendered rates. • The price includes all builders' works, making good and reinstatement including necessary materials and workmanship as well as removal of unwanted materials to dump sites approved by the engineer to complete the job successfully. • All the following items include supply, install, commission and operate of the complete PV solar system. • The work includes maintenance period for each device according to BOQ and Specifications. • The tender must include all relevant registrations and hardware for SSEG applications. • The tenderer shall include all Sums hereunder which are of a preliminary or general nature. This shall include provisions for all the contractor's regulatory obligations, including all relevant Health and Safety requirements.				
2	<u>PV Modules – 26 kWp:</u> Supply, install, connect and operate Tier 1 Mono Crystalline Photovoltaic Solar Modules (JA Solar or equivalent) with all material needed to have complete job ready for installing high quality PV modules with total arrays capacity to achieve 26 kWp. The item Includes supply, install & connect the following: • Water proof PV junction boxes IP65 for each array including DC Fuses, DC switch disconnectors, busbars, terminals, ducts or trays, supports & labels suitable to the PV arrays loads. • Solar DC cables appropriately sized to connect the PV solar cells together and to the inverter directly to have a complete operational circuit with all conduits, clamps, trays and cable end terminations which shall be DC plug and socket connectors. The DC cables must be sized in accordance with the installation requirements applicable on site, the allowable voltage drop for DC cables between PV Arrays and inverter is equal to or less than 5%.	kWp	26		



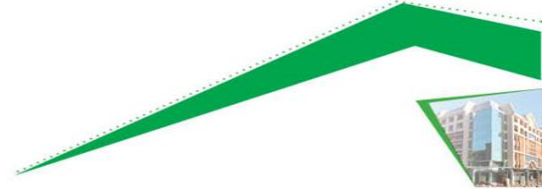
	- The price includes all works, making good and reinstatement including necessary materials and workmanship as well as removal of unwanted materials to dump sites approved by the engineer to complete the job successfully. - Contractor must submit manufacturer warranty for solar panels with a minimum of 12-year product warranty and 25-year linear power warranty - Contractor must submit all the required certificates for PV solar panel. - All works and materials must be according to the drawings, specifications and supervisor engineer instruction's and approval.				
3	<u>Inverters – 20 KW:</u> Supply, install, connect and operate DC/AC 3-phase inverter (Sunsynk or equivalent) with data communication unit. The inverter must be suited to any PV module configuration, and depending on the system design and installation proposed including possible future expansion. The inverter unit shall be suitable for indoor installations with IP20. The inverter AC nominal power output rating must be equal or greater than 20 KW compatible with the AC loads design. The price includes: - Supply, install and connect (monitoring and controlling unit) for all PV solar system installed especially compatible with the inverters, with all needed accessories, interface modules & data cables and all connections needed to complete and connect the monitoring system to internet. - Supply, install and connect all DC cables appropriately sized in accordance with the installation requirements and to connect the inverters with PV system designed with all conduits, clamps, trays and cable terminations end which shall be DC plug and socket connectors to have a complete job, the allowable voltage drop for DC cables between inverters and PV system not less than 5%. - Inverters shall allow an adjustable power factor minimum AC output power with all necessary electrical cables, earthing	No	1		



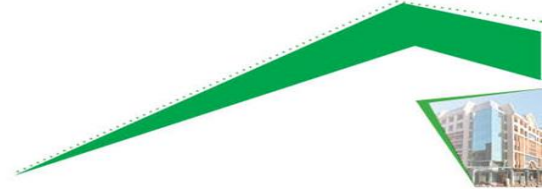
	system, conduits, trays and all other materials and workmanship needed to connect with the main distribution panel according to the engineer's instruction and approval and have a complete job. • The contractor must submit manufacturer warranty for each inverter for a period not less than 5 years. • All works and materials must be according to the drawings, specifications and supervisor engineer instruction's and approval.				
4	<u>Charge Controller:</u> Supply, install, connect and operate a solar charge controller that is compatible with the battery inverter and able to take the complete kilowatt peak of the PV. The price includes: • Supply, install and connect Remote Control Units (RC Unit) for the installed battery inverters with all data & communication cables and connection needed to complete the job. • Supply, install and connect: DC cables appropriately sized in accordance with the installation requirements to connect the battery inverters with DC battery fuses box. The works includes all conduits, clamps, trays and cable terminations end and workmanship needed to have a complete job. • The allowable voltage drop for DC cables between battery inverter and batteries less than 5%. • The contractor must submit manufacturer warranty for each battery inverter for a period not less than 5 years. • All works and materials must be according to the drawings, specifications and supervisor engineer instruction's and approval.	No	1		
5	<u>Battery Bank:</u>	kWh	50		



