

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

NEC3 CONTRACT: ECSC
Delivery & Maintenance of Infrastructure
Template Version 4.00 – January 2024

TENDER No : IHPS-002-2025

PROJECT TITLE : Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

TENDER CLOSING : 12H00 on 26 MAY 2025

SUPPLY CHAIN ADMINISTRATION:		EMPLOYER'S AGENT (REPRESENTATIVE):	
IHPS Procurement Officer		Stephan Reichert	
<u>PHYSICAL ADDRESS</u>	<u>POSTAL ADDRESS</u>	<u>PHYSICAL ADDRESS</u>	<u>POSTAL ADDRESS</u>
45 De La Rey Road	P.O. Box 2844	Boiler House Building	Private Bag X21
The Grid,	Sunninghill	Karl Bremer Hospital	Parow
Ground Floor	2157	Frans Conradie Drive	7499
Rivonia, 2128		Bellville, 7530	
Contact: MR S MTHETHWA		Contact: Stephan Reichert	
Phone: 011 234 2521 (Ext 254)		Phone: 021 830 3768	
Email: requisitions@ihps-sa.org		Email: Stephan.Reichert@westerncape.gov.za	

NOTE:

When requested by the *Employer's Agent*, after the closing of the tender, all returnable documents as listed on page 11 of this document, including the Form of A and Acceptance, C1.1 on page 37, must be completed in full, signed and initialled. The entire document, from page 1 through 84 and appendixes totalling 146 pages, must be submitted to the office of the Employer's Agent at the address listed above within seven (7) days (build link) (refer to clause C.3.8) after being requested to do so. Tenders or Offers must be in writing. "Written" or "in writing" means handwritten in BLACK ink. Photocopies of Tender or Offer documents are not acceptable! Non-compliance shall render your tender invalid.

Name of Tenderer: _____

Contact Number: _____

Email Address: _____

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IMPORTANT NOTICE: Please DO NOT disassemble or dismember this document. DO NOT insert any attached pages to returnable schedules within the page sequence of the document. All additional pages must be attached AFTER the last page of the document and clearly marked to which returnable schedule they belong.

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Part T1: Tendering procedures

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T1.1 Tender notice and invitation to tender

The DEPARTMENT OF HEALTH: ENGINEERING AND TECHNICAL SUPPORT WESTERN CAPE GOVERNMENT, invites tenders for Tender No. **IHPS-002-2025 : Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape.**

It is estimated that tenderers should have a CIDB contractor grading designation of **4 EB** or higher.

Preferences are allocated to tenderers for Broad-Based Black Economic Empowerment (B-BBEE) status level of contribution.

The collection of tender documents is at the compulsory site/clarification meeting.

Queries relating to the technical specification of these documents may be addressed to:

Name : Stephan Reichert
Phone : 021 830 3768
E-mail : Stephan.Reichert@westerncape.gov.za

The closing time for receipt of tenders is **12H00 on 26 MAY 2025.**

Telegraphic, telephonic, telex, facsimile, e-mail, copied and late tenders shall not be accepted

Requirements for sealing, addressing, delivery, opening and assessment of tenders are stated in the Tender Data

The compulsory site/clarification meeting with representatives of the *Employer* will take place at:

Location: Old Boilerhouse Building, PO Karl Bremer Hospital. Map with directions attached in Annexure D
Date: 14 May 2025
Starting Time: 13:00

WESTERN CAPE SUPPLIER EVIDENCE BANK REGISTRATION

As of **1 October 2019**, the Provincial Government of the Western Cape will **ONLY** contract with businesses duly registered on the Western Cape Supplier Evidence Bank.

All prospective Service Providers must register as a supplier on the Western Cape Supplier Evidence Bank. Enquiries regarding the registration process may be referred to Provincial Treasury at the **Western Cape Supplier Helpdesk on 021 833 5361/ wcseb@westerncape.gov.za.**

All Service Providers who are **currently** registered on the Evidence Bank must **update** their status by contacting the **Western Cape Supplier Helpdesk on 021 833 5361/ wcseb@westerncape.gov.za.**

From **1 September 2015** prospective suppliers will be able to self-register on the **CSD** website **www.csd.gov.za**. Suppliers will only be required to register once when they do business with government. Contact **National Treasury for further clarity on the process at csd@treasury.gov.za or 012 406 9222**. Should service providers require assistance with the registration process it may visit the Central Supplier Helpdesk at 4 Waterford Place SAP Building 2nd Floor, Century City, Cape Town. Alternatively, you may contact Leonora Ndlotyeni on (021) 833 5361/ **Leonora.Ndlotyeni@westerncape.gov.za.**

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T1.2 Tender Data

The Conditions of Tender are the Standard Conditions of Tender as contained in Annex C of the CIDB Standard for Uniformity in Construction Procurement as per Board Notice 423 of 2019 in Government Gazette 42622 of 08 August 2019 and the erratum notices issued thereafter (see www.cidb.org.za).

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

The additional Conditions of Tender are:

Clause Number

Tender Data

C.1

General

C.1.1

The *Employer* is THE DEPARTMENT OF HEALTH AND WELLNESS, WESTERN CAPE GOVERNMENT.

C.1.2

Tender Documents

The Tender Document (this document), issued by the *Employer* and comprising the following parts:

Part T: 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

Part C: The Contract

Part C1: Agreement and Contract Data

C1.1 Form of Offer and Acceptance

C1.2 Contract Data

Contract Data Part One: Data provided by the *Employer*

Contract Data Part Two: Data provided by the *Contractor*

Part C2: Pricing Data

C2.1 Pricing assumptions & instructions

C2.2 Pricing schedule

Part C3: Scope of Work

Part C4: Site information

Appendix: Drawings, schematics & annexures

C.1.4

The *Employer's Agent* is:

Name: **Stephan Reichert**

Address: Boiler House Building
Karl Bremer Hospital
Frans Conradie Drive
Bellville, 7530

Phone: 021 830 3768

Email: Stephan.Reichert@westerncape.gov.za

C.2 Tenderer's obligations

C.2.1 Eligibility

Only those tenderers who are registered with the CIDB and who satisfy the grading requirement of a CIDB grading of a **4 EB** or higher, as calculated in terms of the CIDB regulations, are eligible to have their tenders evaluated.

C.2.2 Cost of tendering

The Employer shall not compensate the tenderer for costs incurred in the preparation and submission of a tender offer nor for any the cost incurred to demonstrate that aspects of the offer complies with tender requirements.

C.2.3 Checking of documents

The Tenderer shall check the tender documents on receipt for completeness and notify the Employer of any discrepancy or omission.

C.2.4 Confidentiality and copyright of documents

The Tenderer shall treat the tender document and all matters arising in connection with the tender as confidential. The use and copy of this tender document is only for the purpose of preparing and submitting a tender offer in response to an invitation.

C.2.5 Reference documents

The tenderer shall obtain, at his own cost, the latest versions of standards, specifications, conditions and other relevant publications which are not attached to this tender document, but which are incorporated into the tender document by reference.

C.2.6 Acknowledge addenda

The Tenderer shall 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.

C.2.7 Clarification meeting

The arrangements for a compulsory site/clarification meeting are:

A compulsory site/clarification meeting with representatives of the *Employer* will take place at:

Location: Old Boilerhouse Building, PO Karl Bremer Hospital. Map with directions attached in Annexure D
Date: 14 May 2025
Starting Time: 13:00

THE FOLLOWING CONDITIONS APPLY:

- (a) Failure to attend the meeting will automatically disqualify the tenderer.
- (b) After official start of the meeting by the chairperson, late arrivals will as a general rule not be allowed into the meeting. However, the chairperson may, at his sole discretion, delay the official start of the meeting or decide to allow late arrivals into the meeting if he deems this to be appropriate in terms of prevailing circumstances at the time (e.g. traffic congestion, ineffective venue directions, etc), and if deemed to be in the interest of the *Employer*.
- (c) Tenderers must complete and sign the meeting attendance register. Failure to complete and sign the attendance register will disqualify the tenderer.
- (d) Tenderers must complete and sign the clarification meeting certificate (returnable Schedule 7 on page 34 in this document, a copy of the clarification meeting certificate will be made available at the meeting to tenderers who are not in possession of a tender document). The clarification meeting certificate must be counter-signed by a designated representative of the *Employer* at the time of the meeting, who will be identified at the meeting. Failure to include a duly completed, originally signed and counter-signed clarification meeting certificate in the tender submission, shall disqualify the tender.
- (e) Addenda may be issued to all who received tender documents.
- (f) Tenderers must be represented by a person who is suitably qualified and experienced to comprehend the implications of the work involved.

Written, and verbal instructions given to tenderers at the clarification meeting and which are recorded in the *Employer's Agent's* minutes of the meeting, form part of the Conditions of Tender. Failure to comply with such instructions will disqualify the tender.

C.2.8 Seek clarification

The Tenderer shall request clarification of the tender documents, if necessary, by notifying the employer at least five (5) working days before the closing date of tenders.

C.2.10 Pricing the tender offer

All rates and prices/amounts offered by the tenderer must be physically written into the pricing schedule (Schedule 10) of this tender document, completed in full and signed. Failure to fully complete Schedule 10 will disqualify the tender. Printouts of electronic spreadsheets or any form of substitute for the returnable pages of the pricing schedule will not be accepted for this tender.

C.2.11 Alterations to tender documents

No alterations/corrections to inserted information in the document (including pricing) may be performed by erasing or using masking fluid ("Tipp-Ex" or similar) on any submitted page. Alterations/corrections to inserted information may only be performed as follows:

- Strike a line through the incorrect information, write the corrected information as appropriate (under, above or next to the information to be corrected), **and initial at every incidence of alteration/correction.**
- In the case of access to a digital copy of the tender document (PDF), simply reprint the page, enter the information on the reprinted page and substitute in the document.
- In the case of no access to a digital document, use masking fluid or erasure to remove/conceal all input information on the page and make a new blank copy of the page. Enter the information on the reprinted page and substitute in the document.

Tender submissions with alterations/corrections not in compliance with the requirements as described above, shall be rejected.

C.2.12 Alternative tender offers

No alternative tender offers will be considered.

C2.13 Submitting a tender offer

C2.13.1 The Tenderer shall submit **ONE** tender offer only

C.2.13.2 **When requested by the Employer's Agent, the complete tender document comprising pages 1 through 71, including ALL returnable documents, must be returned to the Employer when submitting a tender offer. If the pricing schedule or parts thereof are contained in the Appendix to this document, the duly completed pricing schedule or parts thereof must be returned with the tender document. Failure to do so shall invalidate the tender.** Other drawings, schematics or annexures in the Appendix need NOT be returned with the tender offer, unless there are specific instructions for a specific item to be returned, or if the tenderer wishes to utilise any item for clarification purposes when submitting an alternative tender offer, when applicable.

C.2.13.4 The tender shall be signed by a person duly authorized to do so. Tenders submitted by joint ventures of two or more firms shall be accompanied by the document of formation of the joint venture, authenticated by a notary public or other official deputed to witness sworn statements, in which is defined precisely the conditions under which the joint venture will function, its period of duration, the persons authorised to represent and obligate it, the participation of the several firms forming the joint venture, and any other information necessary to permit a full appraisal of its functioning.

C.2.13.5 **IMPORTANT:** The electronic version of the complete tender submission must be submitted on appropriate media (memory stick), enclosed with the tender submission at close of tender. The electronic version of the Tender Submission shall exactly match the hard copy version of the Tender Submission.

The memory stick **MUST** be clearly labelled with the tendering entity's name.

C.2.13.6 A two-envelope procedure will not be followed.

C.2.14 Information and data to be completed in all respects

When requested by the Employer's Agent, the Employer requires tenderers to return a fully priced Price List with the tender submission. ALL ITEMS in the Price List must be priced, subject to the following:

- Where pricing for any item is intentionally included in the rate or Price of another item, this must in every instance be clearly indicated so by the tenderer and cross-referenced to the item in question in the Price List. **Tenders showing a pattern of unpriced items without due reference to where the omitted Prices are included in other items in the Price List, may be disqualified.**
- Summarising parts or sections of the Price List into single lump sums or rates without providing the breakdown of pricing of items as per the Price List, is not acceptable and may disqualify the tender.**

Where an item is encountered against which no Price or rate or cross-referencing is entered and it can be reasonably attributed to error on the part of the tenderer, that item will be treated as covered by other Prices or rates in the Price List.

C.2.15 Closing time

The closing time for submission of tender offers is as stated in the Tender Notice and Invitation to Tender. Telephonic, telegraphic, telex, facsimile, copied or e-mailed tender offers will not be accepted.

C.2.16 Tender offer validity

C.2.16 The tender offer validity period is **90 days** after tender closing. The *Employer* reserves the right to extend the validity period for any additional period if deemed in the interest of the *Employer*.

C.3 The *Employer's* undertakings

C.3.8 Test for responsiveness:

Tenders will be considered non-responsive if:

- the tender is not in compliance with specifications;
- the tenderer has not fully completed and signed where required, and submitted both the tender document and returnable documents as listed in Part T2 of this tender document within the time stipulated by the *Employer*;
- the tenderer has failed to clarify unit rates and lump sums in the tender document or failed to submit any supporting documentation requested within the time stipulated by the *Employer* after being requested to do so in writing.

C.3.9.2 Arithmetical errors and discrepancies

The highest ranked tender or the tenderer with the highest number of tender evaluation points will be checked for:

- a) Gross misplacement of the decimal point in any unit rate;
- b) Omission of rates and/or prices in the Price List or bills of quantities; or
- c) Arithmetical errors in:
 - i) The totals of line items resulting from the product of a unit rate and a quantity in bills of quantities or schedules of prices; or
 - ii) Summation of the prices.

If a pricing schedule in the form of a bill of quantities, a price list, activity schedule or other format applies, the *Employer* shall check all substantively responsive tenders for errors and discrepancies in the pricing schedule and offer form, and correct such errors and discrepancies in the following manner:

- i) If there is an error in the line item 'total' resulting from the product of the unit rate and the quantity, the line-item total shall govern, and the rate shall be corrected.
- ii) Where there is an error in the total of the prices either as a result of other corrections required by this checking process or in the tenderer's summation of prices, the total of the prices tendered shall govern, and the tenderer will be asked to revise selected item prices (and their rates if a pricing schedule applies) to achieve the tendered total of the prices.
- iii) The monetary impact of the gross misplacement of the decimal point in any rate will be adjusted after award of tender, before signing of the contract, in consultation with the contractor, **WITHOUT** altering the contract amount.

Omission of rates and/or prices in the pricing list/bills of quantities will be treated as covered by other prices in the pricing list or bills of quantities. The monetary impact of omission of rates and /or prices in the Price List or bills of quantities will be adjusted after award of tender, before signing of the contract, in consultation with the contractor, **WITHOUT** altering the contract amount.

Tenderers shall be notified by the *Employer* of all errors and omissions identified in the tender offer in accordance with C.3.9.2 and confirm the tender offer as tendered.

C3.11 The procedure for the evaluation of responsive tenders is **Method 1 (Price and Preference)**

Price will be scored using the Formula $P_s = 80(1 - ((P_t - P_{min})/P_{min}))$ where:

1. P_s is the number of points scored for comparative price of tender under consideration;
2. P_{min} is the comparative price of the lowest acceptable tender offer;
3. P_t is the comparative price of tender offer under consideration.

Preference will be scored as follows:

Up to 20 tender evaluation points will be awarded to tenderers who complete the preferencing schedule and who are found to be eligible for the preference claimed. The maximum attainable combined score for price and preference is 80+20=100 points.

All responsive tender offers are subject to a comprehensive risk assessment in terms of:

1. Financial viability and sustainability;
2. Evaluation and validation of the required information provided by the tenderer in inter alia returnable schedules.

The *Employer* reserves the right to request, in writing, additional information from tenderers to clarify their offer if deemed necessary for risk assessment purposes. Failure on the part of the tenderer to provide the additional information within seven days after receipt of such a request shall disqualify the tender. Tender offers which present an unacceptable high risk to the *Employer* in terms of one or both of the risk assessment criteria above, shall be rejected.



C3.13.1

Tender offers will only be considered if:

1. The tenderer has attended the compulsory site meeting and completed the attendance register;
2. the tenderer is registered on the Western Cape Supplier Evidence Bank (WCSEB) and his registration is not suspended by close of tender;
3. the tenderer is registered on the Central Supplier Database (CSD) and the tenderer is shown to be tax compliant either via online CSD verification, or by attaching written proof by SARS of approved arrangements in terms of the tenderer's tax clearance by close of tender;
4. the tenderer is registered with the Construction Industry Development Board (CIDB) in the appropriate contractor grading designation (if applicable), as stated in this Tender Data by close of tender;
5. the tenderer submits **this complete tender document from page 1 to page 71 inclusive, with all returnable documents and schedules duly completed and priced as per the instructions pertaining to each schedule and section, and requirements stated in this Tender Data when requested to do so by the Employer's Agent within the stipulated time;**
6. the tenderer or any of its directors 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;
7. the tenderer has not:
 - abused the *Employer's* Supply Chain Management System, evidence of which can be clearly demonstrated by the *Employer*;
 - failed to complete any previous contract due to the tenderer's own fault for any organ of state within the last 2 years;
 - submitted more than one offer (including participation in joint venture arrangements with others), and
8. has completed the Compulsory Enterprise Questionnaire, Declaration of Interests (SBD 4) 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.

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Part T2: Returnable documents	
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T2.1 List of returnable documents

IMPORTANT: The tenderer must complete, sign and initial all returnable schedules. Use the "Check" column to tick completion of each returnable schedule as a verification procedure to ensure all schedules are duly completed, signed and initialled. **Failure to complete, sign and initial all returnable schedules shall invalidate the tender.** Please see instructions for completion of returnable schedules under heading T2.2 following on the next page.

1. Returnable schedules required for tender evaluation and contracting purposes

Schedule No	Schedule Description & Location	Check
Tender Schedules:		
1	Tendering entity and authority of signatory Page 13	<input type="checkbox"/>
2	Compulsory Enterprise Questionnaire Page 19	<input type="checkbox"/>
3	SBD 6.1 - Preference Points Claim Form Page 22	<input type="checkbox"/>
4	SBD4: Declaration of interest Page 27	<input type="checkbox"/>
5	Addenda / Notices issued to tenderers Page 31	<input type="checkbox"/>
6	Schedule of work experience Page 32	<input type="checkbox"/>
7	Clarification meeting certificate Page 34	<input type="checkbox"/>
Contract Schedules:		
8	C1.1 Form of Offer and Acceptance Page 37	<input type="checkbox"/>
9	C1.2 Contract Data Part Two: Data provided by the Contractor Page 44	<input type="checkbox"/>
10	Pricing Summary Page 48	<input type="checkbox"/>
11	Price List Page 49	<input type="checkbox"/>
12	Works Information required from Contractor Page 64	<input type="checkbox"/>
13	Amendments by Contractor Page 65	<input type="checkbox"/>
14	Contractor's Equipment schedule Page 66	<input type="checkbox"/>
15	Contractor's schedule of subcontractors Page 67	<input type="checkbox"/>
16	Contractor's proposed work programme Page 68	<input type="checkbox"/>
17	Contractor's health & safety plan Page 69	<input type="checkbox"/>

2. Returnable Documents to be submitted with tender

Document	Tick box if submitted
1. Proof of registration as a Supplier on the Central Supplier Database (CSD) to enable the verification of registration on the Western Cape Supplier Evidence Bank (WCSEB)	<input type="checkbox"/>
2. Proof of registration as a contractor with the Construction Industry Development Board (CIDB), the minimum grading of which is specified in the Tender Data;	<input type="checkbox"/>
3. A valid Letter of Good standing from the Department of Labour (Compensation Commissioner). Please note that the nature of business listed on the Letter must be related to the scope of works in this document;	<input type="checkbox"/>
4. All completed Schedules/Appendixes, etc.	<input type="checkbox"/>

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T2.2 Returnable schedules

Important information for completing returnable schedules

1. The returnable schedules list T2.1 shows all the returnable schedules which need to be completed and returned for tender evaluation and contracting purposes by the date and time stipulated by the *Employer's Agent*. This list includes both document-standard and project-specific schedules. List T2.1 should be used as a checklist by the tenderer to verify that all returnable schedules have been duly completed, to avoid the tender being rejected as non-responsive due to an incomplete submission.
2. Each returnable schedule is numbered, starting at Schedule 1 and following a consecutively incremented whole number sequence through the tender document to the final schedule number assigned, as per the returnable schedules list.
3. Although all returnable schedules are numbered and follow in numeric sequence, they are not all grouped together in a single location in this tender document. Returnable schedules are divided into 2 groups:
 - i. Tender Schedules
 - ii. Contract Schedules

The first group of schedules (Tender Schedules) follow directly from here on forward in Part T2.2, with the remainder (Contract Schedules) following in various sub-sections of Part C of this tender document. Contract Schedules become part of the contract document after tender award. Schedules can be quickly located by their document page number given in the list of returnable schedules T2.1.

4. The tenderer must furnish all the information required for each returnable schedule with the indicated amount of detail to ensure compliancy of the tender with responsiveness criteria. Please note: If any returnable schedule or part thereof is not applicable to the tenderer, that schedule or part thereof must be clearly marked "Not Applicable" (N/A), and not simply left blank. Schedules left blank without any indication of response by the tenderer to the requested information in the schedule, will be taken as an omission of the requested information.
5. Some schedules may either require, or have as an option, additional pages of information to be appended by the tenderer when submitting the tender. In each case the exact number of additional pages must be indicated in the space provided on that schedule or indicated as NIL if no additional pages are appended. All appended pages must be clearly marked with the schedule number to which they belong.
6. All returnable schedules require the signature of the tenderer's authorised signatory where indicated and the date. Unsigned schedules, unless they are clearly marked "Not Applicable" by the tenderer, shall render your tender invalid.

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SCHEDULE 1: Tendering entity and authority of signatory

The purpose of this Schedule is to obtain the necessary information about the tendering entity, and to establish authority of the signatory to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender, as well as to sign any contract, and any and all documentation, resulting from the award of the tender to the tendering entity.

INSTRUCTIONS FOR COMPLETING SCHEDULE 1:

Tendering entities may be sole proprietors, partnerships, trusts, companies, close corporations or consortia / joint ventures. Schedule 1 must be completed as follows:

- If the tendering entity is a sole proprietor, trust, partnership, company or close corporation, complete both this page and Section 1 of this Schedule, and clearly mark Section 2 (both 2.1 and 2.2) as "Not Applicable".
- If the tendering entity is a consortium or joint venture, then complete both this page and Section 2 (both 2.1 and 2.2) of this Schedule, and clearly mark Section 1 as "Not Applicable".
- The contact details below must be the officially designated contact addresses which will be used by the *Employer* for any and all communication in regard to this tender, and if the tender is awarded, also during the execution of the contract.

THE TENDERING ENTITY IS: (*Circle the applicable option)

*A Sole Proprietor / Partnership / Trust / Company / Close Corporation / Consortium / Joint Venture.

NAME OF THE TENDERING ENTITY:

.....
(Legally correct full name of the tendering entity)

CONTACT DETAILS:

Physical Address:.....

.....

.....

..... (Postal Code)

Telephone number:

Mobile number:

Email address:

Schedule 1 continues with Section 1 on the next page.

Section 1: Resolution of board of *Trustees/Directors/Members/Partners

Notes:

1. *Delete which is not applicable.
2. IMPORTANT: This resolution must be signed by ALL the trustees/directors/members/partners of the tendering entity.
3. Should the number of trustees/directors/members/partners exceed the space available below, additional names and signatures must be supplied on a separate page.

RESOLUTION by the *Proprietor/Board of *Trustees/Directors/Members/Partners of:

.....
(Legally correct full name and registration number, if applicable, of the tendering entity)

Taken at On
(Place) (Date)

	Name of Proprietor/Trustee/Director/Member/Partner	Capacity	Signature
1			
2			
3			
4			
5			
6			

(Append separate page if not enough space)

RESOLVED that:

1. The entity submits a tender to the Department of Health in respect of Tender No: **IHPS-002-2025: Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape**
2. *Mr/Mrs/Ms:

in *his/her capacity as:
(Position in the entity)

and who will sign as follows:

AUTHORISED SIGNATURE OF TENDERER

be, and is hereby, authorised to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender, as well as to sign any contract, and any and all documentation, resulting from the award of the tender to the entity mentioned above.