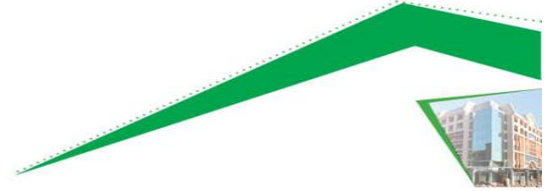
	Supply, install, connect and operate Lithium Phosphate (LiFeP04) batteries (Freedom Won or Equivalent or as specified by the inverter manufacturer). The total demand energy is 50kWh (40kWh Usable power). The batteries must be of high-quality and achieving superior performance. The manufacturing date must be new and not more than 6 months and must be suitable for every type of applications especially for solar renewable energy with designed Service Life of 10 years. The manufacturers' warranty must be greater than 16 years or 5 500 cycles expected life at 70% DoD per cycle, greater than 20 years or 7 500 cycles at 50% DoD. The Battery should provide benefits of being maintenance free, case flame retardant & non-hazardous. The price includes supply, install & connect Battery temp. sensor (BTS) and the following: • All necessary DC cables between the batteries together and to the battery fuse box to have a complete operational circuit with all bus bars, conduits, clamps, stainless steel bolts, washers and cable end terminations and all needed materials to complete the job. All DC cables must be sized in accordance with the installation requirements applicable on site, the allowable voltage drop must be less than 5%. • Battery Banks rack from the same manufacturer of the batteries with dividers and all needed accessories to finish the job. the rack must be enough to carry all the weight of the required batteries for the system. • The contractor must submit manufacturer warranty for each battery cell per requirements as stipulated above. All works and materials must be according to the drawings, specifications and supervisor engineer instructions and approval.				
--	--	--	--	--	--



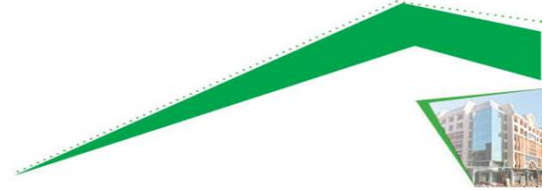
6	<u>PV Mounting structure:</u> Supply and install Module mounting structure from aluminium profile structures to fix the photovoltaic panels on the roof including profiles composed of extruded aluminium, rivets with seal of an aluminium body and shank. The structure must be suitable to the dimension of selected PV modules and PV numbers, the mounting provides a fixed inclination of the modules 30 degree with vertical supports, plates, screws, the structure profile includes bracing and double hot galvanized angles for dividers. The mounting structures and the fixtures must be designed structurally to be suitable to withstand all static loads (weight of modules, wind loads etc.) that might occur according to the Site conditions. The mounting structure components are bonded together to guaranty potential equalization. All works and materials must be according to drawings, specifications and supervisor instructions and approval. • Mounting structures to have a minimum of 20-year product warranty. • All roof penetration must be insulated using EPDM or equivalent to prevent water leaks. • Structural Engineer to inspect roof integrity for panel mounting. Roof mounting to be signed off by Structural Engineer.	Sum	1		
7	<u>Battery Fuse Box:</u> Supply, install, connect and operate battery DC fuse box as an external DC distributor to protect the battery connections of the inverters. The box must be water proof protection with IP65, simple wall mounting, suitable connections for battery inverters and up to six DC connections inlet on the battery side, cable glands, with all necessary DC cables from the battery bank and to the fuse box and from the fuse box to the battery inverters to have a complete operational circuit with all conduits, clamps, stainless steel bolts, washers and cable end terminations needed to fix, all DC cables	Sum	1		



	must be sized in accordance with the installation requirements applicable on site ,the allowable voltage drop must be less than 5%. The contractor must submit manufacturer warranty for each battery fuse box for a period not less than 3 years. All works and materials must be according to the drawings, specifications and supervisor engineer instruction's and approval.				
8	<u>Earthing System for Battery Banks:</u> Supply, install, connect and operate complete independent earthing system for Battery Banks system and must be separated of the main earthing system to obtain 1 ohm max resistance. The item includes (copper electrodes driven into ground, manholes with iron cover, earth joints, clamps, ducts, conduits and flexible earthing copper wires and cables from the negative busbar in the battery fuse box to the electrode to complete the system as specifications and supervisor engineer instruction's and approval.)	Sum	1		
9	<u>Earthing for PV Solar System:</u> Supply, install, connect and operate complete independent earthing system for PV solar system and must be separated of the main earthing system to obtain 1 ohm max resistance. the item includes (copper electrodes driven into ground, manholes with iron cover, earth joints, clamps, ducts, conduits and flexible earthing copper wires and cables from the PV system components to the electrode to complete the system as s.)	Sum	1		
10	<u>Fire Suppression System (Provisional Amount):</u> Supply, install 4 x 2.5kg Stat-X complete with brackets and accessories. This is to include gas panel complete with batteries, 4 conventional smoke detectors, 1 conventional call point, 2 conventional sound strobes, mechanical valves, gas release interface. This must be integrated into existing fire alarm system.	Sum	1	R 130,000.00	R 130,000.00

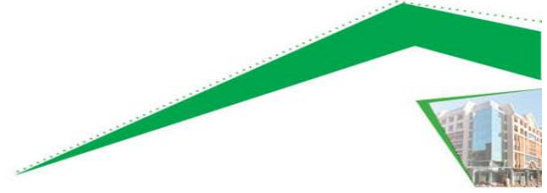


11	<u>Ventilation System (Provisional Amount):</u> Supply and install extraction system (1200l/s), inclusive of ducting, sound attenuator, and all necessary accessories. Supply and install modular filter panels, pleated filter media with galvanized filter housing for easy filter cleaning, weather louvre, etc.	Sum	1	R 50,000.00	R 50,000.00
SUB-TOTAL					
<u>Standards:</u> The above system shall be required to meet all required standards including: • 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. • Osh 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					

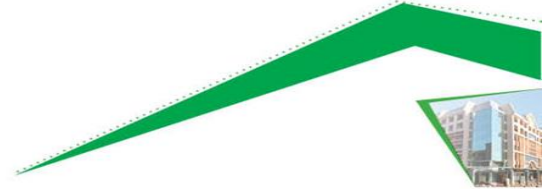


SUMMARY PAGE

	DESCRIPTION	AMOUNT
1	Contingency amount	R 100,000.00
2	Supply, delivery and commissioning of complete systems as per specification	
3	SUB TOTAL	
4	15% VAT	
5	TOTAL (Including VAT)	



PART C3
SCOPE OF WORKS



C3 SCOPE OF WORK

C3 Scope of Work

PROJECT TITLE:	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER:	HO5 – 24/25-0011

C3.1 Scope of Works

Description of Works

This scope of works defines key project milestones and nature of work that the contractor is expected to perform in identified areas for the Solar system installation at Old Disaster Building, Bisho. The details of the works are set out in the Bills of Quantities.