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL).

Section 2.1: Resolution to enter into Consortium / Joint Venture

Notes:

1. *Delete which is not applicable
2. A separate copy of this Section 2.1 must be duly completed, signed and submitted for each consortium/joint venture partner.
3. IMPORTANT: This resolution must be signed by ALL the trustees/directors/members/partners of the entity entering into the consortium/joint venture.
4. Should the number of representatives exceed the space available below, additional names and signatures must be supplied on a separate page.

RESOLUTION by the *Proprietor/Board of *Trustees/Directors/Members/Partners of:

.....
(Legally correct full name and registration number, if applicable, of the entity)

Taken at On
(Place) (Date)

	Name of Proprietor/Trustee/Director/Member/Partner	Capacity	Signature
1			
2			
3			
4			
5			
6			

(Append separate page if not enough space)

RESOLVED that:

1. The entity submits a tender, in consortium/joint venture with the following entities to the Department of Health in respect of Tender No **IHPS-002-2025: Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape**

	Full legally correct name of entity	Registration No (if applicable)
1		
2		
3		
4		
5		
6		

(Append separate page if not enough space)

2. *Mr/Mrs/Ms:

in *his/her capacity as:
(Position in the entity)

and who will sign as follows:

AUTHORISED SIGNATURE

be, and is hereby authorised to sign a consortium/joint venture agreement with the parties listed under item 1 above, and any and all other documents and/or correspondence in connection with and relating to the consortium/joint venture, in respect of the tender described in item 1 above.

3. The entity accepts joint and several liability with the parties listed under item 1 above for the due fulfilment of the obligations of the consortium/joint venture deriving from, and in any way connected with, the contract to be entered into with the Department in respect of the tender under item 1 above.
4. The entity chooses as its **domicilium citandi et executandi** for all purposes arising from this consortium/joint venture agreement and the contract with the Department in respect of the tender under item 1 above, the physical address and contact details as furnished on the first page of this Schedule.

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL).

Section 2.2: Resolution to tender as Consortium / Joint Venture

Notes:

1. IMPORTANT. This resolution must be signed by ALL the representatives of the tendering consortium/joint venture.
2. Should the number of representatives exceed the space available below, additional names and signatures must be supplied on a separate page.
3. Enter the entity details and representative details in the same and corresponding numerical sequence into the respective tables below.

RESOLUTION of a meeting of the duly authorised representatives of the following legal entities who have entered into a consortium/joint venture to jointly tender for Tender No: **IHPS-002-2025: Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape**

	Full legally correct name of entity	Registration No (if applicable)
1		
2		
3		
4		
5		
6		

(Append separate page if not enough space)

Held at On.....
(Place) (Date)

	Name of authorised representative	Capacity	Signature
1			
2			
3			
4			
5			
6			

(Append separate page if not enough space)

RESOLVED that:

- A. The abovementioned entities submit a tender in consortium/ joint venture to the Department in respect of the tender mentioned above.

B. *Mr/Mrs/Ms:

in *his/her capacity as:
(Position in the tendering consortium/joint venture)

and who will sign as follows:

AUTHORISED SIGNATURE OF TENDERER

be, and is hereby, authorised to sign the tender, and any and all other documents and/or correspondence in connection with and relating to the tender, as well as to sign any contract, and any and all documentation, resulting from the award of the tender to the entities in the consortium/joint venture mentioned above.

C. The entities constituting the consortium/joint venture, notwithstanding its composition, shall conduct all business under the name and style of:

.....
(Consortium/joint venture name)

D. The entities to the consortium/joint venture accept joint and several liability with the parties above for the due fulfillment of the obligations of the consortium/joint venture deriving from, and in any way connected with, the contract to be entered into with the Department in respect of the tender mentioned above.

E. Any of the entities to the consortium/joint venture intending to terminate the consortium/joint venture agreement, for whatever reason, shall give the Department 30 days' written notice of such intention. Notwithstanding such a decision to terminate, the entities shall remain jointly and severally liable to the Department for the due fulfillment of the obligations of the consortium/joint venture as mentioned under item D above.

F. No entity to the consortium/joint venture shall, without the prior written consent of the other entities to the consortium and of the Department, cede any of its rights or assign any of its obligations under the consortium/joint venture agreement in relation to the contract with the Department referred to herein.

G. The entities choose as domicilium citandi et executandi of the consortium/joint venture for all purposes arising from the consortium/joint venture agreement and the contract with the Department in respect of the tender mentioned above, the physical address and contact details as furnished on the first page of this Schedule.

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL).

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

SCHEDULE 2: Compulsory Enterprise Questionnaire

Note: In the case of a consortium/joint venture, separate enterprise questionnaires as per this schedule in respect of each consortium/joint venture partner must be completed and submitted.

Section 1: Name of enterprise: Address of enterprise:																							
Section 2: VAT registration number, if any:																							
Section 3.1: CIDB registration number, if any:	Section 3.2: Western Cape Supplier Evidence Bank Registration Number:																						
Section 4: Particulars of sole proprietors and partners in partnerships																							
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 33%;">Name*</th> <th style="width: 33%;">Identity number*</th> <th style="width: 33%;">Personal income tax number*</th> </tr> </thead> <tbody> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> <tr><td> </td><td> </td><td> </td></tr> </tbody> </table>			Name*	Identity number*	Personal income tax number*																		
Name*	Identity number*	Personal income tax number*																					
* Complete only if sole proprietor or partnership and append separate page if more than 6 partners																							
Section 5: Particulars of companies and close corporations Company registration number..... Close corporation number..... Tax reference number.....																							
Section 6: Record of service of the state Indicate by marking the relevant boxes with a cross, if any sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months in the service of any of the following:																							

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

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

Name of sole proprietor, partner, director, manager, principal shareholder or stakeholder	Name of institution, public office, board or organ of state and position held	Status of service (tick appropriate column)	
		current	Within last 12 months

Append separate page if not enough space

Section 7: Record of spouses, children and parents in the service of the state

Indicate by marking the relevant boxes with a cross, if any spouse, child or parent of a sole proprietor, partner in a partnership or director, manager, principal shareholder or stakeholder in a company or close corporation is currently or has been within the last 12 months been in the service of any of the following:

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

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

Append separate page if not enough space

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

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

AUTHORISED SIGNATURE OF TENDERER

Signatory Name.....

Signatory Position/Capacity:.....

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL).

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

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SCHEDULE 3: SBD 6.1(a): PREFERENCE CERTIFICATE (80:20)

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

1.2 To be completed by the organ of state

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

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

- (a) Price; 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

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.

1.5 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 proposals, 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 Offer invitation, and includes all applicable taxes.
- (d) **“tender for income-generating contracts”** means a written offer in the form determined by an organ of state in response to an invitation for the origination of income-generating contracts through any method envisaged in legislation that will result in a legal agreement between the organ of state and a third party that produces revenue for the organ of state, and includes, but is not limited to, leasing and disposal of assets and concession contracts, excluding direct sales and disposal of assets through public auctions; and
- (e) **“The Act”** means the Preferential Procurement Policy Framework Act, 2000 (Act No. 5 of 2000).

3. FORMULAE FOR PROCUREMENT OF GOODS AND SERVICES

3.1. POINTS AWARDED FOR PRICE

3.1.1 THE 80/20 PREFERENCE POINT SYSTEMS

A maximum of 80 points is allocated for price on the following basis: **80/20**

$$Ps = 80 \left(1 - \frac{Pt - Pmin}{Pmin} \right)$$

Where

- Ps = Points scored for price of tender under consideration
- Pt = Price of tender under consideration
- Pmin = Price of lowest 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, of 80/20 preference points 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: 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.)

DECLARATION WITH REGARD TO COMPANY/FIRM

The specific goals allocated points in terms of this tender	Number of points allocated (80/20 system)	Number of points claimed (80/20 system) (To be completed by the Tenderer)
Black Ownership: <i>Enterprise Owned by Black Persons i.e., Africans, Coloured, Indians, and Others as defined by the Constitution of South Africa</i> <ul style="list-style-type: none"> 51% or more Black owned enterprises 10%- 50% Black ownership Less than 10% Black Ownership 	<p>8</p> <p>4</p> <p>0</p>	
Women Ownership <ul style="list-style-type: none"> 51% or more Women Ownership 10%- 50% Women Ownership Less than 10% Women Ownership 	<p>6</p> <p>3</p> <p>0</p>	
Disability <ul style="list-style-type: none"> 51% or more Disability Ownership 50%- 10% Disability Ownership Less than 10% Disability Ownership 	<p>2</p> <p>1</p> <p>0</p>	
Locality <ul style="list-style-type: none"> Within Western Cape Outside Western Cape 	<p>4</p> <p>0</p>	
Total	20	

DECLARATION WITH REGARD TO COMPANY/FIRM

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

4.4. Company registration number:

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

4.5. 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 because 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.

.....
AUTHORISED SIGNATURE OF TENDERER

.....
DATE

.....
POSITION

.....
NAME OF TENDERER

WITNESSES (Signature & Name):

1.

2.

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

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SCHEDULE 4: SBD 4: DECLARATION OF INTERESTS, TENDERER'S PAST SUPPLY CHAIN MANAGEMENT PRACTICES AND INDEPENDENT OFFER DETERMINATION

DECLARATION OF INTEREST

1. Any legal person, including persons employed by the state¹, or persons having a kinship with persons employed by the state, including a blood relationship, may make an offer or offers in terms of this invitation to Offer (includes a price quotation, advertised competitive Offer, limited Offer or proposal). In view of possible allegations of favouritism, should the resulting Offer, or part thereof, be awarded to persons employed by the state, or to persons connected with or related to them, it is required that the Tenderer or his/her authorised representative declare his/her position in relation to the evaluating/adjudicating authority where-
 - the Tenderer is employed by the state; and/or
 - the legal person on whose behalf the Offering document is signed, has a relationship with persons/a person who are/is involved in the evaluation and or adjudication of the Offer(s), or where it is known that such a relationship exists between the person or persons for or on whose behalf the declarant acts and persons who are involved with the evaluation and or adjudication of the Offer.
2. **In order to give effect to the above, the following questionnaire must be completed and submitted with the Offer.**
 - 2.1 Full Name of Tenderer or his or her representative:
 - 2.2 Identity Number:
 - 2.3 Position occupied in the Company (director, trustee, shareholder²):
 - 2.4 Company Registration Number:
 - 2.5 Tax Reference Number:
 - 2.6 VAT Registration Number:
 - 2.6.1 The names of all directors / trustees / shareholders / members, their individual identity numbers, tax reference numbers and, if applicable, employee / persal numbers must be indicated in paragraph 3 below.

¹"State" means –

- (a) any national or provincial department, national or provincial public entity or constitutional institution within the meaning of the Public Finance Management Act, 1999 (Act No. 1 of 1999);
- (b) any municipality or municipal entity;
- (c) provincial legislature;
- (d) national Assembly or the national Council of provinces; or
- (e) Parliament.

²"Shareholder" means a person who owns shares in the company and is actively involved in the management of the enterprise or business and exercises control over the enterprise.

2.7 Are you or any person connected with the Tenderer presently employed by the state? **YES / NO**

2.7.1 If so, furnish the following particulars:

Name of person / director / trustee / shareholder/ member:

Name of state institution at which you or the person connected to the Tenderer is employed :

Position occupied in the state institution:

Any other particulars:

.....
.....
.....

2.7.2 If you are presently employed by the state, did you obtain the appropriate authority to undertake remunerative work outside employment in the public sector? **YES / NO**

2.7.2.1 If yes, did you attach proof of such authority to the Offer document? **YES / NO**

(Note: Failure to submit proof of such authority, where applicable, may result in the disqualification of the Offer.

2.7.2.2 If no, furnish reasons for non-submission of such proof:
.....
.....
.....

2.8 Did you or your spouse, or any of the company's directors / trustees / shareholders / members or their spouses conduct business with the state in the previous twelve months? **YES / NO**

2.8.1 If so, furnish particulars:
.....
.....
.....

2.9 Do you, or any person connected with the Tenderer, have
any relationship (family, friend, other) with a person
employed by the state and who may be involved with
the evaluation and or adjudication of this Offer?

YES / NO

2.9.1 If so, furnish particulars.

.....
.....
.....

2.10 Are you, or any person connected with the Tenderer,
aware of any relationship (family, friend, other) between
any other Tenderer and any person employed by the state
who may be involved with the evaluation and or adjudication
of this Offer?

YES/NO

2.10.1 If so, furnish particulars.

.....
.....
.....

2.11 Do you or any of the directors / trustees / shareholders / members
of the company have any interest in any other related companies
whether or not they are Offering for this contract?

YES/NO

2.11.1 If so, furnish particulars:

.....
.....
.....

3 Full details of directors / trustees / members / shareholders.

Full Name	Identity Number	Personal Reference Number	Tax Number	State Number / Number	Employee / Persal

4 DECLARATION

I, THE UNDERSIGNED (NAME).....

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

I ACCEPT THAT THE STATE MAY REJECT THE OFFER OR ACT AGAINST ME IN TERMS OF PARAGRAPH 23 OF THE GENERAL CONDITIONS OF CONTRACT SHOULD THIS DECLARATION PROVE TO BE FALSE.

.....

Signature

.....

Date

.....

Position

.....

Name of Tenderer

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

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Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

SCHEDULE 5: Addenda / Notice(s) issued to tenderers

We confirm that the following communications / addenda / notice(s) to tenderers received from the *Employer* before the submission of this tender offer, amending the tender documents, have been taken into account in this tender offer (If no addenda/notices mark schedule NIL, if not enough space, attach additional pages):

ADDENDUM No.	DATE	SUBJECT MATTER OF ADDENDUM / NOTICE

Documentary evidence of addenda / notices issued to tenderers indicating proof of receipt must accompany this Schedule.

AUTHORISED SIGNATURE OF TENDERER

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL)

CURRENT (ONGOING) CONTRACTS			
EMPLOYER (NAME, TEL No and FAX No)	NATURE OF WORK	VALUE (R)	ANTICIPATED COMPLETION DATE

(Append separate page if not enough space)

AUTHORISED SIGNATURE OF TENDERER

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL)

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SCHEDULE 7: Clarification meeting certificate

Note: This site/clarification meeting certificate must be taken along to the meeting, completed and signed by a duly authorised and knowledgeable representative of the tenderer, able to comprehend and interpret site conditions and information conveyed, thereby enabling the tenderer to put forward an informed tender, with full understanding of the factors likely to influence the work and cost thereof. This certificate **MUST** be countersigned by a representative of the *Employer* at the time of the meeting; failure to submit the original signed document as part of the tender submission shall render the tender non-compliant and invalid. The attendance register at the site/clarification meeting must also be signed by the tenderer's representative.

This is to certify that I,
(Name)

representing:
(Tenderer)

attended the site clarification meeting on:
(Date)

held at:
(Place)

I, the tendering entity, am sufficiently knowledgeable and experienced to be able to understand all aspects of the tender and work to be undertaken as described in this tender document. I have made myself familiar, as far as is practically possible, with all local conditions, risks, contingencies and other circumstances likely to influence the execution of the work and the cost thereof. I further certify that I am satisfied with the description of the work and explanations given at the clarification meeting and that I understand fully the work to be done, as specified and implied, in the execution of this contract.

SIGNED ON BEHALF OF TENDERER

SIGNED ON BEHALF OF <i>Employer</i>
--

Name of *Employer's* Representative: SA Reichert

Date: **14 May 2025**

**National Dept of Health in collaboration with Western Cape Dept Health
and Institute of Health Programs and Systems**

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

NEC3 CONTRACT: ECSC3
16B – Delivery & Maintenance of Infrastructure
A contract between the Department of Health
and

Name of Contractor:

The Contract

Part C1: Agreement and Contract Data **Page 36**

C1.1 Form of Offer and Acceptance Page 37

C1.2 Contract Data Page 41

Part C2: Pricing Data **Page 45**

C2.1 Pricing assumptions & instructions Page 46

C2.2 Pricing schedule Page 48

Part C3: Scope of work **Page 50**

Works Information Page 51

Part C4: Site Information **Page 70**

Appendix: Drawings, schematics & annexures **Page 71**

NOTE: The complete contract documentation comprises the following:

- This document, from and including page 1 forward, up to and including the last page (page 71) in this document page count;
- All items included by reference or otherwise in this document;
- All addenda/notices issued by the *Employer* to tenderers prior to tender closing;
- All deviations included in the Schedule of Deviations on page 38 of this document;
- All additional pages appended by the tenderer to returnable Contract Schedules which are accepted by the *Employer*.

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Part C1: Agreement and Contract Data	
C1.1 Form of Offer and Acceptance	Page 37
Schedule 8: Form of Offer and Acceptance	Page 37
C1.2 Contract Data	Page 41
Contract Data Part One	Page 41
Schedule 9: Contract Data Part Two	Page 44

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C1.1 Form of Offer and Acceptance

SCHEDULE 8 : C1.1 Form of Offer and Acceptance

The Contractor's Offer

The *Employer*, identified in the Acceptance signature block, has solicited offers to enter into a contract for the procurement of:
Tender No: IHPS-002-2025: Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

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

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

.....

.....Rand (in words);

R..... (in figures).

This offer may be accepted by the *Employer* by signing the *Employer's* Acceptance and returning one copy of this document to the tenderer before the end of the period of validity stated in the Tender Data, whereupon the tenderer becomes the party named as the *Contractor* in the *conditions of contract* identified in the Contract Data.

For the tenderer:

AUTHORISED SIGNATURE OF TENDERER

<p>Tenderer MUST complete the following:</p> <p>CIDB Reg No.....</p> <p>CSD Reg No.....</p> <p>WCSEB Reg No.....</p> <p>B-BBEE Status Level.....</p>

Name of Organisation:

Name and Capacity of signatory:

Address of organisation:

.....

Name and signature of witness:

.....

Date:

The *Employer's* Acceptance

By signing this 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: Agreement and Contract Data, (which includes this agreement)
- Part C2: Pricing data
- Part C3: Scope of work.
- Part C4: Site information

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

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

The tenderer shall arrange for the delivery of any bonds, guarantees, proof of insurance and any other documentation to be provided in terms of this contract. Failure to fulfil any of these obligations in accordance with the terms stipulated, shall constitute a repudiation of this Agreement.

This Agreement comes into effect on the *starting date* as stated in the Contract Data.

For the *Employer*: National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

IHPS Procurement Officer
45 De La Rey Road
The Grid,
Ground Floor
Rivonia, 2128

SIGNATURE OF <i>Employer</i>

Name:

Capacity:

Name and signature of witness:

.....

Date:

Schedule of Deviations

(Append separate page if not enough space)

1 Subject:	.....
Details:	.....

2 Subject:	.....
Details:	.....

3 Subject:	.....
Details:	.....

4 Subject:	.....
Details:	.....

5 Subject:	.....
Details:	.....

6 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 documents and the receipt by the tenderer of a completed signed copy of this Agreement shall have any meaning or effect in the contract between the Parties arising from this Agreement.

For the Tenderer:

AUTHORISED SIGNATURE OF TENDERER

Name:

Capacity:

Name and address of organisation:

.....

Name and signature of witness:

.....

Date:

For the *Employer*: National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

IHPS Procurement Officer
45 De La Rey Road
The Grid,
Ground Floor
Rivonia, 2128

SIGNATURE OF <i>Employer</i>

Name:

Capacity:

Name and signature of witness:

.....

Date:

Number of additional pages appended by the tenderer to this schedule:(If nil, enter NIL).

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

Contract Data

C1.2 Contract Data Part One

Data provided by the Employer

1 General

- The *conditions of contract* are the core clauses and Z: Additional conditions of contract of the NEC3 Engineering and Construction Short Contract (April 2013, available from ECS Associates (Tel 011-803-3008, email admin@ecs.co.za), tenderers to obtain copies at their own cost. The *Employer* is (Clause 10.1)

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

IHPS Procurement Officer

Address: 45 De La Rey Road
The Grid,
Ground Floor
Rivonia, 2128

- The *completion date* is the date following **12 weeks after the starting date**. (Clause 11.2(2)).
- The *site* is as described in the Site Information of this Contract Data (Clause 11.2(12)).
- The *works* are **Tender No IHPS-002-2025: Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape** (Clause 11.2(13)).
- The *period for reply* is **48 hours** (Clause 13.2).
- The *Employer* gives access to the *site* **within 24 hours of the starting date, subject to receipt of all the required information and documents as stated in the letter of notification of appointment of the Contractor by the Employer**. A delay by the *Contractor* to provide the required information and documents to the satisfaction of the *Employer* within two weeks of the *starting date* will delay access and is not a compensation event (Clause 15.2).

3 Time

- The *starting date* is **the date of the handing over at site by the Employer's Agent**. (Clause 30.1)

4 Defects

- The *defects date* is **52 weeks** after Completion (Clause 40.1).
- The *defect correction period* is **2 weeks** (Clause 41.3).

5 Payment

- The *delay damages* are **R500 per day** (Clause 50.5).
- The *assessment day* is the **last** day of each month (Clause 50.1).
- Delete the entire content of Clause 50.4 and replace with the following:
The *Employer* certifies a payment within one week of receipt of the *Contractor's* application for payment. The *Employer* corrects any wrongly assessed amount due in the payment certificate (Clause 50.4).
- Delete the entire content of Clause 51.1 and replace with the following:
The *Contractor* prepares a tax invoice for the exact amount certified. The *Contractor* submits the tax invoice together with the corresponding payment certificate to the *Employer* for payment. Incomplete and incorrect payment submissions are returned within one week to the *Contractor* for correction. Payment is made within thirty (30) days of receipt of a **complete and correct Contractor's** payment submission (Clause 51.1).

8 Indemnity, insurance and liability

- The *Contractor* is liable to the *Employer* for loss of or damage to the *Employer's* property up to a value of **200% of the Work Package value exclusive of VAT or a minimum of R1 000 000 cover exclusive of VAT, whichever is greater**, for any one event (Clause 80.1). (
- The minimum amount of cover for the first insurance stated in the Insurance Table is the tender amount plus twenty percent (Clause 82.1) (Works insurance)
- The minimum amount of cover for the second insurance stated in the Insurance Table is the replacement cost of the contractor's equipment, plant and materials to be utilised for the project (Clause 82.1) (Works insurance)
- The minimum amount of cover for the third insurance stated in the Insurance Table is **R10 000 000 (ten million rand)** (Clause 82.1). (Public liability)
- The minimum amount of cover for the fourth insurance stated in the Insurance Table is **R10 000 000 (ten million rand)** (Clause 82.1). (Insurance for Contractor's employees)

9 Termination and dispute resolution

- The *Adjudicator* is the person selected by the Parties as follows: A Party may at any time notify the other Party of the names of two persons chosen from the panel of NEC *Adjudicators* set up by the Joint Civils Division of the Institution of Civil Engineers (ICE)(UK) and the South African Institution for Civil Engineering (SAICE) (see www.jointcivils.co.za) whose availability to act as the *Adjudicator*, has been confirmed by the notifying Party. The other party selects one of the two persons chosen to be the *Adjudicator* within the *period for reply* of receiving the notice, failing which the person chosen by the notifying Party will be the *Adjudicator*. The Parties appoint the *Adjudicator* under the NEC3 Adjudicator's Contract, June 2005. (Clause 93.1).
- The *Adjudicator nominating body* is The Chairman of the Joint Civils Division of the Institution of Civil Engineers (ICE)(UK) and the South African Institution for Civil Engineering (SAICE) (see www.jointcivils.co.za) (Clause 93.2(2)).
- The *tribunal* is **arbitration** (Clause 93.4).
- The *arbitration procedure* is **as set out in the Rules of the Arbitration Foundation of Southern Africa** (Clause 93.4).

Z: Additional conditions of contract

Z1 Insurance Policy Documents

The contractor will have to submit proof of minimum insurance covers pertaining in this contract, in no later than 10 working days upon receiving a Letter of Acceptance of this contract from the Employer. Failure to do so shall constitute a repudiation of this contract (refer to the Form of Offer and Acceptance: The Employer's Acceptance – 4th paragraph). Note that only fully completed documents from an Accredited Insurer will be accepted. No third-party documentation will be accepted. The minimum cover required in terms of this contract, must be clearly stated on the insurance documentation.

Z2 Identified and defined terms:

The Contract Date is the date this contract came into existence.