Scope of Works

The scope of work is the installation Grid tied hybrid solar system with battery back-up.

THE CONTRACT DURATION IS 4 MONTHS AS A WHOLE. THE CONTRACTOR SHALL PROGRAM ACCORDINGLY

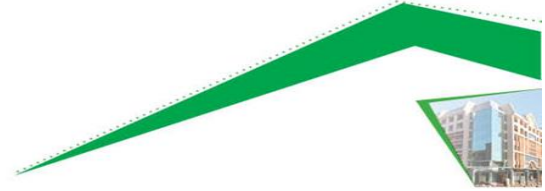
Restrictions and Constraints

The work is to be executed in existing facility, which shall remain fully functional 24 hours per day and 7 days a week. Access to the facilities must not be compromised at all.

- 1 The completion of the project is urgent, and work shall be executed during normal working hours i.e., 7h00 until 17h00 daily including weekends. Work required to be executed outside of these hours must be arranged with the Project Leader, in advance (at least 5 working days before).
- 2 Noise must be always kept to a minimum and within acceptable levels.

Operational Protocols

- 1 Security is a priority for the facilities, and the site shall be always kept safe
- 2 The approved Health and Safety plan shall be always adhered to
- 3 All staff members of the contractor shall always wear PPE
- 4 Appointed Contractors employees will be vetted after the site handover.
- 5 All staff members of the contractor shall be always specifically identifiable, have name tags and to this end shall wear a predetermined coloured overall to be able to enter and work on the site.



Access

Prospective bidders are to fully familiarize themselves with the site and access to the site and restricted area for site establishment.

ACCEPTANCE OF TENDERS

The Employer is not bound to accept the lowest, or any tender, or any portion of any tender

TEMPORARY WORKS

All temporary work to comply with the Construction Health and safety Act (Act 85 of 1993) and its regulations.

C3.2 TECHNICAL SPECIFICATIONS FOR ROOFTOP SOLAR PV

The projects under shall be commissioned as per the technical specifications given below. The vendor will be solely responsible for any shortcomings or negligence.

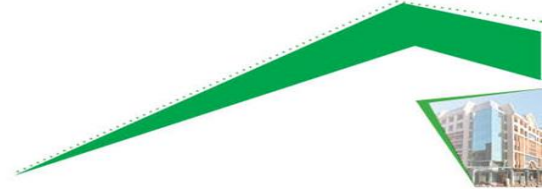
DEFINITION

A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following equipment/components:

- Solar Photo Voltaic (SPV) modules consisting of required number of Crystalline PV modules
- Inverter/PCU
- Module Mounting structures
- Energy Meter
- Array Junction Boxes
- DC Distribution Box
- AC Distribution Box
- Protections – Earthing, Lightning, Surge
- Cables
- Drawing & Manuals
- Miscellaneous
- Lithium Phosphate batteries
- Fire suppression system
- Ventilation system

3. Technical Specifications of On-Grid Solar Power Plant System:

Grid-tied or on-grid solar power plants are made up of an SPV array, a module mounting structure, a Power Conditioning Unit (PCU) that includes a Maximum Power Point Tracker (MPPT), an inverter, controls and

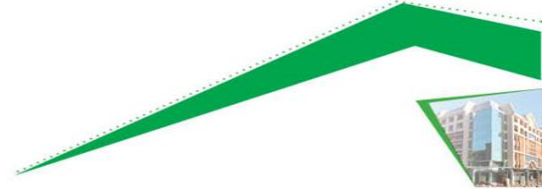


protections, interconnect cables, and switches. The PV array is installed on a suitable framework. Grid tie SPV systems do not have batteries and should be constructed with the appropriate characteristics to supplement grid power throughout the day.

PV modules, metallic structures, cables, junction boxes, switches, PCUs, and other components and parts used in SPV power plants should correspond to BIS, IEC, or international requirements, wherever such specifications are available and appropriate.

3.1.1 Technical Specifications of Major Components of Solar PV Power Plant:

1. Solar PV modules and array
2. Module mounting structure
3. Junction Boxes
4. Power Conditioning Unit
5. DC & AC Switches
6. Cables and installation accessories
7. Earthing and lightning protection



Solar PV modules and array:

Solar modules shall be Crystalline (Mono/Poly) (or) Thin Film (or) Concentrator PV modules type. The peak power output of the PV Module shall be min 100Wp under STC. Module Voc shall be minimum 21V. The power output of the PV module must be reported under standard test conditions (STC).

The mechanical structure shall withstand gusts of wind / cyclonic wind up to 150km/hr from the back side of the panel.