Z3 Acts or omissions by mandataries:

In terms of Section 37(2) of the Occupational health and Safety Act of 1993 (Act 85 of 1993), the *Contractor* hereby agrees that the *Employer* is relieved of any and all of its liabilities in terms of Section 37(1) of this Act in respect of any acts or omissions of the *Contractor* and his employees to the extent permitted by this Act, and that this contract comprises the written agreement between the *Employer* and the *Contractor* contemplated in section 37(2).

Z4 Maintenance of mandatory registrations:

The *Contractor* ensures that his registrations with the Construction Industry Development Board (CIDB) and as a supplier on the Western Cape Supplier Evidence Bank (WCSEB) and the Central Supplier Database (CSD) are maintained until the Completion of the whole of the *works*.

Z5 Compliance with good labour practice:

The *Contractor* is registered with, and provides a Certificate of Compliance issued by, the Building Industry Bargaining Council (BIBC) in terms of clause 6A of the Collective Agreement as published in the Government Gazette No 25769 dated 28 November 2003. The *Contractor* complies with all BIBC requirements in terms of registration and remuneration of employees in the Working Areas, and remains in good standing with the BIBC during the execution of the contract.

Z6 No clause

Z7 – No clause

Z8 No clause

Z9 No gifts/tokens/invitations from the *Contractor* to *Employer's* officials:

Although there are formal prescripts and mechanisms in place to regulate and record the receipt of small tokens/gifts/invitations from contractors and service providers, officials of the *Employer* are actively discouraged from accepting any such gifts/tokens/invitations. In terms of this contract, the *Contractor* shall not offer any gift/token/invitation which carries any monetary benefit, irrespective of value, directly or indirectly, to any official in the *Employer's* service, before or after completion of this contract.

Z10 No clause

Z11 Non-working days and the December/January builders' break:

Z11.1 Non-working days stated in the Contract Data are added to delays to the Completion Date assessed due to compensation events.

Z11.2 Inclusion or exclusion of the annual December/January builders' break in determining and influencing the Completion Date set at the Contract Date is as stated in the Contract Data, omission of which means EXCLUSION by default.

If Completion is delayed until after the start of the builders' break, the full period of the builders' break is added in addition to delays to the Completion Date due to compensation events **only if**

- the annual builders' break was EXCLUDED when setting the Completion Date at the Contract Date, and
- the delay to Completion is not the *Contractor's* fault.

Z11.3 If either Party issues a communication in terms of this contract to the other at any time during the builders' break, the *period for reply* is extended by the remainder of the period of the builders' break at the time of the communication.

Contract Data for Z11:

- Saturdays, Sundays and National public holidays of the Republic of South Africa are non-working days when assessing delays to the Completion Date due to compensation events (Clause Z11.1). There are no non-working days when assessing delays to the Completion Date due to compensation events (Clause Z11.1).
- The full period of the annual builders' break of approximately 4 weeks in December/January during execution of this contract is **EXCLUDED** from the Completion Date as set at the Contract Date (Clause Z11.2).

Z12 No clause

Z13 The *Contractor* provides this additional insurance to the insurances listed in the Insurance Table: A Coupon Policy for Special Risks Insurance issued by the South African Special Risks Insurance Association (SASRIA).

Z14 No clause

Z15 No clause

Z16 Payment of subcontractors by the *Contractor*

The *Contractor* pays a subcontractor within one week for all subcontracted work which in terms of this contract has been certified and paid to the *Contractor*.

Z17 No clause

Z18 No clause

Z19 Cost of preparation of quotations for compensation events

All costs associated with the preparation of quotations for compensation events for this contract are the *Contractor's* risk and are not reimbursable by the *Employer*.

Z20 *Contractor's* site attendance register

The *Contractor* keeps an attendance register detailing identity, sign-in and sign-out by all people entering the site or location where the *works* is provided, details of which are made available to the *Employer* upon request.

**National Dept of Health in collaboration with Western Cape Dept Health and Institute
of Health Programs and Systems
National Dept of Health & Western Cape Dept Health**

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

Contract Data

C1.2 Contract Data Part Two

SCHEDULE 9: Data provided by the Contractor (the Contractor's offer)

1 General

- The *Contractor* is (Clause 10.1):

Name:

Address:

Telephone:

Email Address:

- The tendered total of the Prices is in **Part C1.1: Form of Offer and Acceptance** of this document (Clause 11.2(10)).
- The Price List is in **Part C2: Pricing Data of this document** (Clause 11.2(10)).
- The percentage for overheads and profit added to the Defined Cost for people is%
(max 15% allowed)(Clause 11.2(5)).
- The percentage for overheads and profit added to other Defined Cost is%
(max 15% allowed)(Clause 11.2(5)).

AUTHORISED SIGNATURE OF TENDERER

Date:.....

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

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Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

C2.1 Pricing assumptions & instructions

Pricing assumptions & instructions

1. 1. GENERAL

- 1.1. It will be assumed that prices included in the pricing schedule are based on Acts, Ordinances, Regulations, By-laws, International Standards and National Standards that were published 28 days before the closing date for tenders. (Refer to www.stanza.org.za or www.iso.org for information on standards).
- 1.2. The *Contractor* is paid for completed work i.e. work without Defects. The Price List comprises items using quantities and rates or stated as lump sums. Value related items are not used. Time related items are items measured using rates where the rate is a unit of time.
- 1.3. The Price List needs to be read in conjunction with the drawings identified in the Works Information.
- 1.4. In the event of any ambiguity or inconsistency between the statements in the *method of measurement* and this section, the interpretation given in these pricing assumptions, the latter shall prevail.
- 1.5. The units of measurement described in the Price List are metric units abbreviated as follows:

Abbreviation	Unit
%	percent
h	hour
ha	hectare
kg	kilogram
kl	kilolitre
km	kilometre
km-pass	kilometre-pass
kPa	kilopascal
kW	kilowatt
l	litre
m	metre
mm	millimetre
m ²	square metre
m ³	cubic metre
m ³ -km	cubic metre-kilometre
MN.m	meganewton-metre
No.	number
Prov sum	provisional sum
PC-sum	prime cost sum
R/only	Rate only
sum	Lump sum
t	ton (1000kg)
W/day	Work day

- 1.6. For the purpose of the Price List, the following words have the meanings hereby assigned to them:

Unit:	The unit of measurement for each item of work as defined in the relevant Standards or Specifications stated in the Works Information of this document.
Quantity:	The number of units of work for each item.
Rate:	The agreed payment per unit of measurement.
Price:	The product of the quantity and the agreed rate for an item, or an agreed amount for an item, the extent of which is described in the Price List but the quantity of work of which is not measured in any units.

- 1.7. Descriptions in the Price List are abbreviated and comply generally with those in the Standards or Specifications stated in Works Information of this document.
- 1.8. Instructions to do work or how it is to be done are not included in the Price List but in the Service Information. The Price List is only a pricing document.
- 1.9. As the Contractor has an obligation to correct Defects (Clause 42.1) and there is no compensation event for this unless the Defect was due to an Employer's risk, the lump sum Prices and rates must also include for the correction of Defects.
- 1.10. Unless otherwise stated, items are measured net in accordance with the drawings, and no allowance has been made in the quantities for waste.
- 1.11. The Prices and rates stated for each item in the Price List shall be treated as being fully inclusive of all work, risks, liabilities, obligations, overheads, profit and everything necessary as incurred or required by the Contractor in carrying out or providing that item.
- 1.12. An item against which no Price is entered will be treated as covered by other Prices or rates in the Price List.
- 1.13. All Prices in the Price List exclude VAT, while the total of Prices reflected in the Contractor's Offer includes VAT.
- 1.14. Where the Works Information 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.
- 1.15. Those parts of the contract to be constructed using labour-intensive methods (if applicable) have been marked as such in the pricing schedule and Works Information. The works, or parts of the works so designated are to be constructed using labour-intensive methods only, and pricing for such items must make provision for this accordingly. The use of equipment to provide such works, other than Equipment specifically provided for in the Works Information, is not allowed and in contravention of the contract. The items designated as labour-intensive are not necessarily an exhaustive list of all the activities which must be done labour-intensively, and this instruction does not override any of the requirements in the general labour intensive specification in the Works Information.
- 1.16. In the event of any discrepancy between the total of the Prices in the Price Summary of the Price List and the amount carried forward to the Contractor's Offer, the amount in the Contractor's Offer prevails.

2. **COMPENSATION EVENTS**

- 2.1 Payment for items in the Price List which are associated with any budgetary allowances, provisional sums, and prime costs are dealt with in the same manner as payment for compensation events, i.e. Defined Cost plus the percentage/s for overheads and profit as stated in the Contract Data.

3. **No Clause**

4. **MATERIAL CONFLICT WITH CONDITIONS OF CONTRACT**

- 4.1 PLEASE NOTE: If anything in this Price List materially contradicts or is in conflict with any stipulation in the *conditions of contract*, the stipulation in the *conditions of contract* shall prevail.

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

C2.2 Pricing schedule

SCHEDULE 10: Pricing Summary

TOTAL PRICE OFFER FOR THIS CONTRACT

The total price offer, EXCLUSIVE of VAT for all work specified in the Price List, is as follows:

Price carried from Price List Section A:	R.....
Price carried from Price List Section B:	R.....
Price carried from Price List Section C:	R.....
Price carried from Price List Section D:	R.....
Price carried from Price List Section E:	R.....
SUBTOTAL:	R.....
Add VAT at 15%	R.....
 TOTAL PRICE OFFER :	 R.....

This total price offer is to be carried over to C1.1: Form of Offer and Acceptance on page 37 of this document.

AUTHORISED SIGNATURE OF TENDERER

Name:

Capacity:

Name and signature of witness:

Date:.....

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

C2.2 Pricing schedule

SCHEDULE 11: Price List

The Price List for this contract is in **Annexure 1 in the Appendix** to this document, and consists of the following sections:

- Section A – Equipment
- Section B – Mounting Hardware
- Section C – Cables and Cableway
- Section D – Switchgear, Protection and Distribution Boards
- Section E – General

IMPORTANT: Please note the following:

1. Ensure that the fully priced Annexure 1 is attached after the last page of this document and returned with your tender submission. Failure to comply will invalidate your tender.
2. Ensure that the pricing totals in Annexure 1 are carried as appropriate to the Pricing Summary on page 48 of this document, and the total of the Prices from there to the Form of Offer and Acceptance on page 37 of this document. Failure to comply will invalidate your tender.
3. Please check the Tender Data (clause C.2.10) for the requirements pertaining to submission of the priced document and ensure that you comply with the stipulations thereof. Failure to comply will invalidate your tender.
4. All information given in the Works Information must be taken into account for pricing. Unrealistic pricing in terms of the envisaged work will render your tender high-risk, and therefore ineligible for award.
5. All items in Annexure 1 are to be priced EXCLUSIVE of VAT.
6. All items in the Annexure 1 must be priced. Non-priced items may render your tender invalid – please see the Tender Data (clause C.2.14) for details.

AUTHORISED SIGNATURE OF TENDERER

Date:.....

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

Part C3: Scope of Work

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2. List of drawings, schematics & annexures	Page 56
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Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

Works Information

Preamble to Works Information

NEC3 defined terms and terms identified in the Contract Data

The *works* are to be executed in accordance with the Works Information forming part of the NEC3 *conditions of contract* as described in the Contract Data of this document. The Works Information is meant to convey all relevant information required for the execution of the *works* clearly and unambiguously by following the formatting requirements of the *conditions of contract*, with due reference to defined terms and terms identified in the Contract Data.

Clause 11.1 of the *conditions of contract* stipulates that terms identified in the Contract Data are in italics, and defined terms have capital initials.

While every effort is made to ensure that the Works Information conforms in full to these formatting requirements, there will always be a possibility that some defined terms and terms identified in the Contract Data may not be formatted in the prescribed manner in the Works Information. This possibility increases when the Works Information is voluminous and comprises different parts compiled by different contributors and disciplines.

THEREFORE, PLEASE NOTE:

For the purposes of clarity and to remove any ambiguity regarding defined terms and terms identified in the Contract Data, the following shall apply:

- All terms identified in the Contract Data which appear in the Works Information and which are not in italics, shall be read as if they are in italics, and
- all defined terms which appear in the Works Information and which do not have capital initials, shall be read as if they have capital initials.

Material conflict with *conditions of contract*

PLEASE NOTE: If anything in the Works Information materially contradicts or is in conflict with any stipulation in the *conditions of contract*, the stipulation in the *conditions of contract* shall prevail.

National Dept of Health in collaboration with Western Cape Dept Health and Institute of Health Programs and Systems

National Dept of Health & Western Cape Dept Health

Supply Installation and commissioning of Five PV solar plant at various facilities in the Western Cape

Works Information

1. Description of the works

1.1 Overview

The project entails the Supply installation and commissioning of five (5) Solar PV systems at the health care facilities listed in the header of this document. The system will comprise but is not limited to:

- Solar PV Panels mounted to existing roofs
- Inverters
- Change over switches
- Storage batteries
- Controle and all interconnecting wiring and cables as specified

1.2 Purpose / Employer's objectives

To have a fully functional automated Solar PV system inclusive of batteries inverters and change-over to supply the Newly acquired PSA plants at the five facilities listed

1.3 Location of the works

The location of the facility is stated in the site information.

1.4 Abbreviations and additional defined terms

Abbreviation	Unit
CoC	Certificate of Compliance

1.1 Start-up and management

1.5.1 Meetings

A compulsory site meeting will be held and after acceptance of the winning Tenderer, a site handover meeting.

Progress site meetings will be held, in which case the *Contractor* will be notified at least 48 hours in advance. Progress meetings between the *Employer's Agent*, Department of Health Official at the facility or his duly appointed representative, and the *Contractor* shall be held at a time, date, and venue determined by the *Employer's Agent*, to discuss the progress and quality of the works. No additional compensation will be paid for this. The progress site meetings will be under the chairmanship of the *Employer's Agent* or his Representative

A final inspection meeting will be held once all defects have been corrected at site, as pointed out and notified by the Employer's Agent.

1.5.2 Workshops and training

Training will be given to the hospital staff regarding the operation and maintenance of all *works*.

1.5.3 Documentation

The following documentation will be provided by the Employer:

- The Tender Document
- The Contract
- Drawings if applicable

1.5.4 Communication

The *Employer's Agent* can be contacted directly via any format during working hours. Any complaints, queries, questions etc. regarding the *works*, must be routed via the *Employer*.

1.5.5 Agent on site

The Agent on site has the right to inspect the works of the contractor but may not issue instructions to the *Contractor*. The findings of the Agent on site should be relayed to the *Employer's Agent*, who has the authority to issue instructions to the *Contractor*.

1.5.6 Quality assurance requirements

Only new genuine materials of high quality shall be used throughout the course of the project and shall be subject to the approval of the *Employer's Agent*.

Equally approved 'products' or approved 'manufacturers' other than specified in the Pricing Schedule need to be approved by the *Employer's Agent*, and may require the tenderer to supply the *Employer's Agent* with a specification and samples of the product, for a review of performance and feedback purposes, timeously before the tenderer submits his price on IPS. All other tenderers will be notified of all "equally approved" products that are approved and accepted by the *Employer's Agent*.

The *Contractor* is responsible for the timely ordering of all material and products required for this project and is solely responsible for the quality of these items. All items in the Pricing Schedule shall be for the supply and installation of new genuine "products and materials". Any defective/substandard products, defective/substandard materials, and poor workmanship shall be replaced and corrected with approved products/materials at the *Contractor's* own expense.

1.2 Preapproved materials and equipment:

1.2.1 Materials:

All paints, coatings, epoxies, sealants products, and consumables are to be of good quality from **an approved and reputable manufacturer. All other epoxies and paints shall be of equal or better** quality and shall be approved in writing by the *Employer's Agent* prior to the Tenderer submitting. All epoxy and paint containers delivered to site shall be unopened, free of corrosion and in good condition. All surfaces shall be prepared correctly to the highest standard and manufacturer's recommendations in addition to complying with this specification. Except in the case of approved specialised paints and products, all products shall be from a single manufacturer.

Brand names:

The word "SIMILAR" or "EQUALLY APPROVED" or the use of Brand Names in this specification is by no means an indication of where to source material from. It is used to indicate a standard. The tenderer shall furnish the *Employer's Agent* with documentary proof to his satisfaction that the material he/she has on offer does indeed conform to or exceed that of the Material named in the specification. Samples of materials for testing, if required, shall be supplied by the *Contractor*, free of charge.

1.3 Contract change management control system

When changes in the *works* occur, the *Employer* will obtain a quote from the *Contractor* for the new *works*. If the motivation for the changes is accepted by the *Employer*, the *Employer* will issue a compensation event to the *Contractor* and only then the changed *works* can be done.

1.4 Accounts and records

Enter all information pertaining to Defined Cost, payment arrangements, etc.

The *Contractor's* invoice: The *Contractor* submits original valid tax invoices satisfying the requirements of the Works Information one week after receiving a payment certificate from the *Employer*. Where the *Contractor* does not submit the tax invoices within the time required, the period within which payment is made and the time allowed are extended by the length of time from the date that the *Contractor* should have submitted the tax invoices to the date that the tax invoices are submitted. All invoices should be addressed to the *Employer's Agent* and must incorporate an invoice number, date, project reference number, the name of the facility where the works are carried out, banking particulars of the contractor, a description of the works completed with pricing in accordance with the contract.

Final account and final payment: The Contractor cooperates with the Employer in the preparation of the final account by timeously supplying all relevant documents on request, upon completion of the whole of the works:

- The *Employer* submits the final account to the *Contractor* within 18 (eighteen) weeks of the Completion of the whole of the works;
- The *Contractor* gives written acceptance of the final account within 9 (nine) weeks of receipt thereof. On acceptance the *Employer* issues the final payment certificate within 1 (one) week of the date of acceptance to the *Contractor*;
- If the *Contractor* disputes the correctness of the final account and such dispute is not resolved within the 9 (nine) week period (or such an extended period as the *Employer* may allow on a request from the *Contractor*), the final payment certificate in terms of that final account is issued by the *Employer* within 1 (one) week of the end of such period;
- The amount certified in the final payment certificate separately includes the gross amount of the final account and the amounts previously certified during the execution of the works;
- The *Employer* certifies 100% (one hundred percent) of the amount of the final account in the payment certificate where security in the form of a performance bond or payment reduction has been applied;
- The *Employer* concurrently issues with the final payment certificate, a statement to both the *Employer* and *Contractor* showing the total amount of tax certified;
- The *Employer* pays to the *Contractor* the amount certified for payment in the final payment certificate within 4 (four) weeks of the date of issue of the final payment certificate, subject to the *Contractor* giving the *Employer* a tax invoice for the amount due;
- Where the final payment certificate reflects an amount in favour of the *Employer*, the *Contractor* pays the amount certified within 1 (one) week of the date of issue of the final payment certificate, subject to the *Employer* giving the *Contractor* a tax invoice for the amount due.

1.5 System Documentation

1.5.1 Operating manuals and maintenance schedules

The Contractor shall prepare and supply O & M manuals for the successful operation and maintenance of the Installation as well as all equipment installed.

The manual shall include:

- A system description of the Installation.
- Commissioning data
- All relevant Certificates of compliance e.g. Electrical, Gas, Airconditioning and refrigeration, Plumbing and drainage.
- As-built drawings
- Wiring and control diagrams
- Step-by-step operating instructions.
- Full information of the Contractor including emergency telephone and fax numbers and contact persons.
- The user manuals of all the components and all other relevant information
- A list of equipment (and spares) giving the following information for each item:
Description:
Make:
Model No.:
Manufacturer/Agent: (Name, address, tel. & fax no.)
Comment: (indicate spares to be held if of a critical nature)
Catalogues and brochures
Set of as-installed drawings

A draft copy shall be submitted to the *Employer's Agent* prior to commencement of commissioning.

Prior to handing over the installation to the Employer, the *Contractor* shall supply 4 complete manuals which have been updated, and which include all commissioning data, certificates of compliance, as well as "As-Installed" drawings.

Emergency calls shall be attended to immediately within 24 hours failing which the client will have the right to employ another Contractor and deduct the resulting cost from monies owed to the Contractor for this project or other projects for Health Department.

1.6 Tools, Equipment and Test Instruments

The Contractor shall provide all tools and equipment necessary for the proper and efficient execution of the work including consumables and required cranes.

The Contractor shall provide all test instruments necessary for the proper testing of equipment or systems to ensure that the specified requirements are met.

Any specialised keys or tools (including panel keys) shall be provided to the department in triplicate along with the O&M manuals.

The Contractor shall obtain written approval from the engineer before major Equipment is ordered.

1.7 Procurement

1.7.1 Approval of equipment selection

The Employer is required to inspect and test certain equipment listed in the specification under "Hold Points" at their place of manufacture and such Equipment may not be delivered to the contract Site, nor may the *Contractor* proceed with the manufacture and/or installation of such Equipment without prior written consent from the *Employer*.

The *Contractor* must give the Employer's Agent at least 7 days advance notice of the date at which such tests and inspections are to be carried out unless otherwise agreed by both parties.

1.8 Construction

1.8.1 Progress inspections

The *Employer* will hold inspections at his discretion during the contract to ensure that the *Contractor* meets the requirements of the specification and that the *Contractor* is fulfilling his responsibility regarding quality control.

Should remedial action be required, the Employer's Agent will record the unacceptable work in the Site Instruction (SI) Book and the *Contractor* shall rectify his work within 7 days.

1.9 Commissioning

All on-site testing of the various components as well as all commissioning activities shall be carried out in close co-operation with the *Employer's Agent*.

All testing and commissioning shall be carried out in the presence of the *Employer's Agent* or his duly authorised representative and shall always be thorough and in strict accordance with the specified requirements and approved procedures. All tests carried out without the *Employer* being duly notified will be regarded as unofficial and may, at the discretion of the *Employer*, have to be repeated at the cost of the *Contractor*.

1.10 Costs of re-inspections

Should the *Employer's Agent*, after an inspection or test, find that the number of outstanding defects is of such a nature that he is unable to issue a meaningful list or certificate, or that due to the *Contractor* not attending to previous lists or reports, re-inspections are required, such re-inspections will be charged to the *Contractor* and deducted from the balance of his account by means of a variation order. The Employer's Agent will be compensated accordingly by the *Employer*.

1.11 Guarantee and Maintenance Period

Guarantees and warranties will be as follows:

A full 3-year maintenance and 5-year guarantee period shall commence from the date of Employer taking-over the installation.

Equipment warranties and guarantees will be as contained in the Contract data.

These guarantee shall be transferred to the end user

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Works Information

2 List of drawings, schematics & annexures

The *works* are to be executed in accordance with the following design drawings, schematic representations and annexures which form part of this contract. The list below indicates which items are included in the Appendix to this document, and which are issued separately due to size or other considerations. It is the responsibility of tenderers to ensure they have obtained and considered all the listed items for preparing their tender, which is the assumption when tenders are evaluated.

Identification	Size	Description	Included in Appendix
Annexure A	A4	Price schedule (page 1-39)	Yes
Annexure B	A4	Specification (1-27)	Yes
Annexure C	A4		
Annexure D	A4		

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Works Information

3 Specifications, standards and workmanship

The *works* are to be executed subject to these specifications, standards and workmanship requirements. Please note that compliance with all these specifications and standards, including requirements in terms of qualifications, accreditation (where applicable) and work experience of both the tendering entity and its key people will be material in the *Employer's* risk assessment for awarding this contract.

3.1 Standard Specifications

Where reference is made to the standard specifications in this contract, it means the latest edition of the documents which apply to the specific discipline involved in the *works*, as referenced under any of the headings below. The standard specifications may, due to their generality and completeness, also cover items not applicable to this particular contract.

3.2 Project specifications

Project specifications include amendments to the standard specifications as well as supplemental specifications applicable to work items not covered by the standard specifications. Project specifications, where applicable, may be found throughout the Works Information of this document, including *works drawings*. The *pricing schedule* may also contain references to standard specifications as well as project specifications, for clarification in terms of pricing for certain items, where applicable.

In the event of any discrepancy between the project specifications and a part of the standard specifications found in the Works Information of this document, the project specifications take precedence.

3.3 Accreditation, qualifications and work experience

Minimum requirements for work experience, qualifications and accreditation (where applicable) as well as minimum personnel are as stated under the headings below. The tenderer must supply the relevant information in regard to accreditations, qualifications and work experience for both the enterprise and key people who will be working on this contract on the appropriate returnable schedule in the Works Information

3.4 Statutory and regulatory requirements

- PGWC Standard Specification for Electrical Installations
- SANS 10142 –a.a.: Code of Practice for Wiring of Premises
- National Building Regulations – SANS 10400 and General
- SANS 10139
- The Occupational Health and Safety Act: 1993 incorporated Regulations and Standards.
- Provincial Government Western Cape: Department of Health – Engineering & Support Services: Guideline Health and Safety Specification for Construction and Maintenance work at Hospitals and other Health institutions
- Construction Regulations, 2014 (GN No. R84 of 7 February 2014)
- All relevant SABS or SANS Specifications for products and materials
- Municipal By-laws and Regulations
- The Fire Brigade services act 1993 Act 99 of 1987 as amended,

Municipal, local or, where applicable, other authorities' by-laws and regulations with regard to building, electrical, fire, gas, water, traffic and health requirements.

The *Tenderer* shall study these documents and acquaint himself with the contents thereof as no claims in this regard will be entertained. Before commencing with any work on site, the *Contractor* will be required to hand in a Health & Safety Plan for this contract as well as a detailed programme of activities with dates and materials to be used for approval. If not specified in the pricing schedule, only SABS approved materials will be used and the *Contractor* will guarantee his workmanship for a five-year period.

The *Contractor* shall exempt the Employer from any claims, losses or expenditure that may arise as a result of the *Contractor's* negligence or failure to comply with the abovementioned regulations.

The *Contractor* shall be responsible for all notifications and payments required by any authority for inspections, tests and supply of any service required for this installation. The Tenderers are therefore required to fully acquaint themselves with these requirements prior to tendering.

The *Contractor* shall supply and install all notices and warning signs that are required by relevant laws or regulations, to the full approval of the Employer's Agent and the applicable authorities. All uncertainties of any such requirements shall be clarified prior to tendering. The cost of all such notices shall be allowed for in the Tender.

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Works Information

4 Constraints on how the Contractor Provides the Works

The *works* are to be executed subject to the following constraints:

4.1 Working Areas including sharing thereof by other contractors, staff, and members of the public

Employer's direct contractors

The *Employer* may instruct work to be executed and installed in the *works* by one or more direct contractors, with the understanding that:

- The *Contractor* permits all such work by direct contractors;
- The type and extent of such work is described in the tender document, and the *Contractor* makes reasonable provision in his work programme for such work;
- The payment of direct contractors is the responsibility of the *Employer*;
- A direct contractor is subject to reasonable controls as required by the *Contractor* and all direct contractors, the work or installations undertaken, insurances related thereto and the associated risks including expense or loss caused by direct contractors, are the direct responsibility of the *Employer*; and
- Normal working hours are from Monday till Fridays from 7h30 – 16h00.

4.2 Site Conditions

It will be required of the contractor to work on a fully functional facility. Extra care must be taken not to cause injury or harm to staff, patients or visitors or to cause delays on the facility site.

Work areas must be secured off so that NO unauthorised person can enter the construction site.

4.3 Health and Safety (Electrical tools and/or equipment and hot work)

Electric tools and/or equipment being used by the Contractor, may be tested at any given time by the Employer. Should for any reason whatsoever the Employer find that any of the electrical tools and/or equipment poses a safety risk to either any person or the facility, the Contractor shall immediately stop using such tools and/or equipment and repair and/or replace such tools and/or equipment with tools and/or equipment complying with all health and safety regulations. The Contractor shall provide the Employer with proof that the repaired and/or replaced tools and/or equipment comply with all health and safety regulations **BEFORE** resuming work requiring the using of electrical tools and/or equipment.

The Contractor shall obtain from the Employer a **HOT WORK PERMIT** for any grinding, welding or flame work to be executed on a specific date, timeously, **PRIOR** the work being executed. The Hot Work Permit shall only be valid for a specific date, therefore if any hot work is scheduled to be executed over a period of time, a Hot Work Permit shall be obtained for each day hot work is scheduled to be executed.

4.4 Occupational Health & Safety

Exposure of workers to occupational health hazards and risks is very common in any work environment, especially in construction. Occupational exposure is a major problem and leads to medical conditions like cancers, skin disorders, and noise induced hearing loss, etc. All Contractors must ensure that adequate health and hygiene measures are put in place to prevent exposure to these hazards. Prevent inhalation, ingestion, absorption, and noise induction

4.5 Plant and Scaffolding

The tenderer must provide all plant, scaffolding, craneage, ladders, cables, etc., and must make due allowance in his tender therefore. The Tenderer shall allow in the Quotation for all labour, material, construction plant, temporary works and everything else necessary for the execution and completion of the Works in accordance with the Quotation documents. Only new material of high quality that conform to SABS standards will be used.

4.6 Negligence

Where any known facility/ service is damaged due to the Contractor's negligence, the Contractor will make good such damage or bear the cost of the repairs.

4.7 Material and Work Quality and Tolerances

All work shall be finished to a degree of accuracy and neatness as per specification or drawing. No poor quality work or inferior materials will be accepted. Only new materials of high quality shall be used throughout and shall be subject to the approval of the *Employer's Agent*.

Unless specified in the Pricing Schedule, all materials shall conform in respect of quality, manufacture, tests and performance, with the requirements of the SABS standards or, where no such standards exist, they shall conform to the appropriate current specification of the British Standard Institution. Materials manufactured in South Africa shall be used wherever possible. Imported materials shall comply with the requirements of the relevant SABS or British Standard Specifications, although these materials need not necessarily bear the SABS mark. Where no applicable SABS specification exists, all material must comply with the equivalent DIN, IEC, IP or BSS specifications or be of the quality as specified. All materials shall be suitable for the particular site conditions. These conditions shall include weather conditions as well as prevailing conditions during installation and subsequent permanent use. Should the materials or components not be suitable for use under temporary site conditions where applicable the *Contractor* shall provide at his own cost, suitable protection until these unfavourable site conditions cease to exist.

Uniformity - All items of the same make and type shall where at all possible be used throughout the installation, to ensure interchangeability and ease of maintenance. Deviation from the above will only be allowed after receiving approval in writing from the Chief Engineer, Directorate: Engineering and Technical Services.

The contractor shall obtain written approval from the Employer's Agent before major orders (>R5000) are placed.

4.8 Materials & Tools

The contractor shall acquaint himself with the continuous availability of materials required. No extension of time or additional compensation will be granted if material cannot be obtained locally or has to be sourced elsewhere. The Contractor shall provide all tools and equipment required for the execution of the works.

4.9 Hours of Work

The Contractor shall undertake to carry out the *works* during normal working hours. PRIOR arrangements for working outside normal working hours MUST BE MADE by the Contractor which must be approved in writing by, the User Department or CEO of the Institution. Such work done outside normal working hours shall be at the Contractor's own risk and costs. Normal working hours is from Monday till Fridays from 7h30 – 16h00.

4.10 Site Security

All *Contractor's* staff to report to the designated facility representative before undertaking any servicing, repair or maintenance work. All staff must wear the company uniform, displaying the company logo. Each employee of the Contractor must wear an identification tag, displaying the name of the Contractor's company and name and photo of the Employee.

4.11 Rubbish & Waste

All rubbish and waste arising from the works shall be removed by the Contractor on a daily basis before he/she leaves the site to keep the site(s) and building(s) clean and tidy.

4.12 Tender Documentation

Should there be any discrepancies between the Specification in the Tender Documentation and the drawings or list of applicable documents listed in the annexures of this document, it should be clarified with the Employer's agent in writing. The latest revisions of any Specification or Code issued by the SABS/ISO or other Standards referred to in this Specification, will be applicable. This specification has preference over any additional documentation submitted by the Tenderer. Deviations from this specification will only be considered if indicated as such in this document. If the Tenderer wishes to clarify certain aspects of his offer, he may do so in an additional document that will be subject to the aforementioned preference.

4.13 Terms of Payment and Structure of Contractor's Invoice

All payment claims must be submitted by means of an invoice to the Employer's Agent for review and processing on a month-to-month basis for completed work activities at site. The invoice shall clearly indicate the tender number which is the order number, facility and project name. On addition the invoice will have an invoice number, date, contractor's company name, address and bank details.

The *Contractor* shall be requested at site handover to complete a Bas Registration form of which needs to be certified by the *Contractor's* Bank that his/her bank details are correct. This will enable Health Department to do electronic payments. (If the Contractor is not yet registered at Health) If you are not on the the Western Cape Supplier Evidence Bank (WCSEB), please contact the Database Helpdesk on **021 833 5361** or e-mail: **wcseb@westerncape.gov.za**.

4.14 Compensation Events

Compensation Events shall only be considered in isolated cases. All compensation events shall be approved in writing by the *Employer's Agent* for the *Contractor* to action.

4.15 Construction Site & Plant & Equipment

For safety purposes the construction site shall be cordoned off to secure the construction site when the Contractor starts with his/her work. The plant and equipment used on site shall not interfere with the activities of the facility or hospital or obstructing the entrances or road inside the buildings or on the premises. Flushable or chemical toilets shall be provided by the contractor to his/her workers during the contract period.

4.16 Claims for Delays & Inclement Weather

Rain and inclement weather claims will only be approved by the *Employer's Agent* if external works were to be carried out on the days claimed. No claims for inclement weather will be entertained if internal work activities (if any) could have been carried out during the specified period.

4.17 Notices

The Contractor shall install all notices required in terms of Statutory Regulations and shall amongst others, include the following:

- Prohibiting unauthorised persons from entering.
- Prohibiting unauthorised persons from handling or interfering with electrical apparatus.
- Directions and procedures to be followed in case of fire.
- Instructions for resuscitation of persons suffering from the effects of electrical shock.

4.18 Storage of material

The Contractor shall provide the necessary storage facilities to ensure that all material and equipment is safely stored and protected against any possible loss or damage. If storage is provided on-site, it will be used at own risk and no claims due to theft or damage of stored equipment will be entertained. The area shall be left neat and tidy at the conclusion of the contract.

4.19 Sub-Contractors

Unless specialist works are required as part of this contract, a *Contractor* shall not be permitted to subcontract more than 25% of this contract to another contractor, as per clauses 5.9 and 5.10 on pages 24 and 25 of this document. Any other circumstances require the *Contractor* to timeously notify the *Employer*, who will review the Contractor's application and provide feedback to the *Contractor* in writing. In all cases, the *Contractor* will be liable for all works, actions, etc. executed by the sub-contractor.

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5 Requirements for the programme

- 5.1 The Contractor shall submit a first programme to the Employer for acceptance within two weeks from the date of receipt of the Letter of Acceptance.
- The Contractor shall indicate on each programme which he submits for acceptance
- the starting date, access date/s and the contractual completion date,
 - Predecessor and successor operations and/or activities
 - CRITICAL PATH(s)
 - planned Completion date,
 - the order and timing of the operations and/or activities which the Contractor plans to do in order to Provide the Works,
 - the order and timing of the operations and/or activities of the Employer and others as last agreed with them by the Contractor or, if not so agreed, as stated in this Works Information,
 - (this is not a requirement...only reason why information is required therefore can be omitted)provisions for
 - time risk allowances (example, allowance for custom clearance for imported materials lead on ordering of any materials)
 - health and safety requirements and
 - procedures as set out in this contract,
 - the dates when, in order to Provide the Works in accordance with this programme, the Contractor will need
 - access to a part of the site if later than its access date,
 - acceptances,
 - Plant and Materials and other things to be provided by the Employer and,
 - information from others,
 - for each operation and/or activity, a statement of how the Contractor plans to do the work and identifies the equipment and other resources which he plans to use and
 - any other information which this Works Information requires the Contractor to indicate on a programme submitted for acceptance.
- 5.3 Within two weeks of receipt the Contractor's programme, the Employer shall either accepts the programme or notifies the Contractor of reasons for not accepting it. A reason for not accepting a programme is that
- it does not reflect the required information,
 - the Contractor's operations and/or activities are not practically achievable,
 -
 - it does not represent the Contractor's operations and/or activities realistically or
 - It does not comply with the Works Information.
- 5.4 When revising the programme, the Contractor shall indicate on each revised programme
- Revision number and date of the revised programme
 - the actual progress achieved on each operation and/or activity and its effect on the completion of the remaining work,
 - the effects of implemented compensation events,
 - how the Contractor plans to deal with any delays in the execution of the works and to correct notified Defects and
 - any other changes which the Contractor proposes to make to the currently accepted programme.
- 5.5 The Contractor submits a revised programme to the Employer for acceptance
- within the period for reply after the Employer has instructed him to,
 - when the Contractor chooses to and, in any case,
 - at no longer than an interval of every four weeks from the starting date until the issue of the Completion Certificate.
- 5.6 Acceptance of any programme where anticipated Completion is shown to be later than the Completion Date, does not alter the Completion Date nor negate the Contractor's liability for delay damages.
- 5.7 All compensation event claims for events arising after the Completion Date which would not have had any effect if the contract had been completed by the Completion Date, remain the Contractor's risk.

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6. Services and other things provided by the *Employer*

Electricity and water is available on site. These access points may not always be in close proximity to the works and it is the responsibility of the contractor to supply his own extension cables/tools/piping to perform the necessary work and to ensure that all the necessary safety precautions are adhered to.

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Works Information

SCHEDULE 12: Works Information required from Contractor

The *Employer* requires the following information pertaining to the work for this contract to be furnished at the time of tender. The tenderer must provide ALL the information as stipulated in this schedule.

Bill No. /Trade	Main products to be used	Complies with specification (indicate Yes/No)

AUTHORISED SIGNATURE OF TENDERER

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL)

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SCHEDULE 13: Amendments by Contractor

The tenderer should record any amendments (i.e. deviations, qualifications, alterations or modifications) he may wish to make to the tender documents in this Schedule. Alternatively, a tenderer may state such amendments in a covering letter and append such letter to this Schedule.

The tenderer's attention is drawn to clause F.3.8 of the Standard Conditions of Tender referenced in the Tender Data regarding the *Employer's* handling of material deviations and qualifications. If no amendments are allowed for this tender, clause F.3.8 will state so and same would also be indicated in the table below. If amendments are allowed but none desired by the tenderer, this Schedule is to be marked NIL in the table below.

IMPORTANT: No alternative tender will be considered unless a tender free of qualifications and strictly on the basis of the Tender Documents is also submitted.

PAGE / ITEM	CLAUSE / DESCRIPTION
	<p>NO ALTERATIONS/AMENDMENTS BY CONTRACTOR ALLOWED FOR THIS CONTRACT. TENDERER MUST SIGN SCHEDULE TO ACKNOWLEDGE.</p>

(If not enough space, attach additional pages. If no amendments are desired, mark NIL.)

AUTHORISED SIGNATURE OF TENDERER

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL)

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Works Information

SCHEDULE 14: Contractor's Equipment schedule

The tenderer must furnish the details of the equipment required for the execution of this contract. The tenderer must differentiate, where applicable, between Equipment immediately available, Equipment which will become available by virtue of outstanding orders, and Equipment to be acquired or hired for the *works* should the tenderer be awarded the contract.

EQUIPMENT DESCRIPTION (Type, size, capacity, etc)	AVAILABLE (A) ON ORDER (O) HIRED (H)	NUMBER OF

(Append separate page if not enough space, or enter NIL if nil)

AUTHORISED SIGNATURE OF TENDERER

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL)

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SCHEDULE 16: Contractor's proposed work programme

The tenderer must append a proposed work breakdown and programme, reflecting the proposed sequence and rate of execution of the various activities comprising the work for the contract, to this schedule page.

This programme must be in the form of a sufficiently detailed bar chart (Gantt chart) or similar acceptable time/activity form as per the Works Information reflecting the proposed sequence and rate/duration of the various activities and the quantities of work that will be carried out every week under each of the items comprising the work scope for this contract. Working hours for the execution of this contract must be indicated, and the programme must clearly indicate project milestones where applicable and the critical path of the activities through the work schedule.

The tenderer must take into account all requirements as per the project specifications referenced in the Contract Data of this document when drawing up the programme.

Details of the Contractor's proposed work programme must be appended to this Schedule.

AUTHORISED SIGNATURE

Date:.....

Number of Proposed Work Programme pages appended by the tenderer to this Schedule:

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SCHEDULE 17: Contractor's health & safety plan

Tenderers are to note the requirements of the Occupational Health and Safety (OHS) Act No. 85 of 1993 and the Construction Regulations 2014 issued in terms of Section 43 of the Act. The tenderer shall be deemed to have read and fully understood the requirements of the above Act and Regulations and to have allowed for all costs in compliance therewith.

In this regard the tenderer shall submit with his tender, appended to this Schedule, a detailed Health and Safety Plan in respect of the *works* in order to demonstrate the necessary competencies and resources to perform the *works* all in accordance with the Act and Regulations. The Health and Safety Plan shall cover inter-alia the following details:

- The safety management structure including the names of all designated persons such as the construction supervisor and any other competent persons;
- Safety method statements and procedures to be adopted to ensure compliance with the OHS Act.

Aspects to be dealt with include:

- Public vehicular and pedestrian traffic accommodation measures;
- Control of the movement of construction vehicles;
- The storage and use of materials;
- The use of tools, vehicles and plant;
- Temporary support structures;
- Dealing with working at height;
- The use of batch plants;
- Excavation work;
- Demolition work;
- Security, access control and the exclusion of unauthorised persons.
- The provision and use of temporary services;
- Compliance with way leaves, permissions and permits;
- Safety equipment, devices and clothing to be employed;
- Emergency procedures;
- Provision of welfare facilities;
- Induction and training;
- Provision and maintenance of the health and safety file and other documentation;
- Arrangements for monitoring and control to ensure compliance with the safety plan.

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

The *Contractor* will only be given access to start work after approval of his detailed Health and Safety Plan, which must be submitted to the *Employer* within one (CHECK TO BE ALIGNED WITH REST OF DOCUMENT) week after award of this contract.

AUTHORISED SIGNATURE OF TENDERER

Date:.....

Number of additional pages appended by the tenderer to this Schedule:(If nil, enter NIL)

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Part C4: Site Information

Site Information

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Site Information

Description of the Site:

Site description and reports

All relevant site details are encompassed in the Project Specification

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Appendix: Drawings, schematics & annexures

The Appendix to this contract is a separate document, independent of the main contract document (this document) and does not follow, or integrate with, the page numbering sequence of the main contract document. The Appendix contains the **Price List** as well as drawings, schematics and annexures ("items") which are referenced in this document, and which are indicated as included in the Appendix.

PLEASE NOTE:

ALL items which are referenced in the main contract document form part of the complete contract documentation for this contract, irrespective of whether they are physically included in the Appendix or not. It is the responsibility of the tenderer to ensure he acquires and considers all the items referenced in this document in the preparation of his tender, which is the assumption when tenders are evaluated.

The Appendix consists of a total of ...66 pages of various sizes and orientation, as a separate document.

Appendix – Annexure A

Price List

PREAMBLE TO PRICE SCHEDULE

- a) This Price Schedule has been measured from main drawing and prepared for the purpose of obtaining competitive Quotations and of forming a basis for interim and final payments. The work actually executed will be measured by the Engineer during and after execution and the final Price Schedule prepared from such measurements will be priced at the unit rates inserted herein by the Tenderer or at rates proportionate thereto.
- b) The cost of complying with all the conditions, obligations and liabilities described in the Conditions of Contract and Specification will be deemed to be spread over and included in the prices stated in this Schedule, unless expressly the subject of a specific item. The Contractor shall have no claim for further payment in respect of any work or method of execution, which may be described or implied in the Contract, although apparently no corresponding item is given in the Price Schedule. Additional rates may, however, be inserted in the tender where deemed necessary by the Tenderer.
- c) General directions and descriptions of work and material given in the Specifications are not repeated in the Price Schedule. Reference shall be made to the Specifications and General Conditions of Contract for this information.
- d) All rates, Provisional Sums, etc. in this Price Schedule shall be net, added as a lump sum on the Final Summary before being carried over to the Tender Form.
- e) The net measurement of the finished work in place will always be taken except where otherwise specified.

Price List / Bill of Quantities: (Vat Excluded)

The rate provided for each item shall cover the cost of labour, material, small plant and tools, and sub-contractor cost where applicable. All rates shall be priced in accordance with the prescribed specification of the *Employer's Agent* as described in this Schedule of Rates.

The installation shall be designed by the responsible system designer. All components of the installation shall be re-measurable upon installation and claims shall be certified according to the measured quantities.

Items shall be deemed to include standard consultation, installation, commissioning and tests as set out in the specification and shall be assumed to include all costs to perform the work as described in the specification.

Section A – Equipment

Item	Description	Unit	Qty	Rate/Unit	Price
A1	Inverter 35kW	Ea	6		
A2	Lithium-Ion Phosphate Battery 30kWh	Ea	2		
A2	Lithium-Ion Phosphate Battery 40kWh	Ea	2		
A3	Lithium-Ion Phosphate Battery 60kWh	Ea	1		
A4	Solar Panel 580W-630W Tier 1	Ea	380		
A5	Solar Panel 580W-630W (Spare Stock)	Ea	20		
A6	Solar Panel Connector MC4 Connector	Ea	380		
A7	Remote Monitoring 4G Router with 12 Months Service	Ea	5		
A8	Remote Monitoring Inverter Network Adapter	Ea	5		
Sub-Total Section A of Price list carried forward to Pricing Schedule (Schedule 10 of this document)					

Section B – Mounting Hardware

Mounting is based on 2 profiles per panel and 4 anti-tamper mounting clips per panel and shall be deemed to include any spacers, stop-ends, supports, fixing hardware and all other items required to deliver a fully functional mounting system.

Item	Description	Unit	Qty	Rate/Unit	Price
B1.1	Brooklyn Chest Hospital Panel Group: Ward B – Big 6 Fiber Cement Incl fasteners to roof rafters	M	110		
B1.2	Brooklyn Chest Hospital Panel Group: Ward C – Big 6 Fiber Cement Incl fasteners to roof rafters	M	120		
B1.3	Brooklyn Chest Hospital Panel Group: PSA Roof – Kliplok Incl fasteners to roof rafters	M	56		
B1.4	Brooklyn Chest Hospital Panel Mount Mid Clamp	Ea	190		
B1.5	Brooklyn Chest Hospital Panel Mount End Clamp	Ea	52		
B2.1	Beaufort West Hospital Panel Group: Maternity Kliplok Incl fasteners to roof rafters	M	174		
B2.2	Beaufort West Hospital Panel Mount Mid Clamp	Ea	136		
B2.3	Beaufort West Hospital Panel Mount End Clamp	Ea	16		
B3.1	Ceres Hospital Panel Group: Workshop Roof Kliplok Incl fasteners to roof rafters	M	107		
B3.2	Ceres Hospital Panel Group: Kitchen Roof Kliplok Incl fasteners to roof rafters	M	64		
B3.3	Ceres Hospital Panel Mount Mid Clamp	Ea	100		
B3.4	Ceres Hospital Panel Mount End Clamp	Ea	88		
B4.1	Wesfleur Hospital Panel Group: OPD Roof Sheetmetal Incl fasteners to roof rafters	M	168		
B4.2	Wesfleur Hospital Panel Mount Mid Clamp	Ea	142		
B4.3	Wesfleur Hospital Panel Mount End Clamp	Ea	12		

Item	Description	Unit	Qty	Rate/Unit	Price
B5.1	Vredendal Hospital Panel Group: Med Gas – Fiber Cement Incl fasteners to roof rafters	M	64		
Item	Description	Unit	Qty	Rate/Unit	Price
B5.2	Vredendal Hospital Panel Group: PSA – Klip Lok Incl fasteners to roof rafters	M	56		
B5.3	Vredendal Hospital Panel Mount Mid Clamp	Ea	100		
B5.4	Vredendal Hospital Panel Mount End Clamp	Ea	24		
Sub-Total Section B of Price list carried forward to Pricing Schedule (Schedule 10 of this document)					

Section C – Cables and Cableway

String design should spread load between strings on each MPPT to limit current in DC lines. Preliminary string and MPPT layout calculations indicate maximum current of 17A per string under 800V.

Cables shall be priced complete with glands, lugs, shrouds, nuts, flat and spring washers and any other accessories required for connection of the cable for its intended purpose.

The Tenderer shall at final claim provide a per-site breakdown of conductors claimed with identifying location information. Claimed/remeasured quantity may include a 10% waste allowance.