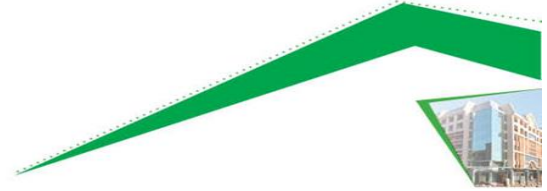
Module Junction box (weather proof), where the module terminals shall be interconnected and output taken, shall be designed for long life outdoor operation in harsh environments as per the relevant BIS specifications and protected against surges. It should have a provision for "Opening" for replacing the cable, if required.

Modules shall be North –South oriented at the Tilt Angle of 11 -13 degree.

PV modules used in solar power plants must be warranted for output wattage, which should not be less than 90% at the end of 10 years and 80% at the end of 25 years.

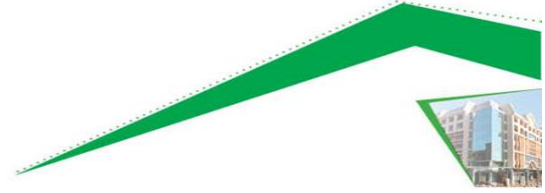
Module Mounting Structure:

The PV modules will be mounted on fixed metallic structures of adequate strength and appropriate design, which can withstand loads of modules and high wind velocities up to 100 km per hour. The support structure used in the power plants will be hot dip Galvanized Iron (G.I).



The “Mounting Structure” should have the following features:

- The modules support structure shall be Mild Steel /hot dipped Galvanized (at least 120 micron) Iron for holding the PV modules. The size of angle iron should not be less than 50x50x5 mm.



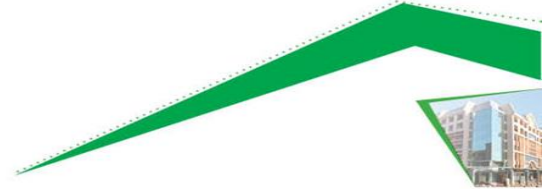
- Each panel frame structure shall be so fabricated as to be grouted on the roof on its legs. The legs of the structure shall be fixed and grouted in the PCC foundation column made with 1:2:4 cement concrete. The foundation shall support SPV modules at a given orientation, absorb and transfer the mechanical loads to the ground properly and shall withstand a maximum wind speed of 100 km/hr.
- All nuts and bolts should be made of good quality Stainless Steel.
- The structure should be designed to allow easy replacement of any module.
- The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.
- The minimum clearance of the lowest part of the module structure and the developed ground level shall not be less than 500 mm.

Junction Boxes:

The junction boxes must be dustproof, vermin-proof, and waterproof, and they must be manufactured of FRP / ThermoPlastic. The terminals must be linked to a copper bus bar configuration of appropriate size. The junction boxes must have sufficient cable entry ports with proper cable glands for both incoming and outgoing cables. For simple identification, suitable markings must be supplied on the bus bar, and cable ferrules must be installed at the cable termination positions. Each main junction box must include an adequately rated blocking diode. The junction boxes must be of high quality.

Power Conditioning Unit (PCU):

As SPV array produce direct current electricity, it is necessary to convert this direct current into alternating current and adjust the voltage levels to match the grid voltage. Conversion shall be achieved using an electronic Inverter and the associated control and protection devices. All these components of the system are termed the “Power Conditioning Unit (PCU)”. In addition, the PCU shall also house MPPT (Maximum Power Point Tracker), an interface between Solar PV array & the Inverter,



DC & AC Switches

DC SIDE:

- MCB of suitable rating shall be provided for connection and disconnection of array & PCU for maintenance purpose.
- Switches and Circuit Breakers on the DC side shall be DC rated or they shall be sufficiently de-rated, if AC rated switches are used.

AC SIDE:

MCB of suitable rating shall be provided for connection and disconnection of PCU & load.

Cables and accessories:

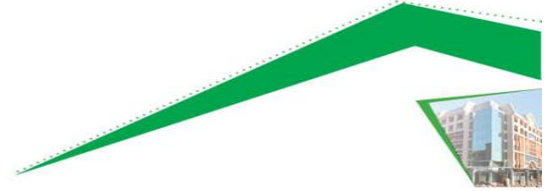
All the cables shall be supplied conforming to IEC 60227/IS 694 & IEC 60502/IS 1554 shall be of 1.1 kV grade as per requirement. Only PVC copper cables shall be used.

The size of the cables between array interconnections, array to junction boxes, junction box to PCU, PCU to AC Distribution Box etc shall be selected to keep the voltage drop and losses to the minimum. Permissible Wire Drop on DC side shall be $\leq 1\%$

Earthing and Lightning Protection:

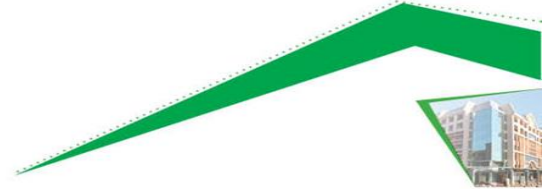
Earthing: The array structure of the PV yard shall be grounded properly using an adequate number of earthing kits. All metal casing or shielding of the power plants shall be thoroughly grounded to ensure safety of the solar power plants.

Lightning: The SPV power plants shall be provided with lightning & over voltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc.