Item	Description	Unit	Qty	Rate/Unit	Price
C1.1	4mm ² Single Core PVC 1000V HV Black/Red	M	1000		
C1.2	6mm ² Single Core PVC 1000V HV Black/Red	M	150		
C1.3	10mm ² Single Core PVC 1000V HV Black/Red	M	50		
C1.4	16mm ² Single Core PVC 1000V HV Black/Red	M	5		
C1.5	25mm ² Single Core PVC 1000V HV Black/Red	M	5		
C1.6	35mm ² Single Core PVC 1000V HV Black/Red	M	5		
C2.1	SWA Multicore 4 copper cable 600/1000V 10mm ²	M	135		
C2.2	SWA Multicore 4 copper cable 600/1000V 16mm ²	M	30		
C2.3	SWA Multicore 4 copper cable 600/1000V 25mm ²	M	10		
C2.4	SWA Multicore 4 copper cable 600/1000V 35mm ²	M	5		
C2.5	SWA Multicore 4 copper cable 600/1000V 70mm ²	M	5		
C2.6	SWA Multicore 4 copper cable 600/1000V 95mm ²	M	5		
C2.7	SWA Multicore 4 copper cable 600/1000V 120mm ²	M	5		
C3.1	PVC Multicore 4 copper cable 600/1000V 10mm ²	M	10		
C3.2	PVC Multicore 4 copper cable 600/1000V 16mm ²	M	10		
C3.3	PVC Multicore 4 copper cable 600/1000V 25mm ²	M	10		
C3.4	PVC Multicore 4 copper cable 600/1000V 35mm ²	M	5		
C3.5	PVC Multicore 4 copper cable 600/1000V 70mm ²	M	3		
C3.6	PVC Multicore 4 copper cable 600/1000V 95mm ²	M	2		
C3.7	PVC Multicore 4 copper cable 600/1000V 120mm ²	M	2		
C4.1	Anti-Theft Earth Cable 10mm ²	M	50		
C4.2	Anti-Theft Earth Cable 16mm ²	M	200		
C4.3	Anti-Theft Earth Cable 25mm ²	M	50		

Item	Description	Unit	Qty	Rate/Unit	Price
C4.4	Anti-Theft Earth Cable 35mm ²	M	5		
C4.5	Anti-Theft Earth Cable 70mm ²	M	2		
C4.6	Anti-Theft Earth Cable 95mm ²	M	2		
C4.7	Anti-Theft Earth Cable 120mm ²	M	2		
C4.8	Earth Rod Copper 1200mmx12mm	Ea	40		
C5.1	Tie-on Cable Labels	Ea	40		
C6.1	PVC Trunking with Cover 100mmx50mm	M	35		
C7.1	P9000 Channel + Cover 127mmx76mmX0.6mm	M	17		
C8.1	Galvanised Mesh Cable Tray 100mmx50mm 50mmx50mm aperture	M	88		
C8.2	Galvanised Mesh Cable Tray 200mmx50mm 50mmx50mm aperture	M	146		
C8.3	Galvanised Mesh Cable Tray 300mmx50mm 50mmx50mm aperture	M	22		
C8.4	PVC Sleeve 110mm Installation included but trenching priced separately	M	48		
C8.5	Draw-Box ~300x300X300 Direct burial Lockable cover Installed Cost	Ea	6		
C9.1	Trenching 800mm deep x 400mm	M	48		
C9.2	Concrete slab removal and re-instatement	M	5		
C9.3	Asphalt removal and re-instatement	M	7		
C9.4	Sand Backfill + HV Warning Tape	M	48		
Sub-Total Section C of Price list carried forward to Pricing Schedule (Schedule 10 of this document)					

Section D – Switchgear, Protection and Distribution Boards

Switchgear shall be priced complete with glands, lugs, shrouds, nuts, flat and spring washers and any other accessories required for connection of the switchgear for its intended purpose.

Cable is for tails are measured elsewhere but hardware shall be deemed to be included.

Item	Description	Unit	Qty	Rate/Unit	Price
D1.1	Circuit Breaker 3 Phase 50A	Ea	2		
D1.2	Circuit Breaker 3 Phase 100A	Ea	1		
D1.3	Circuit Breaker 3 Phase 125A	Ea	4		
D1.4	Circuit Breaker 3 Phase 150A	Ea	1		
D1.5	Circuit Breaker 3 Phase 200A	Ea	2		
D2.1	Rotary <u>Manual</u> Changeover Switch 4 Pole Mechanically Interlocked Mounted in epoxy mild steel enclosure 125A	Ea	2		
D2.2	<u>Motorised</u> Changeover Switch 4 Pole Mechanically Interlocked Mounted in epoxy mild steel enclosure 200A	Ea	1		
D2.3	<u>Motorised</u> Changeover Switch 4 Pole Mechanically Interlocked Mounted in epoxy mild steel enclosure 400A	Ea	1		
D3.1	Battery Disconnect Protection for Battery Cable 160A DC Rated	Ea	5		
D3.2	DC Disconnect Switch (1 per string) DC Rated (Isc x 1.25) DIN Rail Mounted 25A	Ea	26		
D3.3	DC Fuse Holder 25A (1 per string) DIN Rail Mounted Fuse Included	Ea	26		
D3.4	DC Fuse 25A Maintenance Stock	Ea	52		
D3.5	Surge Arrestor 800VDC 40kA	Ea	26		
D4.0	12 Way PVC Distribution Board With PVC Cover DIN Mounting	Ea	13		
D5.1	Sub DB Board with space to mount: Changeover/Transfer Switch Up to 3 Local 3Ph Circuit Breakers Transfer switch controller (where applicable) Inverter Isolation (Feed and Output) IP66 IK10	Ea	5		

Item	Description	Unit	Qty	Rate/Unit	Price
D5.2	Automatic Transfer switch controller Department Standard: Levato or AMSO Paneltrack. Inclusive of CT/Coils and programming. Inclusive of training and software.	Ea	2		
Sub-Total Section D of Price list carried forward to Pricing Schedule (Schedule 10 of this document)					

Section E – General

Item	Description	Unit	Qty	Rate/Unit	Price
E1.1	Travel Installation as described	Lot	1		
E1.2	Travel Additional to work as described and as requested by the employer's agent inclusive of labour time for travel and any other fees or tolls.	Km	1000		
E2.1	Labour Installation as described	Lot	1		
E2.2	Labour – Qualified Artisan/Technician Additional to work as described and as requested by the employer's agent. Overtime calculated at 1.5x including Saturday time and Sunday or Public Holiday calculated at 2x.	h	12		
E2.3	Labour – Semi Skilled/Assistant Additional to work as described and as requested by the employer's agent. Overtime calculated at 1.5x including Saturday time and Sunday or Public Holiday calculated at 2x.	h	12		
E3.1	Profit Profit for the works as described. Please use zero total and rate if the profit is priced into the unit rates.	Lot	1		
E3.2	Site Establishment and General Cost of establishing site and for other items required operationally to complete the works as described. This item is not time-based.	Lot	1		
E3.3	Health and Safety File Creation and updating of the H&S file which is kept on-site.	Ea	5		
E3.4	Electrical COC For the modifications to the existing system/SDB and inverter installation.	Ea	5		
E3.5	Structural Sign-off For the inspection and certification to install the solar panels to existing roofs and structures.	Ea	5		
E4.1	SSEG Registration with Local Authority Hybrid SSEG administration and registration with the local authority inclusive of any administrative cost payable to the local authority. Does not include any additional physical requirements by the local authority.	Ea	4		
E4.2	SSEG Registration with Local Authority Grid-Tied SSEG administration and registration with the local authority inclusive of any administrative cost payable to the local authority. Does not include any additional physical requirements by the local authority.	Ea	1		

Item	Description	Unit	Qty	Rate/Unit	Price
E5.1	Training 3h operational training on-site with maintenance staff.	Ea	5		
E5.2	Site Specific Maintenance Manual Including copies of registration, certification and other information as per the specification. 1x Physical and 1x Electronic copy per site.	Ea	5		
E5.3	Operating Instructions & COC A3 Laminated instructions with pictures as per the technical specification.	Ea	5		
E5.4	Designer Training Training facilitation in Cape Town for 2 technical system designers. Green solar academy SuperSolarSchool. Cost is approximate R13 500 PP	Ea	2		
E5.5	Maintenance Training Training facilitation in Cape Town for 5 technical staff. Green solar academy Solar101. Cost is approximate R6000 PP	Ea	5		
E6.1	Service and Maintenance Quarterly inspections and panel cleaning as per the specification. Monthly monitoring via web with performance report. 4 maintenance visits per site.	Ea	20		
E7.1	Contract Contingency Issued at the discretion and with the approval of the project manager.	Lot	1	X	350 000.00
Sub-Total Section E of Price list carried forward to Pricing Schedule (Schedule 10 of this document)					

Appendix – Annexure B Project Specification

Solar Power Generating Plant

1. Solar Power Generating Plant

1.1. Design Methodology

The solar installation system is designed to ensure energy cost offset for the oxygen generating plant while ensuring a stable power supply to the system where feasible. To achieve this, each system will either deliver power to the electrical reticulation or run an isolated section of the facility grid.

The available solar power will therefore power a section of the hospital and may include the oxygen plant with the day-time savings on the hospital energy consumption offsetting the night-time consumption on the oxygen generation plant.

The solar panels are sized to achieve energy offset at the worst performing solar months (Jun-Aug) while surplus power in high performance months will be used to directly supply additional energy to the hospital grid and effect an energy cost saving to offset the increase in maximum demand cost.

To summarise, the goals of the system design are as follows:

- To offset direct energy costs to facilities in low solar yield months by providing at least sufficient solar energy to offset the direct energy cost of the oxygen generator.
- To offset maximum demand costs produced by the oxygen plant by providing excess energy to facility during excess production months.

1.2. Oxygen Plant General Electrical Design Parameters:

Nominal Operating Power	: 5.5kW | 7.5 kW | 15kW (Typically 2-off)
Design Inrush at Startup	: 2.0 X nominal
Design Load Factor	: 70% of single unit capacity

1.3. Solar Panel Specification

The Tenderer shall standardise on a specific brand and model panel for all the installations including the maintenance stock delivered to the department. For the purpose of modelling a Tier 1 620W panel was used with dimensions of 1134mmx2278mmx30mm dimensions and with a module efficiency of 23%.

To exact model and brand of the panel modelled is available on request but generally the Tenderer may make use of any qualified solar panel of any dimension noting in most cases there is limited roof space available, and the Tenderer shall within the nearest +/- 300W provide a suitable system layout with similar PV output within the constraints of the available roof space.

The following minimum standards shall be maintained regardless of the brand or model of panel:

Solar Module Technology	Mono-crystalline Half Cell with Efficiency >22%
Glass	Tempered 2mm Back and Front with Reflective Coating
Frame Construction	Anodised Aluminium Alloy
Max Static Load (Back/Front)	>=2400 Pa
Max Series Fuse Rating	>= 30A
Power Tolerance	0~+ 1.5% or higher
Temperature Coefficient at Voc	<= 0.26% / °C
Temperature Coefficient at Pmax	<= 0.30% / °C
Temperature Coefficient at Isc	0.04% - 0.05% / °C
Performance Warrantee Type	Linear 30 year Performance, 10 year material and workmanship
1st Year Performance degradation	<=1%
Annual power degradation	<= 0.4%
Minimum DC Cable	4.0mm ² / 12 AWG
Connector	MC4EVO2/2A
Certifications	ISO9001:2015 (Factory) IEC61215 IEC61730 (Panel)
Brand Certification	Tier 1 – Bloomberg NEF Tier (2020+)

1.4. Solar Panel Mounting

The mounting method and detail will be specified by the structural engineer who will inspect the site, provide the working method and sign off on the structural aspects of the solar installation but the following guidelines are provided.

The installation shall comply with SANS10160 in-terms of wind loads and structural loading after the proposed installation of solar panels as per the provided solar layouts. For this purpose the Tenderer shall allow for structural inspection by a registered structural engineer to verify the roof support and certify that the roof system and solar installation falls within the requirements of the regulations.

Any additional support or alteration of the roof support system to enable the installation of solar panels shall be implemented on a proven cost + 10% markup basis.

Anodised aluminium channels or rails shall be used and shall be fixed to the underlying structure of the roof. Spacers shall ensure a uniform airgap is maintained between the solar panel and the peak of the roof. The airgap shall be no less than 50mm on any corrugated roof and no less than 100mm on a flat or tiled roof. The construction of the roof is provided in the site-specific data in the specification.

All materials used in the construction of the solar panel support structure shall be galvanically similar or shall be galvanically separated from the rest of the roof structure. Fixing hardware shall feature insulating washers.

Fixing between the rail/channel and the panel shall be direct mount anti-theft/vandal brackets or shall be secured using security fixing bolts, sheer nuts or hidden fastener type brackets.

Where possible, existing penetrations should be used for mounting of the frame to the roof structure. Any new penetrations shall be suitably waterproofed by means of screw which features a suitable sealing washer/gasket.

All penetrations shall be properly waterproofed, and this element shall carry a minimum 3-year all-inclusive warrantee.

1.5. Cable Routes Wiring Specification

Cables shall enter/exit any roof covering via a suitable IP68 glanded entry.

The entire frame and the solar panels shall be grounded to SANS10142-1 requirements using copper coated steel earthing rods or earthing mats.

No bare copper conductor may be used for earthing and all earth cables shall be theft resistant type such as Kwena. Composite (TDCC) cables will only be considered if the composites are mechanically welded to each other permanently. Earth wire connection to earthing rods shall be a fused/welded connection, earthing clamps are not permissible. The Tenderer shall inform the local workshop team at least 2 days prior to the earth connection being buried to inspect the installation.

All underground or wall mounted cables shall be steel wire armoured type solid conductors.

DC cables in in roof voids shall, unless specified otherwise, be secured on dedicated wire mesh cable trays. The trays shall be hot dip galvanised but shall be fully deburred before and after galvanising to remove any sharp edges or drips in the tray. The tray shall be bonded to earth. The mesh tray shall unless otherwise specified have dimensions of 200mm width and a sidewall height of 50mm.

Where more than one pair of conductors are run in a single wire tray, the Tenderer shall mark pairs with a tie-on cable label at intervals not exceeding 10m around both conductors of the pair.

DC cables on the exterior of a building vertical wall shall be run in galvanised trunking with lids. The trunking shall be bonded to earth and any other metal cable management items. P9000 trunking of 127mmx76mm shall be used unless specified otherwise. All trunking shall feature electrical warning triangles spaced at 2000mm intervals on the cover.

All underground sleeves shall unless specified otherwise be 110mm PVC sleeves and shall be buried at 800mm (centre of the sleeve to ground). The sleeve shall be laid in a 300mm bed of sand and a high voltage danger tape shall be installed at 150mm (from centre of sleeve) before backfilling the trench. Bends shall be long radius (>1000mm) and shall not exceed 90 degrees. Generally, sleeves shall end in joining boxes or manholes. Sleeves shall not contain more than 2 pairs of conductors.

1.6. DC System Voltage, DC Cable Size and Solar String Design

It is not possible for the department to fully specify the brand and model of the components of the system and therefore provide a suitable string plan, sting voltage or suitable cable gauges. The Tenderer shall appoint or use a qualified and experienced designer to make a proposal to the department for approval before materials are ordered. This is a hold-point of the project.

The system designer shall also certify and provide the COCs and as-built documentation of for the project and shall be fully responsible for the electrical installation covered in this contract.

The general methodology to be used shall be as follows:

The required output of the inverter shall be used to select the inverter set or sets noting the requirement to be stringed. The specification/data sheet of the inverter will provide a MPPT range or optimal input voltage.

- If optimal input voltage is provided, this voltage shall be used to size all conductors upstream.
- If MPPT input voltage range is provided, the optimal voltage shall be selected as 75% of the voltage range. For instance, if the range is 100V-200V, 75% of the range would equate to 175V being selected as the optimal voltage value.

From the system voltage, suitable wire gauge shall be calculated to limit voltage drop to 1% on systems up to 600VDC and 0.8% on systems operating above 600VDC. String loss calculations shall be provided to the department as part of the hold-point for approval.

String configuration and cable sizing shall then be done based on the design parameters.

DC fuse holders shall be installed for each DC string in each building. The fuse holder shall be installed in dedicated distribution board with DIN rail of 12 way . The distribution board shall be installed in the main passage or as indicated under the ceiling and shall be clearly labelled as 'SOLAR DC CONTROL'.

In addition to fuses, each string shall have a manual DC rated disconnect switch and surge protector.

Each component shall be labelled, and a legend shall be included for each distribution board.

Each fuse box shall include 4 spare 25A fuses (or as per sting max current design).

All electrical switchgear and equipment shall as far as practically possible be of the same manufacturer.

1.7. AC System Design (Changeover and Failsafe)

The detailed system parameters in the site-specific specifications shall inform but in general the following system design shall be followed.

AC will feed into the inverter and all power shall under normal circumstances feed directly from the inverter output.

- If the load is less than the PV production, the system shall provide the load directly via solar and PV.
- If the load exceeds the available PV, the system shall mix utility supply and solar to satisfy the load requirement.
- If the load exceeds the inverter capacity, the inverter will automatically bypass and provide AC load directly via passthrough until passthrough maximum current is reached.
- If AC passthrough current is exceeded, the system will shut down and interrupt power output to the load.
- The Tenderer shall install a controller and switchgear which shall sense AC load or inverter output failure, isolate the inverter supply and trigger an automatic changeover switch rated to the maximum power identified in the site-specific specification to take over the load.

The changeover shall be mechanically interlocked to lock out the inverter feed. The interlock activation shall illuminate an external warning strobe until deactivated.

The output load shall be monitored and once the combined load reaches 50% of peak passthrough current, the system shall automatically change back to the inverter supply. Manual changeover and lockout shall also be accommodated.

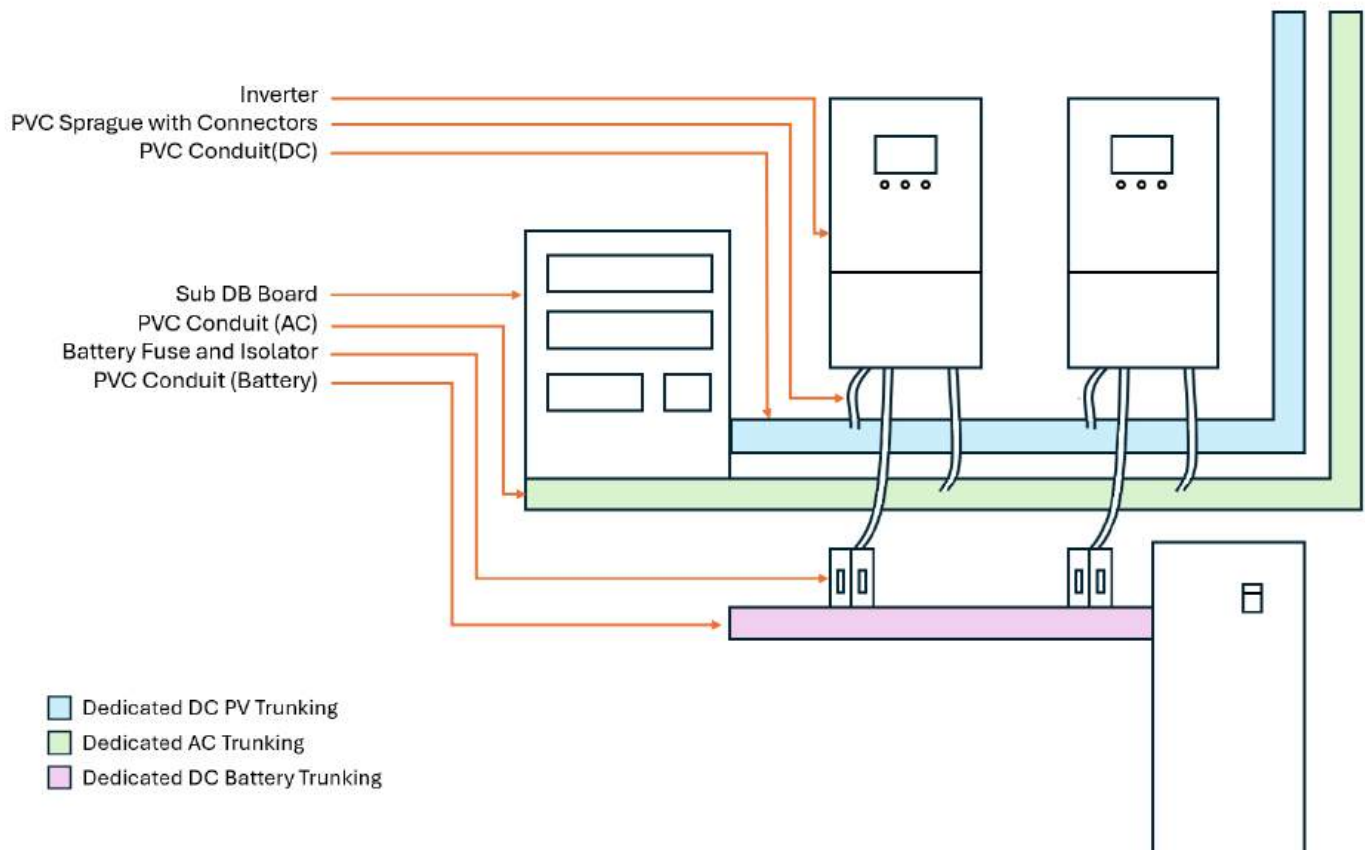
This point is only applicable where automatic transfer switch is specified in the control circuit diagram.

Where load-control or splitting of loads are required at the downstream distribution boards, this will be indicated in the site-specific specification.

1.8. Inverter Wiring and Cable Management

All inverters shall be mounted on the wall at indicated position with cognisance to the OEM recommended clearance distances between inverters.

Below the inverter three single runs of PVC trunking shall be mounted with a minimum clearance of 100mm between each. One trunking shall be dedicated to DC PV cables, one to AC (input and output) and one shall be dedicated to the battery DC cables.



Short circuit protection shall be provided on each string and conductor from the PV panels.

Isolation shall be provided for each inverter.

Each inverter power input shall have a suitably rated isolator (3 Ph) on both input and output side located in the distribution board.

Communication cables between inverters may be run in small trunking above the top DC trunking.

The Tenderer shall note and implement the OEM prescribed clearance distances around each component of the system. Batteries shall not be mounted directly below the inverter (even if this meets the OEM clearance distances).

Approximate breakdown of cableways per-site are as follows. Actual installed quantities shall be remeasured upon completion of the works.

Brooklyn Chest Hospital

P9000 Galvanised 127x76mm		3m
Wire Mesh 200x50mm		35m
Wire Mesh 100x50mm		45m
PVC Trunking 100x50mm	7m	
PVC Sleeve		20m
Draw-Box		2 each

Beaufort West Hospital

Wire Mesh 200x50mm		32m
PVC Trunking 100x50mm	7m	

Ceres Hospital

P9000 Galvanised 127x76mm		7m
Wire Mesh 300x50mm		22m
Wire Mesh 200x50mm		43m
Wire Mesh 100x50mm		38m
PVC Trunking 100x50mm	7m	
PVC Sleeve		4m

Wesfleur Hospital

P9000 Galvanised 127x76mm		4m
Wire Mesh 200x50mm		25m
Wire Mesh 100x50mm		50m
PVC Trunking 100x50mm	7m	
PVC Sleeve		24m
Draw-Box		2 each

Vredendal Hospital

P9000 Galvanised 127x76mm		6m
Wire Mesh 200x50mm		11m
Wire Mesh 100x50mm		5m
PVC Trunking 100x50mm	7m	
PVC Sleeve		12m
Draw-Box		2 each

1.9. Inverter Specification

The selected inverter must meet the following basic requirements:

- The inverter must be readily available in the local market and supported by a reputable dealer and technical support available in South Africa.
- The selected brand must have an established track record of reliability and performance.
- Inferior-quality inverters or brands with limited market presence and unverified performance history will not be considered.
- If the inverter package is not a complete system (e.g., requiring a separate battery controller or PV controller), the Tenderer must provide a complete quotation including all necessary components to ensure full system functionality as described.

The following inverter brands are recognized for meeting the necessary technical, quality, and warranty requirements based on the model specifications:

- Sunsynk
- DEYE
- SMA
- Victron **Note: Many Victron models function as inverter-chargers and may require separate solar controllers.