1. SOLAR PV MODULES

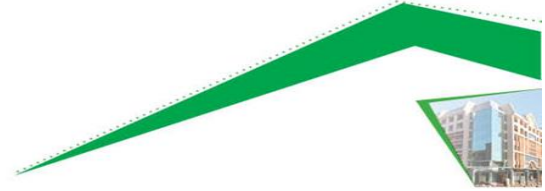
- 1.1. The PV modules used must qualify to the latest edition of IEC standards
- 1.2. The rated power of solar PV module shall have maximum tolerance up to +3%.
- 1.3. The peak-power point current of any supplied module string (series connected modules) shall not vary by +1% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- 1.4. The peak-power point voltage of any supplied module string (series connected modules) shall not vary by + 2% from the respective arithmetic means for all modules and/or for all module strings (connected to the same MPPT), as the case may be.
- 1.5. The temperature co-efficient power of the PV module shall be equal to or better than $-0.45\%/^{\circ}\text{C}$.
- 1.6. Solar PV modules of minimum capacity $\geq 26\text{KWp}$ to be used.
- 1.8. The PV Module efficiency should be minimum 16%.
- 1.9. Solar PV modules of minimum fill factor 75%, to be used.
- 1.10. All electrical parameters at STC shall have to be provided.
- 1.11. The PV modules shall be equipped with IP 65 or better protection level junction box with required numbers of bypass diodes of appropriate rating and appropriately sized output power cable of symmetric length with MC4 or equivalent solar connectors. The IP level for protection may be chosen based on following conditions:
 - i. An IP 65 rated enclosure is suitable for most outdoor enclosures that won't encounter extreme weather such as flooding.
 - ii. An IP 67 rated enclosure is suitable at locations which may encounter temporary submersion at depths of up to one meter.
 - iii. An IP 68 enclosure is recommended if there may exist situations of submergence for extended periods of time and at substantial depths.
- 1.12. All PV modules should carry a performance warranty of >90% during the first 10 years, and >80% during the next 15 years. Further, module shall have performance warranty of >97% during the first year of installation—degradation of the module below 1 % per annum.
- 1.13. The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than TWO (2) years from the date of commissioning:
 - 1.14. Defects and/or failures due to manufacturing.
 - 1.15. Defects and/or failures due to quality of materials.
 - 1.16. Nonconformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option.
- 1.17. PV modules must be tested and approved by one of the accredited and approved test centres.
- 1.18. Modules deployed must use a RF identification tag laminated inside the glass. The following information must be mentioned in the RFID used on each module:
 - i. Name of the manufacturer of the PV module
 - ii. Name of the manufacturer of Solar Cells.
 - iii. Month & year of the manufacture (separate for solar cells and modules)
 - iv. Country of origin (separately for solar cells and module)
 - v. I-V curve for the module Wattage, I_m , V_m and FF for the module
 - vi. Unique Serial No and Model No of the module
 - vii. Date and year of obtaining IEC PV module qualification certificate.
 - viii. Name of the test lab issuing IEC certificate.
 - ix. Other relevant information on traceability of solar cells and module as per ISO 9001 and ISO 14001.
 - x. Nominal wattage +3%.
 - xi. Brand Name, if applicable.



- 1.19. Other details as per IS/IEC 61730-1 clause 11 should be provided at appropriate place. In addition to the above, the following information should also be provided:
 - i. The actual Power Output Pmax shall be mentioned on the label pasted on the back side of PV Module.
 - ii. The Maximum system voltage for which the module is suitable to be provided on the back sheet of the module.
 - iii. Polarity of terminals or leads (colour coding is permissible) on junction Box housing near cable entry or cable and connector.
- 1.20. Unique Serial No, Model No, Name of Manufacturer, Manufacturing year, Make and module wattage details should be displayed inside the laminated glass.

2. INVERTER/PCU

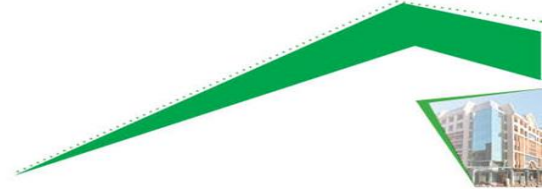
- 2.1. Inverters/PCU should comply with applicable IEC/equivalent BIS standard for efficiency measurements and environmental tests as per standard codes IEC 61683/IS 61683, IS 16221 (Part 2), IS 16169 and IEC 60068-2(1,2,14,30) /Equivalent BIS Std.
- 2.2. Maximum Power Point Tracker (MPPT) shall be integrated in the inverter/PCU to maximize energy drawn from the array. Charge controller (if any) / MPPT units environmental testing should qualify IEC 60068-2(1, 2, 14, 30)/Equivalent BIS standard. The junction boxes/enclosures should be IP 65 or better (for outdoor)/ IP 54 or better (indoor) and as per IEC 529 Specifications.
- 2.3. All inverters/PCUs shall be IEC 61000 compliant for electromagnetic compatibility, harmonics, Surge, etc.
- 2.4. The PCU/ inverter shall have overloading capacity of minimum 10%.
- 2.5. Typical technical features of the inverter shall be as following:
 - i. Switching devices: IGBT/MOSFET
 - ii. Control: Microprocessor/DSP
 - iii. Nominal AC output voltage and frequency: as per current regulations
 - iv. Output frequency: 50 Hz v. Grid Frequency Synchronization range: as per current regulations
 - vi. Ambient temperature considered: -20°C to 60°C
 - vii. Humidity: 95 % Non-condensing
 - viii. Protection of Enclosure: IP-54 (Minimum) for indoor and IP-65(Minimum) for outdoor.
 - ix. Grid Frequency Tolerance range: as per current regulations
 - x. Grid Voltage tolerance: as per current Regulations
 - xi. No-load losses: Less than 1% of rated power
 - xii. Inverter efficiency (Min.): >93% (In case of 10 kW or above with in-built galvanic isolation) >97% (In case of 10 kW or above without inbuilt galvanic isolation)
 - xiii. Inverter efficiency (minimum): > 90% (In case of less than 10 kW)
 - xiv. THD: < 3%
 - xv. PF: > 0.9 (lag or lead)
 - xvi. Should not inject DC power more than 0.5% of full rated output at the interconnection point and comply .
- 3.2 The output power factor of inverter should be suitable for all voltage ranges or sink of reactive power, inverter should have internal protection arrangement against any sustain fault in feeder line and against the lightning on feeder.