Tenderers may propose alternative inverter brands or models. Each proposal will be evaluated based on compliance with the specified technical requirements.

Manufacturer Warrantee	5 Year Standard extended to 10 Years
Maintenance/Technical Support	Local within South Africa, In business for 10+ years
Off-Site Monitoring	Yes, with internet connection and dongle or on-board
Weather Rating	>= IP65
Operating Temperature	-20°C to 60°C
Derating Temperature	>=45°C
Solar Characteristics	
Type of Charger	MPPT
Number of MPPT Trackers	2-4
Strings per MPPT Tracker	2-4
Startup Voltage	<200V
MPPT Full Load Voltage Range	Accommodates 200V - 800V
Max PV I_{sc}	50A per tracker
Charger Characteristics	
Max Charging Current	>35A per battery/charger
Max Discharge Current	>35A per battery/charger

Li-Ion Battery Strategy	BMS self-adaption
BMS Communication Protocol	RS485 and CAN BUS
Battery Voltage Range	Accommodates 200V-600V
Power Characteristics	
Nominal Output Power (continuous)	3PH >45A @ 400V 50Hz
Maximum Output Power	3Ph >50A @ 400V 50Hz
AC Passthrough (continuous)	3Ph >= 100A @ 400V
Power Factor	0.8 Lagging – 0.8 Leading
Safety Systems	DC Input Lightning Protection Anti-Islanding Reverse polarity protection Insulation resistance detection Residual current detection Output overcurrent protection Output short circuit protection Output over voltage protection (DC Type II AC Type II) Surge protection
Efficiency Ratings	
Maximum Efficiency	> 97.5 %
MPPT Efficiency	> 96.0 %
European Efficiency Rating	> 99.8 %
Certification	
Local Approval	City of Cape Town Type Tested Inverters List (NRS 097-2-1)
Local Regulatory Compliance	NRS 097-2-1: 2017 certification required

All proposed inverters must meet or exceed these criteria to be considered for approval.

Inverters shall feature a ground connection to the system common grounding using anti-theft earth cable.

1.10. Inverter Remote Monitoring and Control

The Tenderer shall provide (if applicable), install and setup any peripheral or built-in monitoring hardware to enable internet-based monitoring of the inverter performance.

The system shall be capable of providing at least the following information :

- Live Input power
- Live Power demand
- Live PV Input
- Historical Performance (minimum 6 months and downloadable)
- Access to set inverter parameters
- Battery state of charge
- Remote bypass/shut-down
- Event notifications

The Tenderer shall be required to include a 4G based router with data connection (SIM) for the first 12 months from the date of acceptance by the department.

1.11. Battery Specifications

The battery components shall first and foremost be compatible with the specifications of the inverter in-terms of charging voltages and communication bus connections. Batteries shall be mounted as close as practically possible to the inverter to limit line losses. In addition, the battery shall comply with the following requirements:

Battery Technology	Lithium Ion Phosphate (LiFePO4)
Continuous Charge Rating	>= Inverter DC Charge Rating
Continuous Discharge Rating	>= Inverter DC Charge Rating
Expansion	BMS controlled up to 4 in parallel
Maximum Discharge BMS Controlled	>= 90% of rated capacity
BMW Communication	RS485 or CAN connection
Cycle Rating	10 Year Battery Warrantee at 6000 Cycles @ 80% DoD or equivalent.
Warrantee	Manufacturer must have: Local technical and maintenance support within Western Cape Replacement parts and stock availability within South Africa The batteries must be assembled/manufactured in South Africa
Casing	The battery shall feature on-board epoxy coated steel or aluminium casing with a screen/ visual indicator of charge level.
Mounting	Wall mount preferred Floor mount acceptable Rack mount not acceptable

1.12. Battery Installation and Connection Instructions

DC cable selection shall be based on the rated maximum discharge current and shall be selected to limit voltage drop over the cable to < 2% of the battery rated voltage.

Suitable sized DC rated circuit breakers shall be installed on the positive terminal as close as practically possible to the battery terminals.

Connections between the battery, isolators (if not integrated) and the inverter shall be bolt-on type and shall be torqued as per manufacturer recommendation. Connections shall be cleaned with electrical cleaner before connection.

Wall mounted batteries are preferred but if floor mounted batteries are selected, they shall be installed on a raised support platform.

- Wall mounted batteries shall follow the OEM mounting instructions and hardware suggestions. If the wall is not concrete/masonry or otherwise incapable of suitably supporting the load, the Tenderer shall install a mounting backplate of 3mm galvanized steel to which the wall bracket will be attached. Detailed instructions are included in the site specific specifications regarding wall construction for mounting.

- If the installation area features concrete flooring, the support platform shall be form-cast 25MPa concrete of 150mm height extending at least 100mm beyond the physical dimensions of the battery. The existing concrete shall be scarified before casting. Edges shall be chamfered.
- If the installation area features flooring that is not suitable for a concrete base, the Tenderer shall manufacture an angle iron supporting frame. The components shall feature 50mmx50mmx5mm welded angle iron with cross bracing and a 3mm steel baseplate. The frame shall feature flanged footing plates which shall be bolted securely to the floor.

1.13. Warranties

The installation shall be signed off by competent persons responsible for the structural and electrical certifications and letters of compliance.

All penetrations and subsequent repairs shall be free from leaks for a period of 3 years from the date of acceptance by the client.

The inverter shall feature a standard 5-year warrantee.

The battery shall feature a performance-based warranty no less than 6000 cycles at 80% average DoD.

The solar panels shall feature a 30-year performance-based warranty in-addition to a 10-year workmanship and materials warrantee.

All other workmanship and materials shall feature a standard 1-year warrantee.

Warrantee information with purchase orders (if the warrantee is linked to purchase date) shall be supplied in the O&M and compliance manual per site.

1.14. Service and Maintenance

The Tenderer shall include all required service and maintenance procedures as recommended by the OEM for a period of 12 months from the date of acceptance by the department. This service shall consist of ongoing off-site monitoring and quarterly maintenance and inspections which shall include as a minimum the following actions and checks:

- Off-site monitoring of system performance (monthly with report to department)
- Visual inspection
 - Solar Panels
 - Panel Wiring
 - Damage or signs of tampering, overheating or excessive dust/debris collection.
- Physical cleaning of solar panels
- Cleaning of inverter and/or battery air intakes. Inspection
- Physical checking of all connections
- Physical checking of mountings and fixing hardware as well as waterproofing

During the warranty period all materials, spares and consumables shall be for the account of the Tenderer except in the case of physical damage (weather related, vandalism or theft) where such damage is not found to be due to incorrect installation.

1.15. Local Authority Registration

The Tenderer shall allow for the registration of the hybrid/grid tied system with the local authority. Registration shall be done on behalf of the client who shall appoint the Tenderer as a proxy for the purpose of registration.

Registration and inspection fees due to the local authority as well as any additional work or materials required to enable such registration, where not included in the specifications, shall be paid to the Tenderer at a proven cost + 10% markup rate. A suitable bill item is allowed with a preliminary estimate of the registration cost and allowance is made for an administration fee to facilitate the registration process.

Where an installation requires the installation of new meters or anti-feedback devices, the cost thereof shall where possible be added to the municipal statement for the account of the department. Where this is not possible, the Tenderer shall facilitate the installation fee and shall claim such item at a proven cost + 10% markup.

1.16. Training and Manuals

The Tenderer shall allow for a 3h training session at each facility. This training should include the following minimum topics and demonstrations:

- How to isolate the inverter(s), batteries and solar arrays.
- How to check battery level.
- How to check load on the inverter.
- How to switch on/off power supply to the inverter.
- How to switch on/off utility power supply (bypass inverter).
- How to fully isolate the load from all supplies.
- Basic system operation.
- Basic system fault-finding.
- Safety when working on the system.
- Operation of the off-site application or web interface.
- Maintenance procedures and frequency

In addition to the training, the Tenderer shall issue a site-specific manual covering the above topics in detail along with product information and general maintenance requirements. 1 physical copy shall be issued to the on-site staff, and an electronic copy shall be provided to the department.

The manual shall include circuit diagrams, as-built drawings, control procedures and the registration and warranty information along with any certification/CoC issued for the site.

The Tenderer shall also include formal training identified by the department and facilitate this training in the contract period. A suitable item is included in the bill of quantities for 6 people.

2. Brooklyn Chest Hospital

2.1. Design Parameters

Site Information	
Location City	Cape Town, Milnerton
Location Address	Stanberry Street
Location GPS	-33.90021, 18.48614
Technical Representative	Tulani Jumba - 021 508 7465
Oxygen Plant Design	
PSA Electrical Size	2 x 15 kW Generators
Energy Consumption	10.5 kW | 252 kWh per day
Load Characteristics	
Ward E	13.75 kW Peak Load (Summer Load + 25%)
Ward F	13.75 kW Peak Load (Summer Load + 25%)
Oxygen Generator	30 kW Peak Load
Design Peak Load	57.5 kW
Design Nominal Load	15.0 kW
Solar System Parameters	
Inverter Type	Hybrid (Dedicated Feed)
Inverter Capacity	75 kW (2x35kW)
Inverter Bypass Capacity	200A 131kW
Panel Specification	620W (1.134mm X 2382mm X 30mm) 32.8kg
Battery Capacity	2x30 kWh
PV Capacity	66.96 kW
Normalised Daily Production (20Y)	298 kWh per day
Redundant Standby Supply	4h
Solar Panel Design	
PSA Roof	Klip-Lock covering
	Azimuth 22.3° @ 15° Slope
	24 panels X 620W

	
Ward B	Big 6 Fiber Cement
	Azimuth 22.1° @ 30° Slope
	40 panels X 620W
	
Ward C	Big 6 Fiber Cement
	Azimuth 22.1° @ 30° Slope
	44 panels X 620W
	
Site Conditions	
Earth conditions	Sandy

Mounting Wall Construction	Container Corrugated Iron
Asbestos Risk	No known exposure
Electrical Control Parameters	
Max Passthrough Current	Inverter controlled or 80% of maximum passthrough current
Changeover On-Load Rating	200 A

2.2. DC Cable Route

One of the containers for the PSA will have 3m of usable space (3000mmx2440mm) where all switchgear, inverters and batteries shall be installed.

Between Ward B and Ward C the DC power cables shall run in a dedicated 127mmx76mm P9000 galvanized channel with cover (Orange). The channel shall be electrically bound to earth and shall feature a warning sticker at 2m intervals to warn of high voltage.

From Ward C the channel shall exit down the building into a draw-box mounted 1200mm above ground level (Purple) from where the DC cable pairs shall enter a 110mm sleeve trenched for bottom entry into the plinth and container (Yellow).

The cable depth shall be 800mm from the centre of the sleeve to ground level and shall be laid in a 300mm bed of sand with high voltage warning tape buried 150mm above the cable along the length of the trench before backfilling. Bends shall be of large radius to simplify cable replacement.

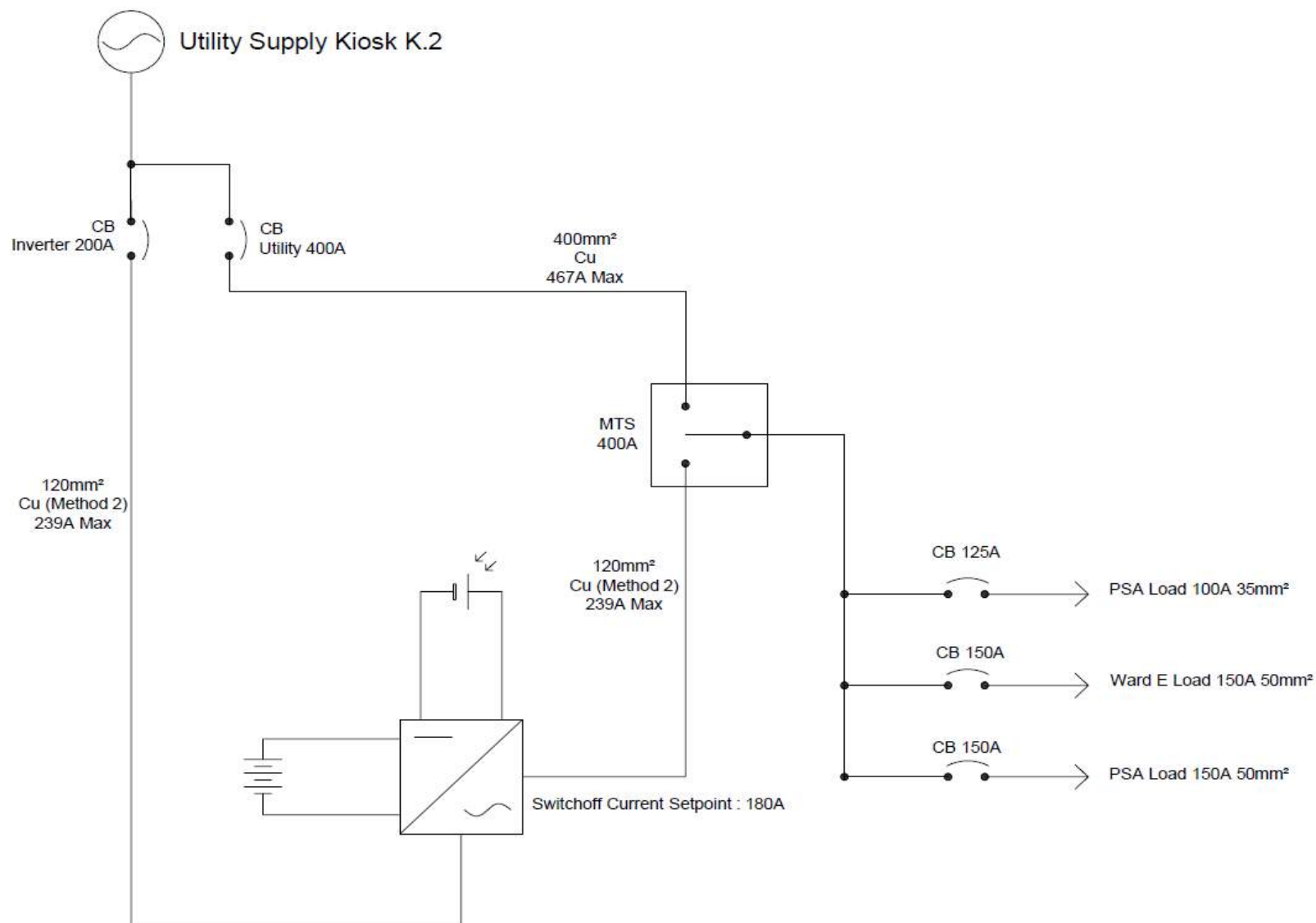


Existing kiosk K.3 has 2x150A circuit breakers servicing ward E and ward F. The cables shall be rerouted into container power control distribution board and the kiosk dismantled. The feed cable shall feed the changeover and the inverter input via dedicated circuit breakers.

The transfer switch shall automatically activate on inverter output failure or maximum passthrough load condition. 3 circuit breakers shall feed the two wards and the PSA plant directly after the transfer switch.

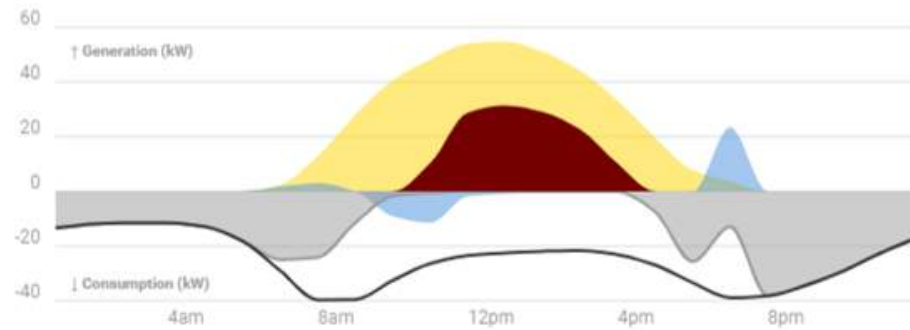
The circuit diagram provided should not be installed as-is. The circuit breakers, ATS/MTS and the cable sizes are provided for illustrative/Offering purposes only. The design of the system shall be done by the responsible professional competent person and cable sizes shall be paid at the quoted price in the bill of quantities.

2.3. Reticulation Control Diagram

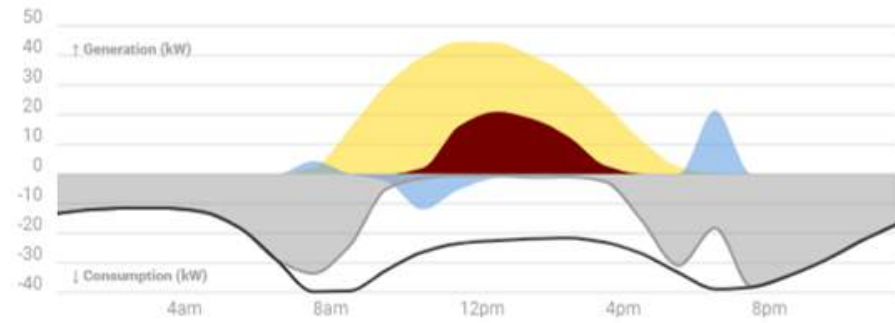


2.4. Solar Yield

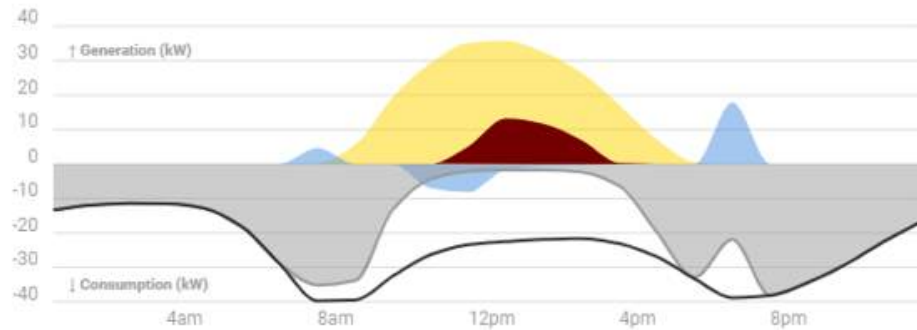
Summer



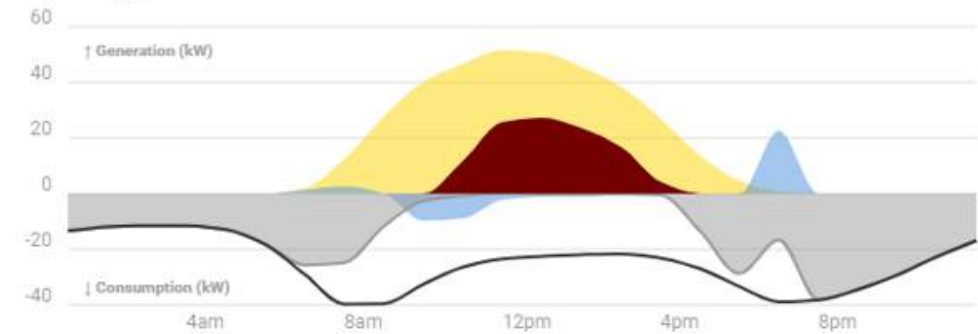
Autumn



Winter



Spring



■ CONSUMPTION (kWh) ■ GENERATION (kWh) ■ NET CONSUMPTION (kWh) ■ EXPORT TO GRID (kWh)
 ■ BATTERY (kWh) ■ EXPORT LIMITING (kWh)

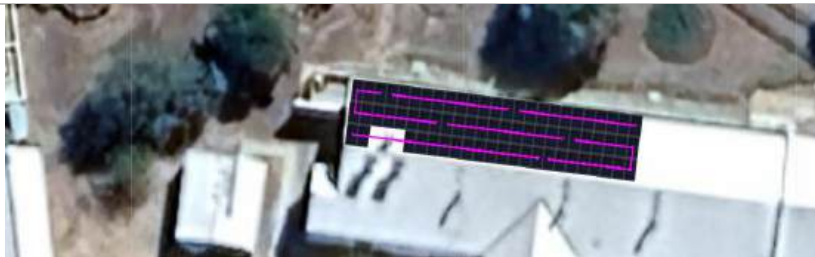
GENERATION (kWh/day)
 CONSUMPTION (kWh/day)



3. Beaufort West Hospital

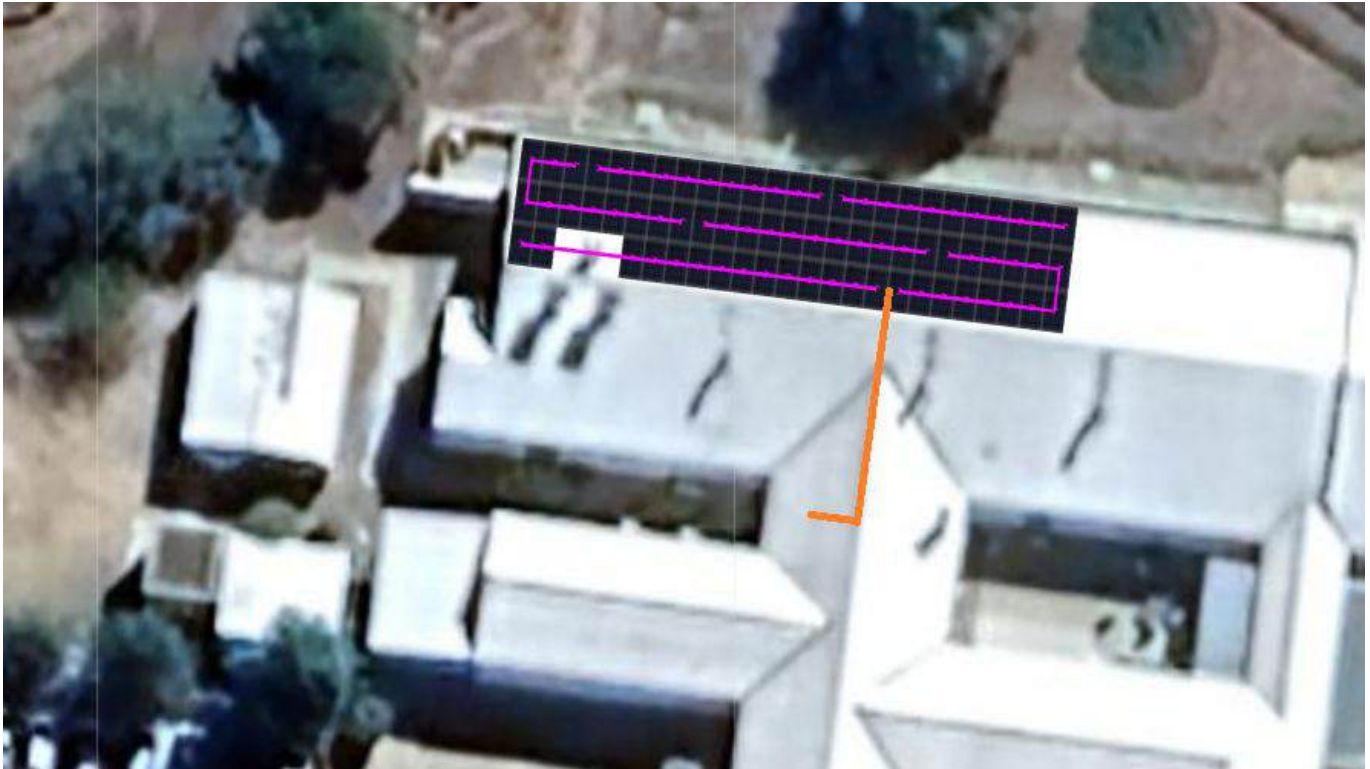
3.1. Design Parameters

Site Information	
Location City	Beaufort West
Location Address	Voortrekker Street, Hospital Hill
Location GPS	-32.3527947 , 22.6067603
Technical Representative	Clement Makwela – 023 414 8200
Oxygen Plant Design	
PSA Electrical Size	2 x 15 kW Generators
Energy Consumption	10.5 kW | 252 kWh per day
Load Characteristics	
Trauma	15.0 kW Peak Load (Summer Load + 25%)
Admissions	8.50 kW Peak Load (Summer Load + 25%)
Design Peak Load	23.5 kW
Design Nominal Load	12.00 kW
Solar System Parameters	
Inverter Type	Hybrid (Dedicated Feed)
Inverter Capacity	35 kW
Inverter Bypass Capacity	200A 131kW
Panel Specification	595W (1.134mm X 2278mm X 30mm) 27.6kg
Battery Capacity	40 kWh
PV Capacity	42.84 kW
Normalised Daily Production (20Y)	195 kWh per day
Redundant Standby Supply	3h20m

Solar Panel Design	
Hospital Roof	Klip-Lock covering
	Azimuth 7.1° @ 20° Slope
	72 panels X 595W
	
Site Conditions	
Earth conditions	Hard
Mounting Wall Construction	Masonry
Asbestos Risk	Asbestos Present on site – Not on installation roof
Electrical Control Parameters	
Max Passthrough Current	Inverter controlled or 80% of maximum passthrough current
Changeover On-Load Rating	200A

3.2. DC Cable Route

In the main distribution board plantroom, there is sufficient space for wall mounting of the equipment. The cables shall run through the maternity roof above the link passage and enter the plant room from the ceiling. DC Cable shall run in a dedicated wire mesh tray in the roof space and the tray shall be bound to earth.



In the main circuit board, there is a spare slot for the installation of a dedicated breaker feeding the inverter. DB2 circuit breaker is rated at 50A and feeds the trauma section of the facility. DB3 circuit breaker is rated at 100A and feeds the admission section of the facility.

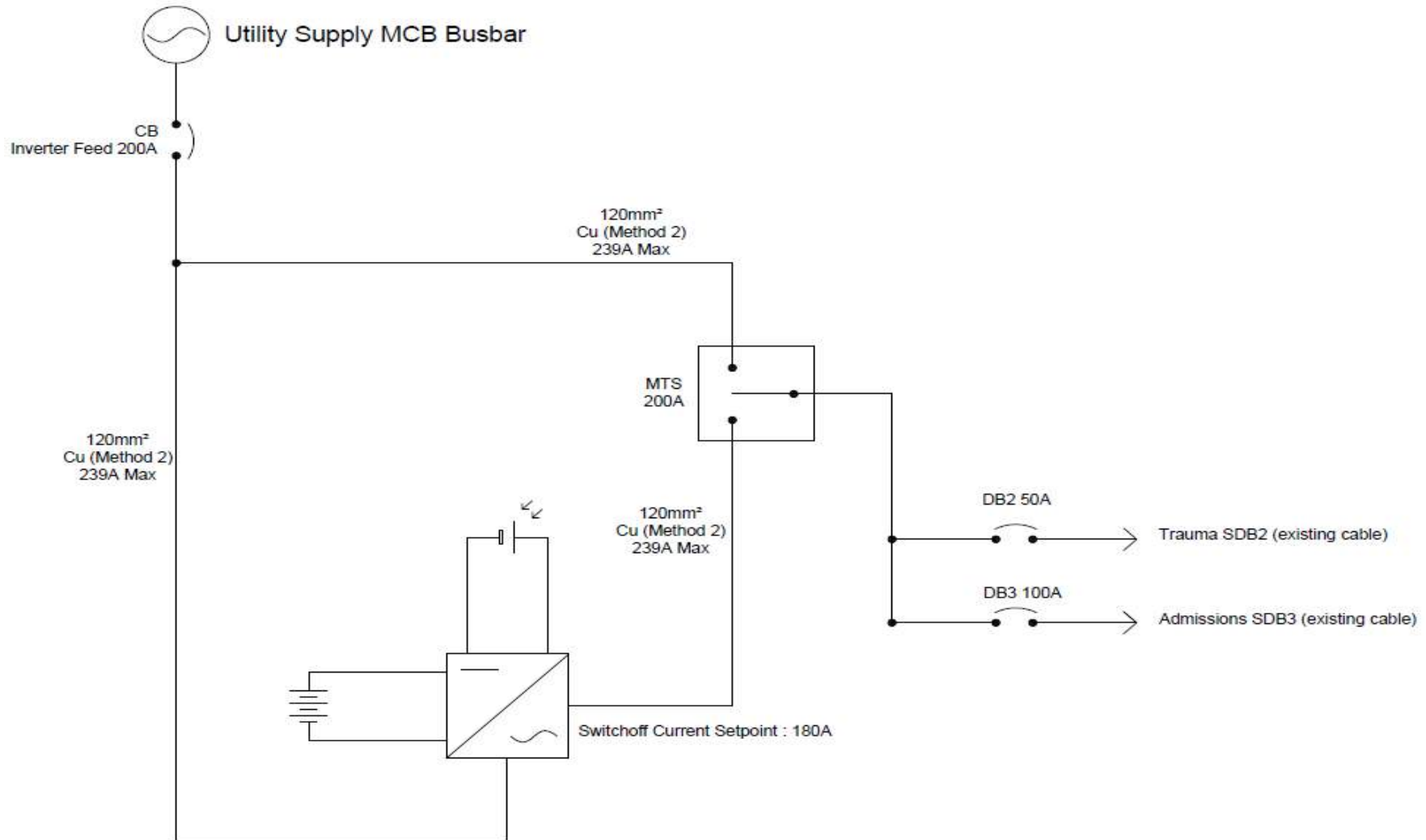
The changeover shall be installed in a dedicated SDB mounted next to the inverter.

The feed cable from the new dedicated circuit breaker shall feed the changeover and the inverter input.

The transfer switch shall automatically activate on inverter output failure or maximum passthrough load condition. Output from the changeover shall feed back to the existing DB2 and DB3 circuit breakers.

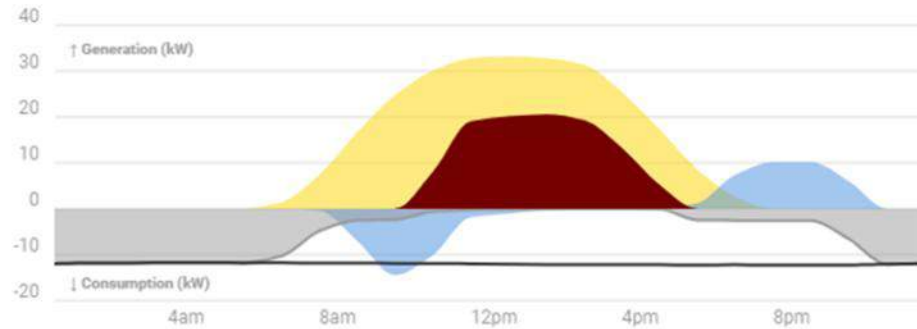
The circuit breakers, ATS/MTS and the cable sizes are provided for illustrative/Offering purposes only. The design of the system shall be done by the responsible professional competent person and cable sizes shall be paid at the quoted price in the bill of quantities.

3.3. Reticulation Control Diagram

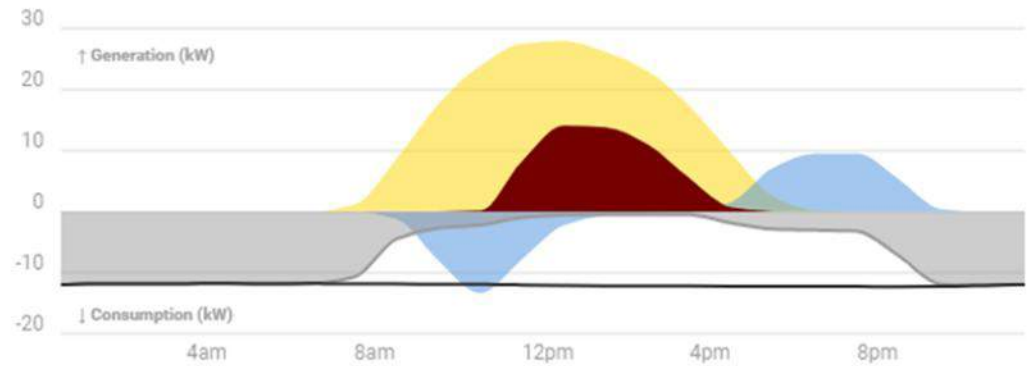


3.4. Solar Yield

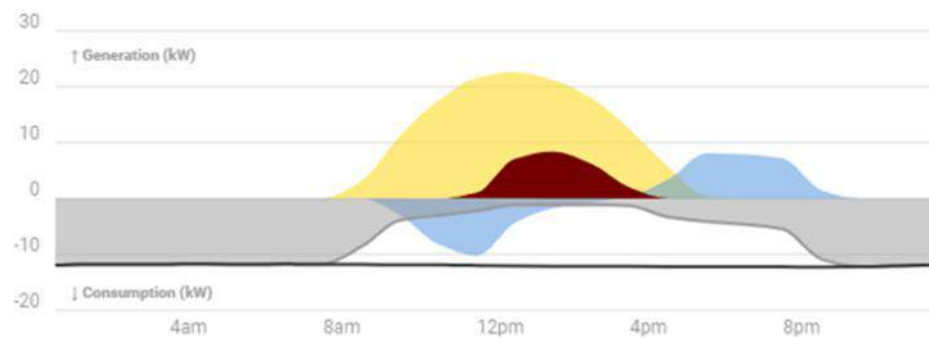
Summer



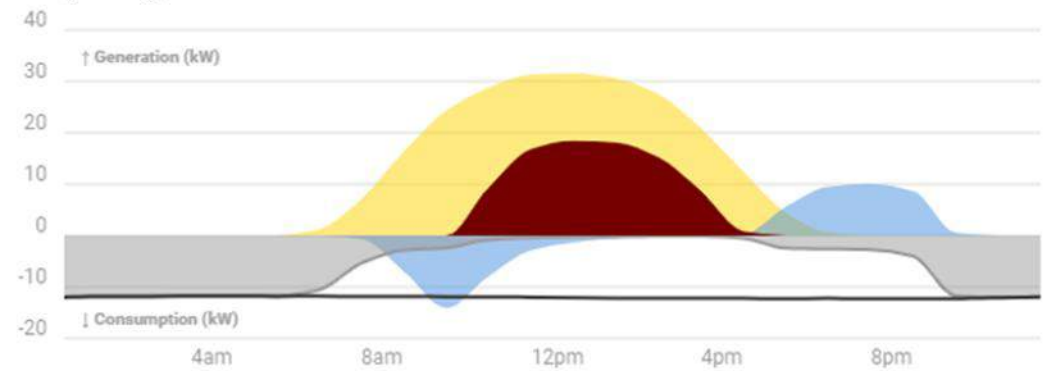
Autumn



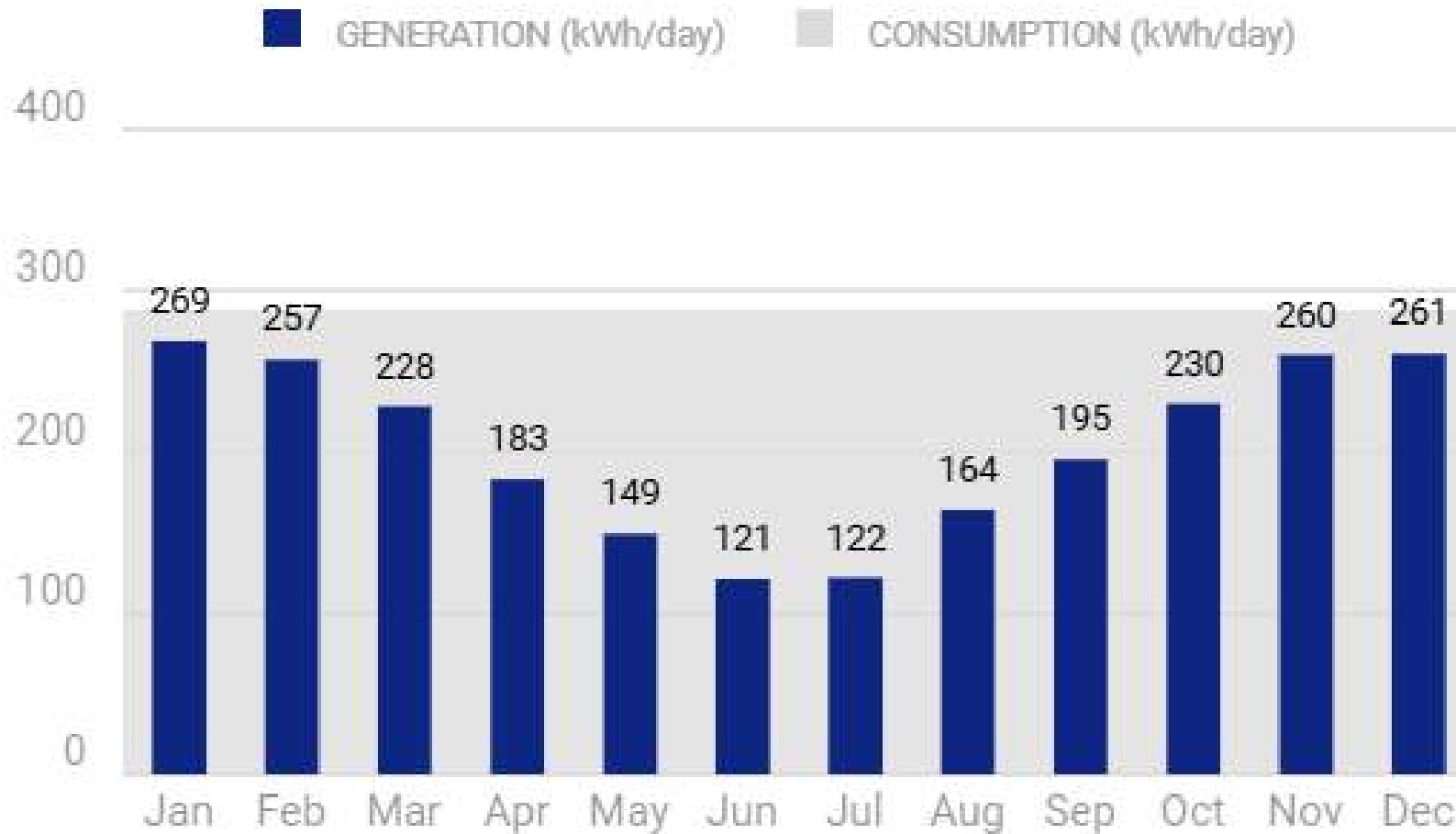
Winter



Spring




CONSUMPTION (kWh) GENERATION (kWh) NET CONSUMPTION (kWh) EXPORT TO GRID (kWh)
 BATTERY (kWh) EXPORT LIMITING (kWh)



4. Ceres Hospital

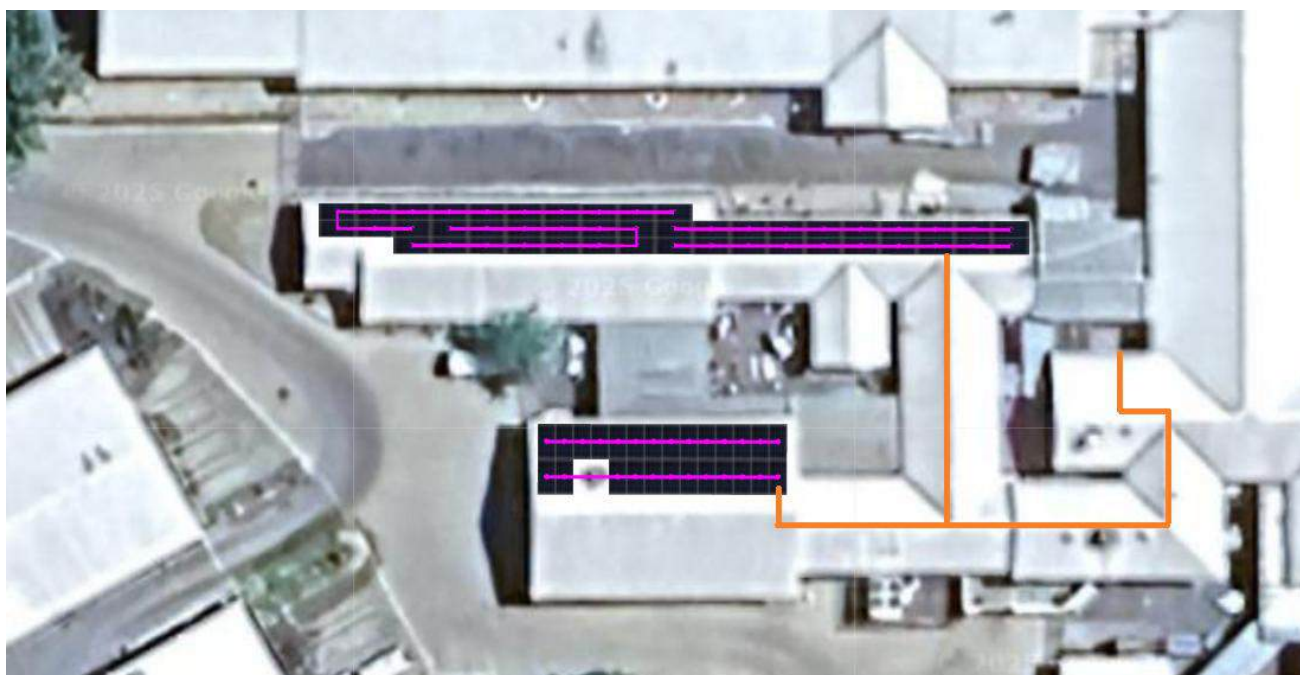
4.1. Design Parameters

Site Information	
Location City	Ceres
Location Address	Plantation Street
Location GPS	-33.3627992 , 19.3000903
Technical Representative	Clint Gabriels – 023 316 9600
Oxygen Plant Design	
PSA Electrical Size	2 x 7.5 kW Generators
Energy Consumption	5.25 kW | 126 kWh per day
Load Characteristics	
PSA Plant	15.0 kW Peak Load
DB-C Casualty	15.0 kW Peak Load
Design Peak Load	30.0 kW
Design Nominal Load	12.00 kW
Solar System Parameters	
Inverter Type	Hybrid (Dedicated Feed)
Inverter Capacity	35 kW
Inverter Bypass Capacity	200A 131kW
Panel Specification	620W (1.134mm X 2382mm X 30mm) 32.8kg
Battery Capacity	40 kWh
PV Capacity	44.64 kW
Normalised Daily Production (20Y)	200.20 kWh per day
Redundant Standby Supply	3h20m
Solar Panel Design	
Hospital Roof	Klip-Lock covering
	Azimuth 0.1° @ 20° Slope
	72 panels X 620W

	
Site Conditions	
Earth conditions	Sandy Loam
Mounting Wall Construction	Masonry
Asbestos Risk	No known exposure
Electrical Control Parameters	
Max Passthrough Current	Inverter controlled or 80% of maximum passthrough current
Changeover On-Load Rating	200A

4.2. DC Cable Route

In the main distribution board plantroom, there is sufficient space for wall mounting of the equipment. The cables shall run through the roof above the kitchen and passage and enter the plant room from the ceiling. DC Cable shall run in a dedicated wire mesh tray in the roof space and the tray shall be bound to earth.



In the main circuit board, there is a spare slot for the installation of a dedicated breaker feeding the inverter. DB-C circuit breaker is rated at 60A and feeds the trauma section of the facility.

The changeover shall be installed in a dedicated SDB mounted next to the inverter.

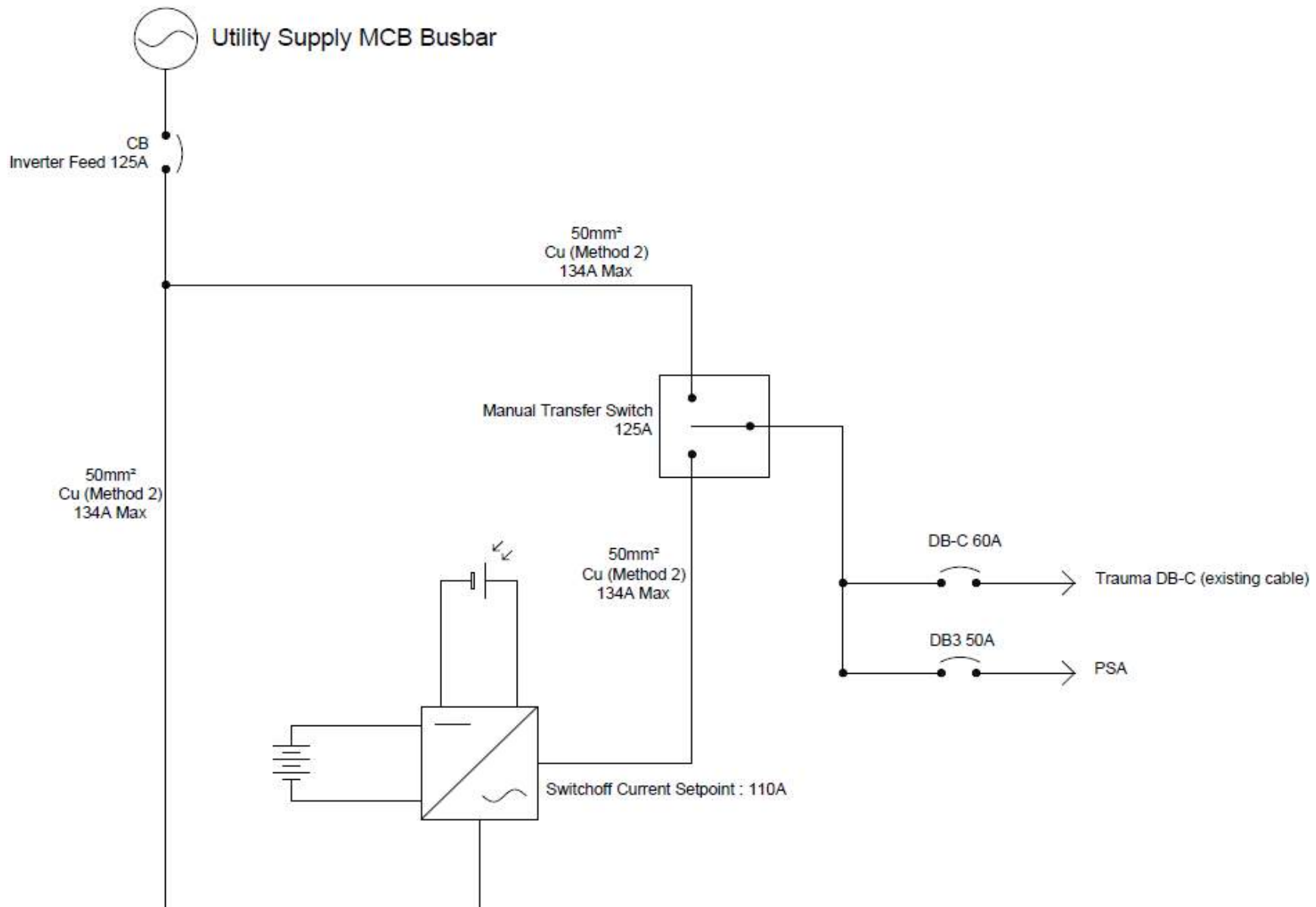
The feed cable from the new dedicated circuit breaker shall feed the changeover and the inverter input.

The inverter is rated to supply peak power and therefore a motorised transfer switch is not required. A manual transfer switch shall allow for bypass of the inverter feed for maintenance.

Output from the transfer switch shall feed back to the existing DB-C circuit breaker and to a new dedicated circuit breaker for the PSA plant. A new supply cable shall be drawn to the PSA plant from the new circuit breaker.

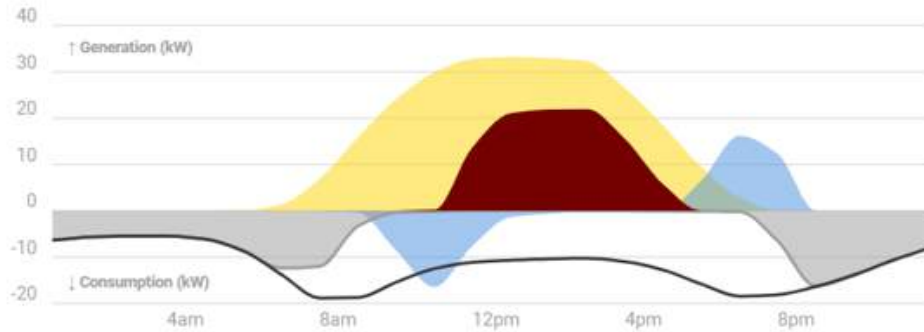
The circuit breakers, transfer switch and the cable sizes are provided for illustrative/Offering purposes only. The design of the system shall be done by the responsible professional competent person and cable sizes shall be paid at the quoted price in the bill of quantities.