- 2.7. All the Inverters should contain the following clear and indelible Marking Label & Warning Label. The equipment shall, as a minimum, be permanently marked with:
 - i. The name or trademark of the manufacturer or supplier;
 - ii. A model number, name or other means to identify the equipment,
 - iii. A serial number, code or other marking allowing identification of manufacturing location and the manufacturing batch or date within a twelvemonth time period.
 - iv. Input voltage, type of voltage (a.c. or d.c.), frequency, and maximum continuous current for each input.
 - v. Output voltage, type of voltage (a.c. or d.c.), frequency, maximum continuous current, and for a.c. outputs, either the power or power factor for each output.
 - vi. The Ingress Protection (IP) rating
- 2.8. Marking shall be located adjacent to each fuse or fuse holder, or on the fuse holder, or in another location provided that it is obvious to which fuse the marking applies, giving the fuse current rating and voltage rating for fuses that may be changed at the installed site.
- 2.9. In case the consumer is having a 3- ϕ connection, 1- ϕ /3- ϕ inverter shall be provided by the vendor as per the consumer's requirement.
- 2.10. Inverter/PCU shall be capable of complete automatic operation including wake-up, synchronization & shutdown.
- 2.11. For CFA calculation, minimum of following two shall be considered:
 - i. Solar PV array capacity in kWp
 - ii. Inverter Capacity in KW
- 2.12. Integration of PV Power with Grid & Grid Islanding:
 - i. The output power from SPV would be fed to the inverters/PCU which converts DC produced by SPV array to AC and feeds it into the main electricity grid after synchronization.
 - ii. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as "islands." Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. The Rooftop PV system shall be equipped with islanding protection. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided, if not available in inverter.
 - iii. MCB/MCCB or a manual isolation switch, besides automatic disconnection to grid, would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel.

4. MODULE MOUNTING STRUCTURE (MMS)

- 3.1. Supply, installation, erection and acceptance of module mounting structure (MMS) with all necessary accessories, auxiliaries and spare part shall be in the scope of the work.
- 3.2. Module mounting structures can be made from three types of materials. They are Hot Dip Galvanized Iron, Aluminium and Hot Dip Galvanized Mild Steel (MS). However, MS will be preferred for raised structure.
- 3.3. MMS Steel shall be as per latest standards, and galvanization of the mounting structure shall be in compliance of latest SANS/ISO specifications. MMS. For Aluminium structures, necessary protection towards rusting need to be provided either by coating or anodization.
- 3.4. All bolts, nuts, fasteners shall be of stainless steel of grade SS 304 or hot dip galvanized, panel mounting clamps shall be of aluminium and must sustain the adverse climatic conditions. Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts.



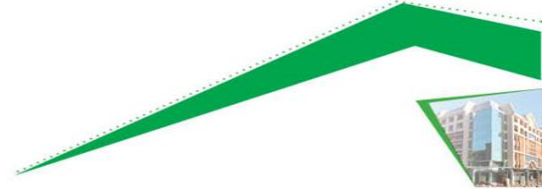
- 3.5. The module mounting structures should have angle of inclination as per the site conditions to take maximum insolation and complete shadow-free operation during generation hours. However, to accommodate more capacity the angle of inclination may be reduced until the plant meets the specified performance ratio requirements.
- 3.6. The Mounting structure shall be so designed to withstand the speed for the wind zone of the location where a PV system is proposed to be installed. The PV array structure design shall be appropriate with a factor of safety of minimum 1.5.
- 3.7. The upper edge of the module must be covered with wind shield so as to avoid build air ingress below the module. Slight clearance must be provided on both edges (upper & lower) to allow air for cooling.
- 3.8. Suitable fastening arrangement such as grouting and calming should be provided to secure the installation against the specific wind speed. The Contractor shall be fully responsible for any damages to SPV System caused due to high wind velocity within guarantee period as per technical specification.
- 3.9. The structures shall be designed to allow easy replacement, repairing and cleaning of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels. Necessary testing provision for MMS to be made available at site.
- 3.10. Adequate spacing shall be provided between two panel frames and rows of panels to facilitate personnel protection, ease of installation, replacement, cleaning of panels and electrical maintenance.
- 3.11. The structure shall be designed to withstand operating environmental conditions for a period of minimum 25 years.

5. METERING

- 4.1. A Roof Top Solar (RTS) Photo Voltaic (PV) system shall consist of following energy meters:
 - i. Net meter: To record import and export units
 - ii. Generation meter: To keep record for total generation of the plant.

6. ARRAY JUNCTION BOXES

- 5.1 The junction boxes are to be provided in the PV array for termination of connecting cables. The Junction Boxes (JBs) shall be made of GRP/FRP/Powder Coated aluminum /cast aluminum alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands. Suitable markings shall be provided on the bus-bars for easy identification and cable ferrules will be fitted at the cable termination points for identification.
- 5.2 Copper bus bars/terminal blocks housed in the junction box with suitable termination threads Conforming to IP 65 or better standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry, Single /double compression cable glands should be provided.
- 5.3 Polyamide glands and MC4 Connectors may also be provided. The rating of the junction box shall be suitable with adequate safety factor to interconnect the Solar PV array.
- 5.4 Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification.
- 5.5 Junction boxes shall be mounted on the MMS such that they are easily accessible and are protected from direct sunlight and harsh weather.



7. DC DISTRIBUTION BOX (DCDB)

- 6.1 May not be required for small plants, if suitable arrangement is available in the inverter.
- 6.2 DC Distribution Box are to be provided to receive the DC output from the PV array field.
- 6.3 DCDBs shall be dust & vermin proof conform having IP 65 or better protection, as per site conditions.
- 6.4 The bus bars are made of EC grade copper of required size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the inverter along with necessary surge arrestors. MCB shall be used for currents up to 63 Amperes, and MCCB shall be used for currents greater than 63 Amperes.

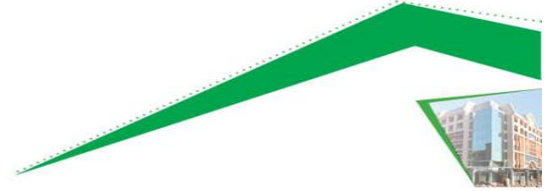
8. AC DISTRIBUTION BOX (ACDB)

- 7.1 AC Distribution Panel Board (DPB) shall control the AC power from inverter, and should have necessary surge arrestors, if required. There is interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- 7.2 All switches and the circuit breakers, connectors should conform to IEC 60947:2019, part I, II and III/ IS 60947 part I, II and III.
- 7.3 The isolators, cabling work should be undertaken as part of the project.
- 7.4 All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on 1- ϕ /3- ϕ , 415 or 230 volts, 50 Hz (or voltage levels as per CEA/State regulations).
- 7.5 The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- 7.6 All indoor panels will have protection of IP 54 or better, as per site conditions. All outdoor panels will have protection of IP 65 or better, as per site conditions.
- 7.7 Should conform to SANS 10142 safety regulations (till last amendment).
- 7.8 All the 415 or 230 volts (or voltage levels as per regulations) AC devices / equipment like bus support insulators, circuit breakers, SPDs, Voltage Transformers (VTs) etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions.
 - i. Variation in supply voltage: as per regulations
 - ii. Variation in supply frequency: as per regulations
- 7.9 The inverter output shall have the necessary rated AC surge arrestors, if required and MCB/ MCCB. RCCB shall be used for successful operation of the PV system, if inverter does not have required earth fault/residual current protection.

9. PROTECTIONS

The system should be provided with all necessary protections like Earthing, Lightning, and Surge Protection, as described below:

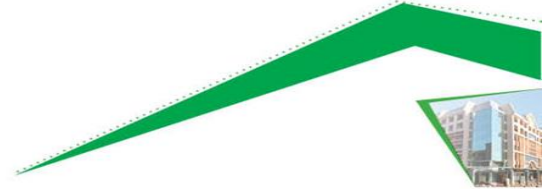
- 8.1 Earthing Protection
 - i. The earthing shall be done in accordance with latest Standards.
 - ii. Each array structure of the PV, Low Tension (LT) power system, all electrical equipment, inverter, all junction boxes, etc. shall be grounded properly.
 - iii. All metal casing/ shielding of the plant shall be thoroughly grounded in accordance with Regulation. In addition, the lightning arrester/masts should also be earthed inside the array field.
 - iv. Earth resistance should be as low as possible and shall never be higher than 5 ohms.



- v. For 10 KW and above systems, separate three earth pits shall be provided for individual three earthing viz.: DC side earthing, AC side earthing and lightning arrestor earthing.
- 8.2 Lightning Protection
- i. The SPV power plants shall be provided with lightning & over voltage protection, if required. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. Lightning arrestor shall not be installed on the mounting structure.
 - ii. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors (LAs). Lightning protection should be provided as per NFC17-102:2011/IEC 62305 standard.
 - iii. The protection against induced high-voltages shall be provided by the use of Metal Oxide Varistors (MOVs)/Franklin Rod type LA/Early streamer type LA.
 - iv. The current carrying cable from lightning arrestor to the earth pit should have sufficient current carrying capacity according to IEC 62305. According to standard, the minimum requirement for a lightning protection system designed for class of LPS III is a 6 mm² copper/ 16 mm² aluminum or GI strip bearing size 25*3 mm thick. Separate pipe for running earth wires of Lightning Arrestor shall be used.
- 8.3 Surge Protection
- i. Internal surge protection, wherever required, shall be provided.
 - ii. It will consist of three SPD type-II/MOV type surge arrestors connected from +ve and –ve terminals to earth.

9 CABLES

- 9.1 All cables should conform to latest edition of IEC Standards along with IEC 60227/IS 694, IEC 60502 standards.
- 9.2 Cables should be flexible and should have good resistance to heat, cold, water, oil, abrasion etc.
- 9.3 Armored cable should be used and overall PVC type 'A' pressure extruded insulation or XLPE insulation should be there for UV protection.
- 9.4 Cables should have Multi Strand, annealed high conductivity copper conductor on DC side and copper/FRLS type Aluminum conductor on AC side. For DC cabling, multicore cables shall not be used.
- 9.5 Cables should have operating temperature range of -10°C to +80°C and voltage rating of 660/1000 V.
- 9.6 Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop less than 2% (DC Cable losses).
- 9.7 The size of each type of AC cable selected shall be based on minimum voltage drop. However; the maximum drop shall be limited to 2%.
- 9.8 The electric cables for DC systems for rated voltage of 1500 V shall conform to IEC Standards.
- 9.9 All cable/wires are to be routed in a RPVC pipe/ GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable is easily identified.
- 9.10 All cable trays including covers to be provided.
- 9.11 Thermo-plastic clamps to be used to clamp the cables and conduits, at intervals not exceeding 50 cm.
- 9.12 Size of neutral wire shall be equal to the size of phase wires, in a three phase system.
- 9.13 The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 25 years.



10 DRAWINGS & MANUALS

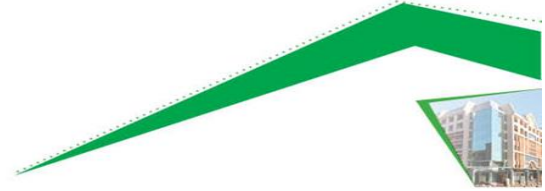
- 10.1 Operation & Maintenance manual/user manual, Engineering and Electrical Drawings shall be supplied by the contractor.
- 10.2 The manual shall include complete system details such as array lay out, schematic of the system, inverter details, working principle etc.
- 10.3 The Manual should also include all the Dos & Don'ts of Power Plant along with Graphical Representation with indication of proper methodology for cleaning, Operation and Maintenance etc.
- 10.4 Step by step maintenance and troubleshooting procedures shall also be given in the manuals.
- 10.5 Vendors should also educate the consumers during their guarantee period.

11 MISCELLANEOUS

- 11.1 Connectivity:
The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the regulation for Grid connectivity.
- 11.2 Safety measures:
Electrical safety of the installation(s) including connectivity with the grid must be taken into account and all the safety rules & regulations applicable as per NRS and SANS must be followed.
- 11.3 Shadow analysis:
The shadow analysis report with the instrument such as Solar Pathfinder or professional shadow analysis software of each site should be provided and the consumer should be educated to install the system only in shadow free space. Lower performance of the system due to shadow effect shall be liable for penalty for lower performance.

12 BATTERY BOX

- 12.1 The battery bank should be housed in a vented compartment that prevents users from coming in contact with batteries terminals. This compartment should be strong enough to accommodate the weight of the batteries. A mechanism to prevent opening and entry of the batteries should be provided.
- 12.2 The entire enclosure must be constructed to last at least twenty years without maintenance and should be protected against corrosion. The battery bank enclosure should have a clean and neat appearance.



13 BATTERY

Lithium Phosphate batteries of appropriate capacity with complete battery management system should be used in hybrid and off grid system where required.

- 13.1 The batteries must conform to the latest edition of IEC 62133 and/or IEC 61960 (whichever is applicable).
- 13.2 The battery bank should provide backup to night load of building.
- 13.3 The battery must ensure safe and reliable operation in the whole range of ambient temperatures from -10° C to + 50° C.
- 13.4 The maximum permissible self-discharge rate is 5 percent of rated capacity per month at 25 C.
- 13.5 Cycle life of the batteries must be greater than 6000 when discharged down to depth of discharge (DOD) of 80% percent discharge rate.
- 13.6 The battery shall have a certificate of compliances, issued by a recognized laboratory.
- 13.7 Batteries should be packaged in order to withstand transportation on non-metallic road.
- 13.8 The performance guarantee shall cover at least 05 years.

Note: Bidder should justify the specs with appropriate lab test reports/certifications from the principle manufacturer.

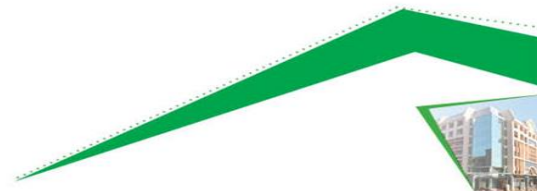
14 FIRE PROTECTION

The complete PV installation shall comply to the minimum building regulations.

- 14.1 The battery and inverter room shall be classified as J1 occupancy
- 14.2 All safety distances shall be accounted for when dealing with combustible roof assemblies and covering as per SANS 10400 T.
- 14.3 The battery and inverter room shall be equipped with a fire suppression system

15 VENTILATION SYSTEM

- 15.1 The battery and inverter room shall be ventilated to keep the temperature between -5°C and 40°C

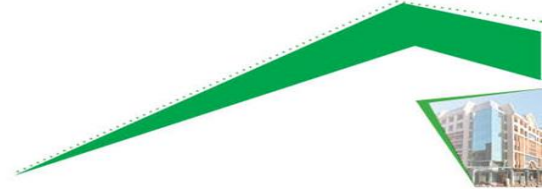


PART C4
SITE INFORMATION



C4.1 SITE INFORMATION

PROJECT TITLE:	SUPPLY, INSTALL, TEST AND COMMISSION OF A 13KW PHOTOVOLTAIC(PV) SYSTEM FOR OLD DISASTER
SCMU NUMBER:	HO5-24/25-0011



GENERAL

Prospective bidders to familiarize themselves with the locality, access, any other “restrictions”.

(Refer to *Scope of Works C3*)

The site is the existing site is located at Old Disaster Building, Bhisho, Eastern Cape. This site is next to Tru FM site in Bisho