4.3. Reticulation Control Diagram

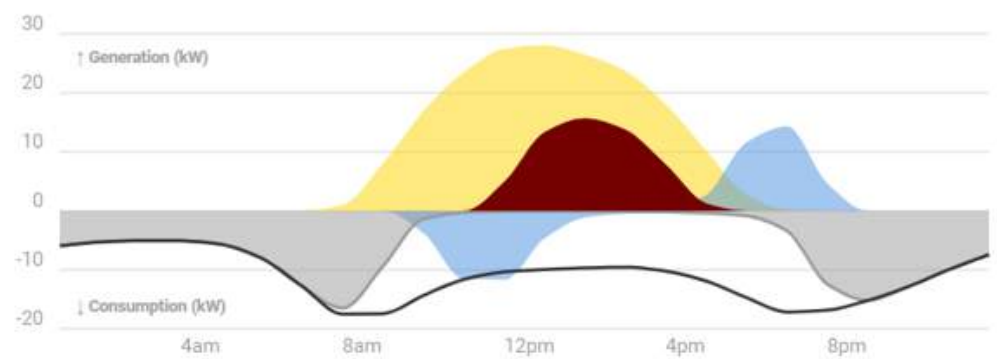


4.4. Solar Yield

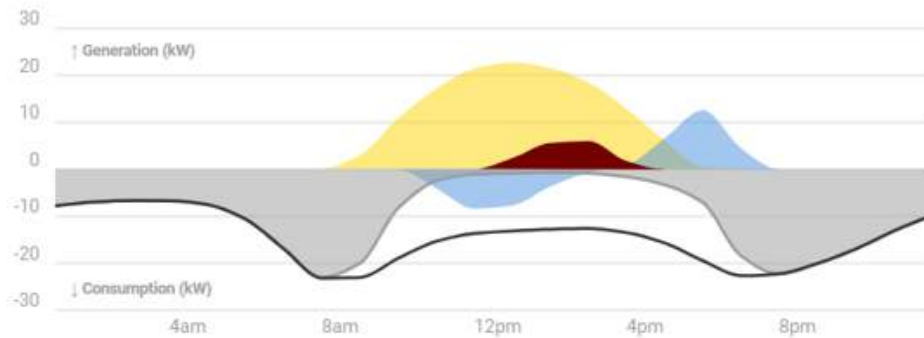
Summer



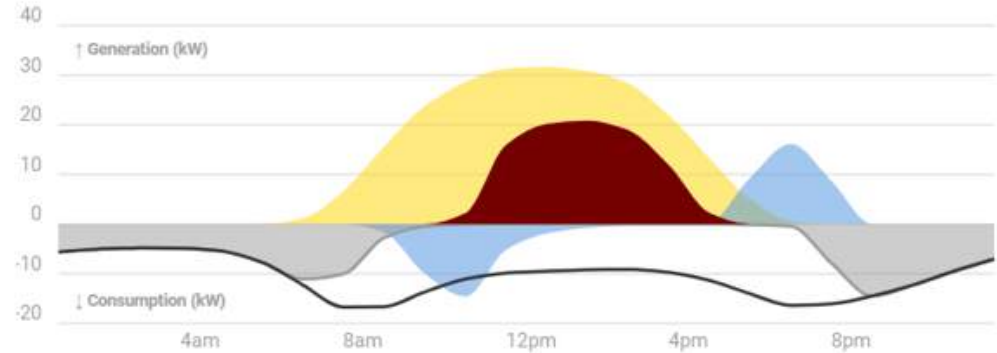
Autumn



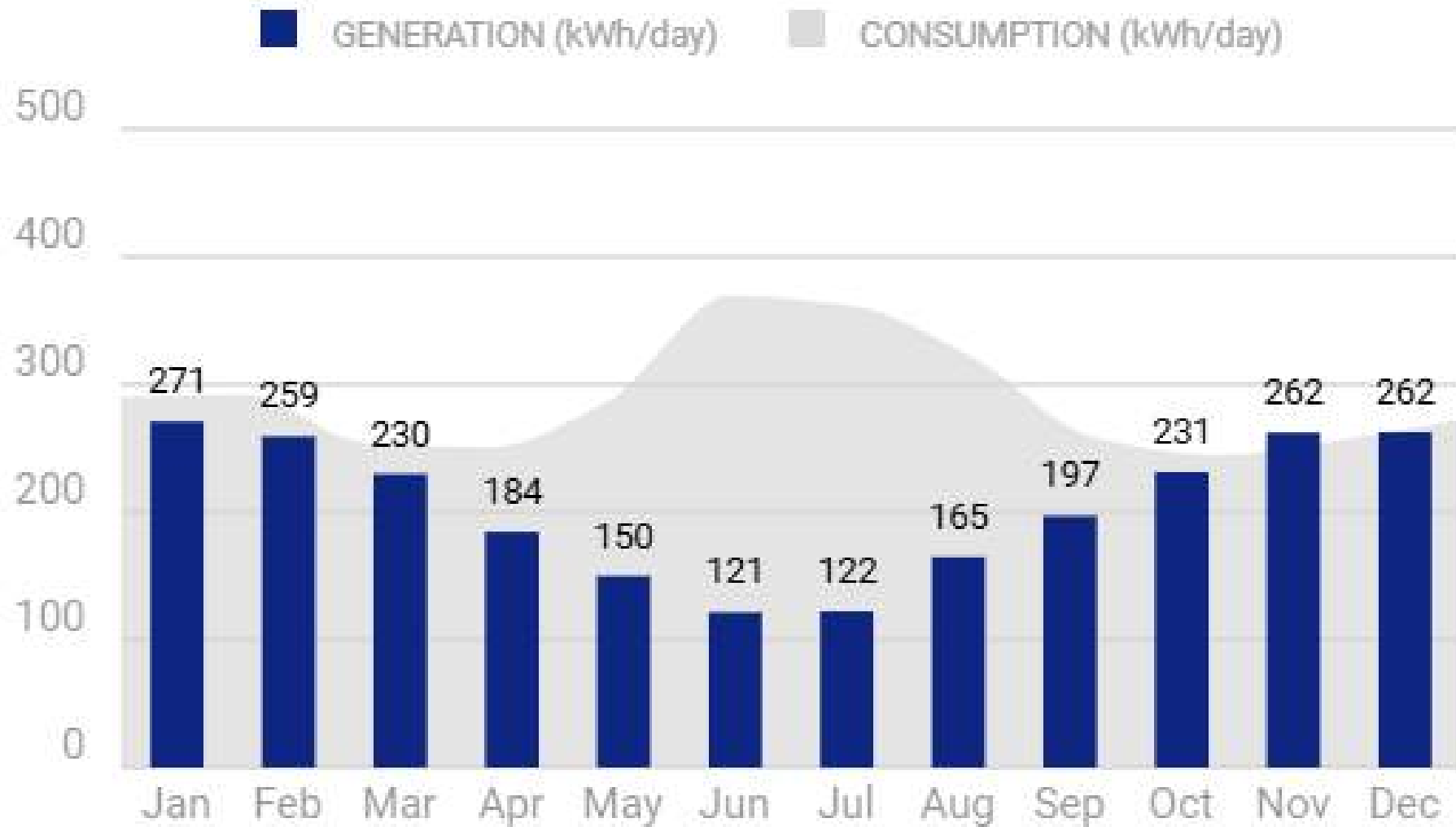
Winter



Spring




■ CONSUMPTION (kWh) ■ GENERATION (kWh) ■ NET CONSUMPTION (kWh) ■ EXPORT TO GRID (kWh)
 ■ BATTERY (kWh) ■ EXPORT LIMITING (kWh)



5. Wesfleur Hospital

5.1. Design Parameters

Site Information	
Location City	Atlantis
Location Address	Sampson Road, Wesfleur
Location GPS	-33.5645167, 18.4944823
Technical Representative	Ricardo Cupido – 021 571 8040
Oxygen Plant Design	
PSA Electrical Size	2 x 7.5 kW Generators
Energy Consumption	5.25 kW | 126 kWh per day
Load Characteristics	
PSA Plant	15.0 kW Peak Load
DB-C Casualty	20.0 kW Peak Load
Design Peak Load	35.0 kW
Design Nominal Load	15.00 kW
Solar System Parameters	
Inverter Type	Hybrid (Dedicated Feed)
Inverter Capacity	35 kW
Inverter Bypass Capacity	200A 131kW
Panel Specification	620W (1.134mm X 2382mm X 30mm) 32.8kg
Battery Capacity	60 kWh
PV Capacity	44.64 kW
Normalised Daily Production (20Y)	188 kWh
Redundant Standby Supply	4h
Solar Panel Design	
Hospital Roof	Corrugated Sheetmetal covering
	Azimuth 24.7° @ 8° Slope

	72 panels X 620W
	
Site Conditions	
Earth conditions	Sandy Loam
Mounting Wall Construction	Masonry
Asbestos Risk	Asbestos Present (Old roof under new sheetmetal roof)
Electrical Control Parameters	
Max Passthrough Current	Inverter controlled or 80% of maximum passthrough current
Changeover On-Load Rating	200A

5.2. DC Cable Route

In the main distribution board plantroom, there is sufficient space for wall mounting of the equipment. The cables shall run through the roof in the main passage and enter the plant room from the ceiling. DC Cable shall run in a dedicated wire mesh tray in the roof space and the tray shall be bound to earth.



In the main circuit board, there is a spare slot for the installation of a dedicated breaker feeding the inverter. EC circuit breaker is rated at 60A and feeds the emergency section of the facility.

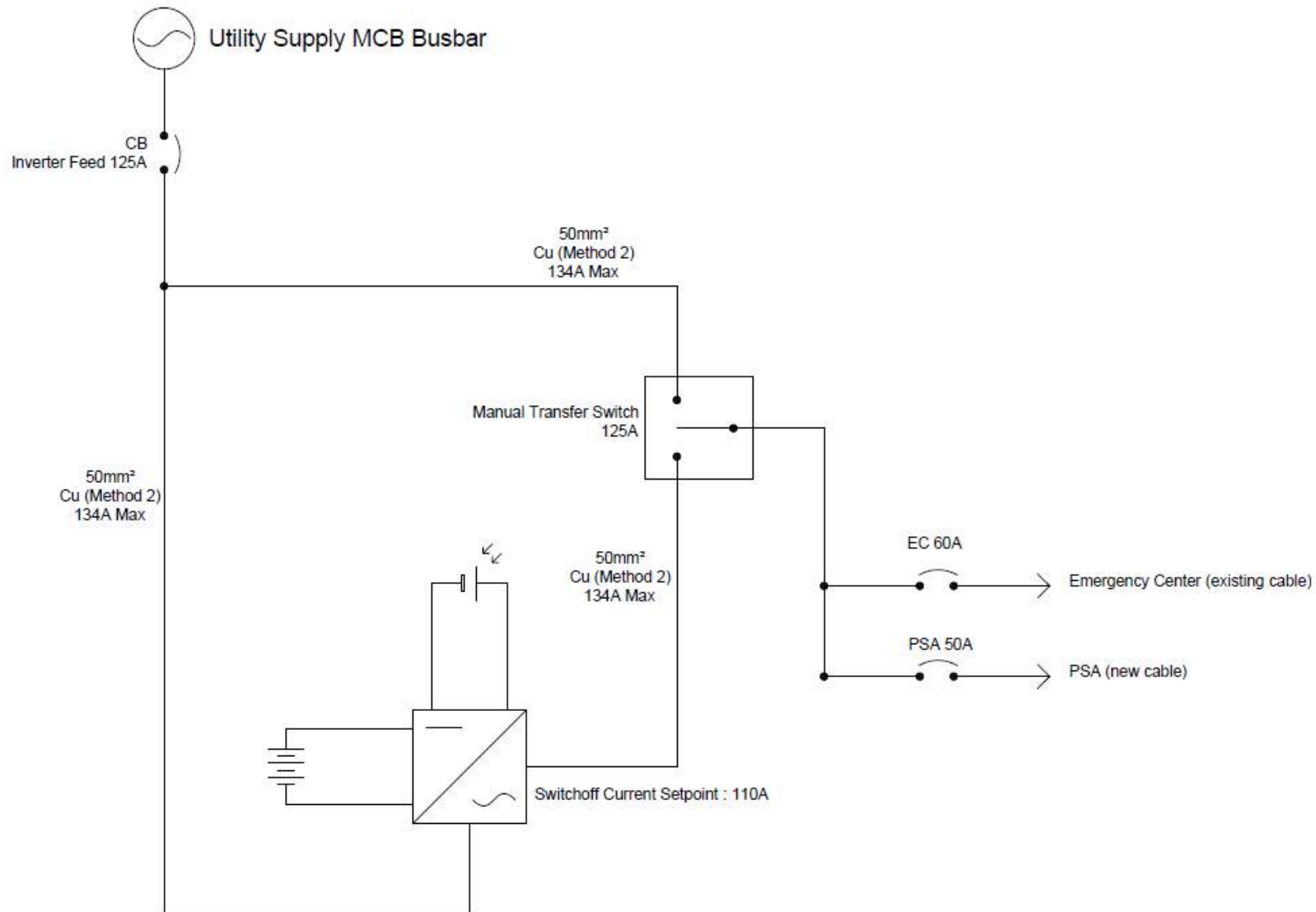
The changeover shall be installed in a dedicated SDB mounted next to the inverter.

The feed cable from the new dedicated circuit breaker shall feed the changeover and the inverter input.

Output from the transfer switch shall feed back to the existing emergency centre circuit breaker and to a new dedicated circuit breaker for the PSA plant. A new supply cable shall be drawn to the PSA plant from the new circuit breaker.

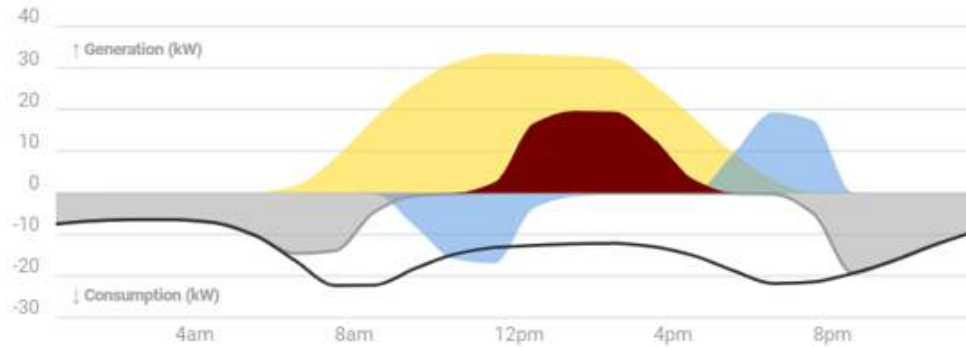
The circuit breakers, transfer switch and the cable sizes are provided for illustrative/Offering purposes only. The design of the system shall be done by the responsible professional competent person and cable sizes shall be paid at the quoted price in the bill of quantities.

5.3. Reticulation Control Diagram

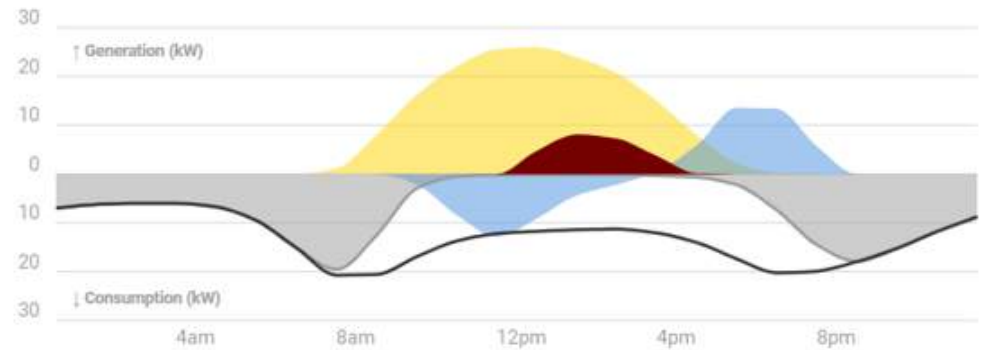


5.4. Solar Yield

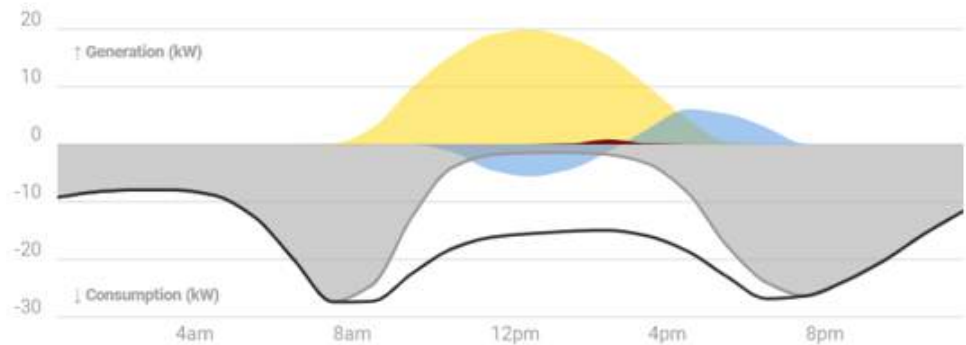
Summer



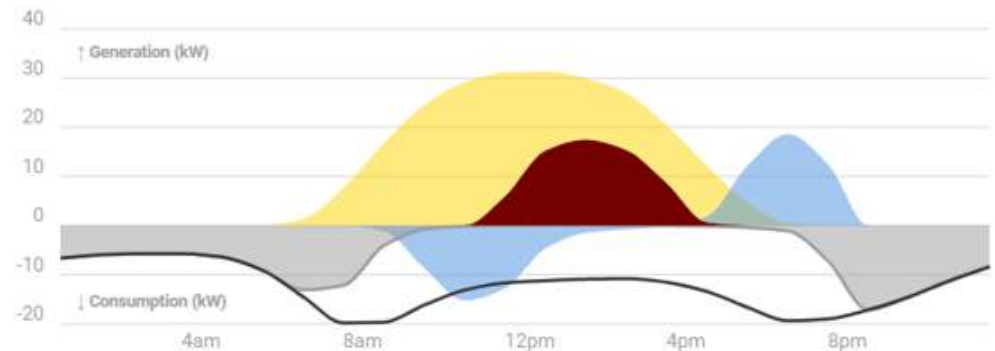
Autumn



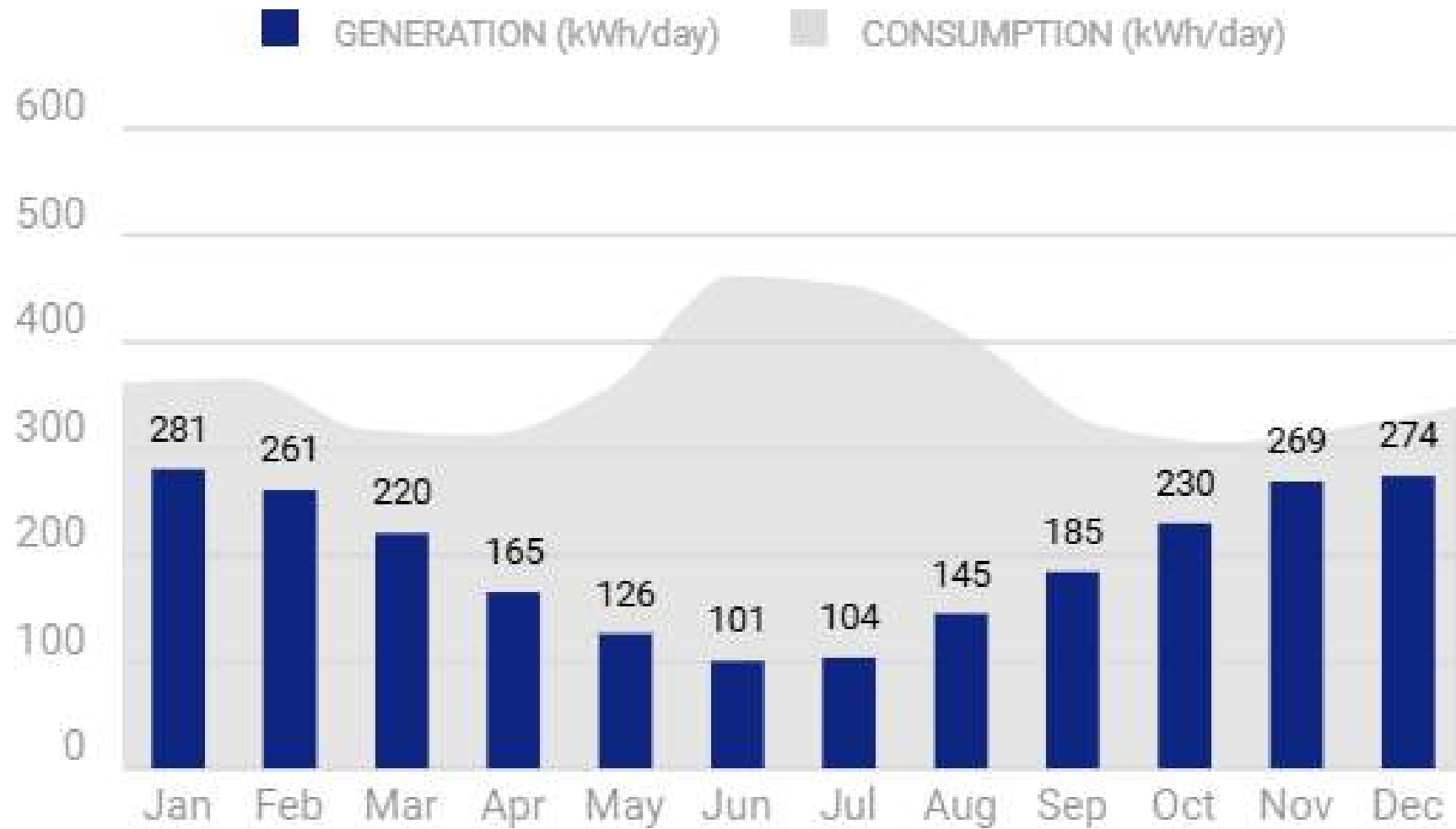
Winter



Spring



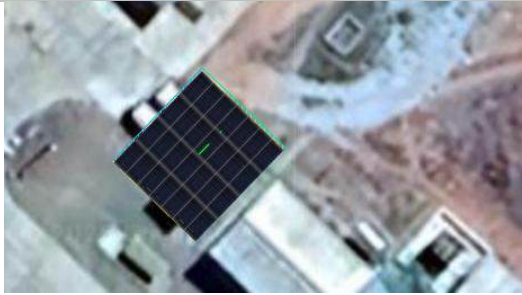

CONSUMPTION (kWh) GENERATION (kWh) NET CONSUMPTION (kWh) EXPORT TO GRID (kWh)
 BATTERY (kWh) EXPORT LIMITING (kWh)



6. Vredendal Hospital

6.1. Design Parameters

Site Information	
Location City	Vredendal
Location Address	Van Der Stel Street
Location GPS	-31.6693435, 18.5048757
Technical Representative	Albertus Rossouw – 027 213 2039
Oxygen Plant Design	
PSA Electrical Size	2 x 5.5 kW Generators
Energy Consumption	4.125 kW | 99 kWh per day
Load Characteristics	
Design Peak Load	35.0 kW
Solar System Parameters	
Inverter Type	Grid Tied
Inverter Capacity	35 kW
Inverter Bypass Capacity	200A 131kW
Panel Specification	620W (1.134mm X 2382mm X 30mm) 32.8kg
PV Capacity	34.72 kW
Normalised Daily Production (20Y)	147.5 kWh
Solar Panel Design	
PSA Roof	Corrugated Sheetmetal covering
	Azimuth 24.7° @ 15° Slope
	28 panels X 620W

		
Hospital Roof	Fibre Cement Sheets	
	Azimuth 24.7° @ 20° Slope	
	28 panels X 620W	
		
Site Conditions		
Earth conditions	Sandy – Hard Soil	
Mounting Wall Construction	Masonry	
Asbestos Risk	Asbestos in vicinity and gutters	
Electrical Control Parameters		
Max Passthrough Current	Inverter controlled or 80% of maximum passthrough current	
Changeover On-Load Rating	200A	

6.2. DC Cable Route

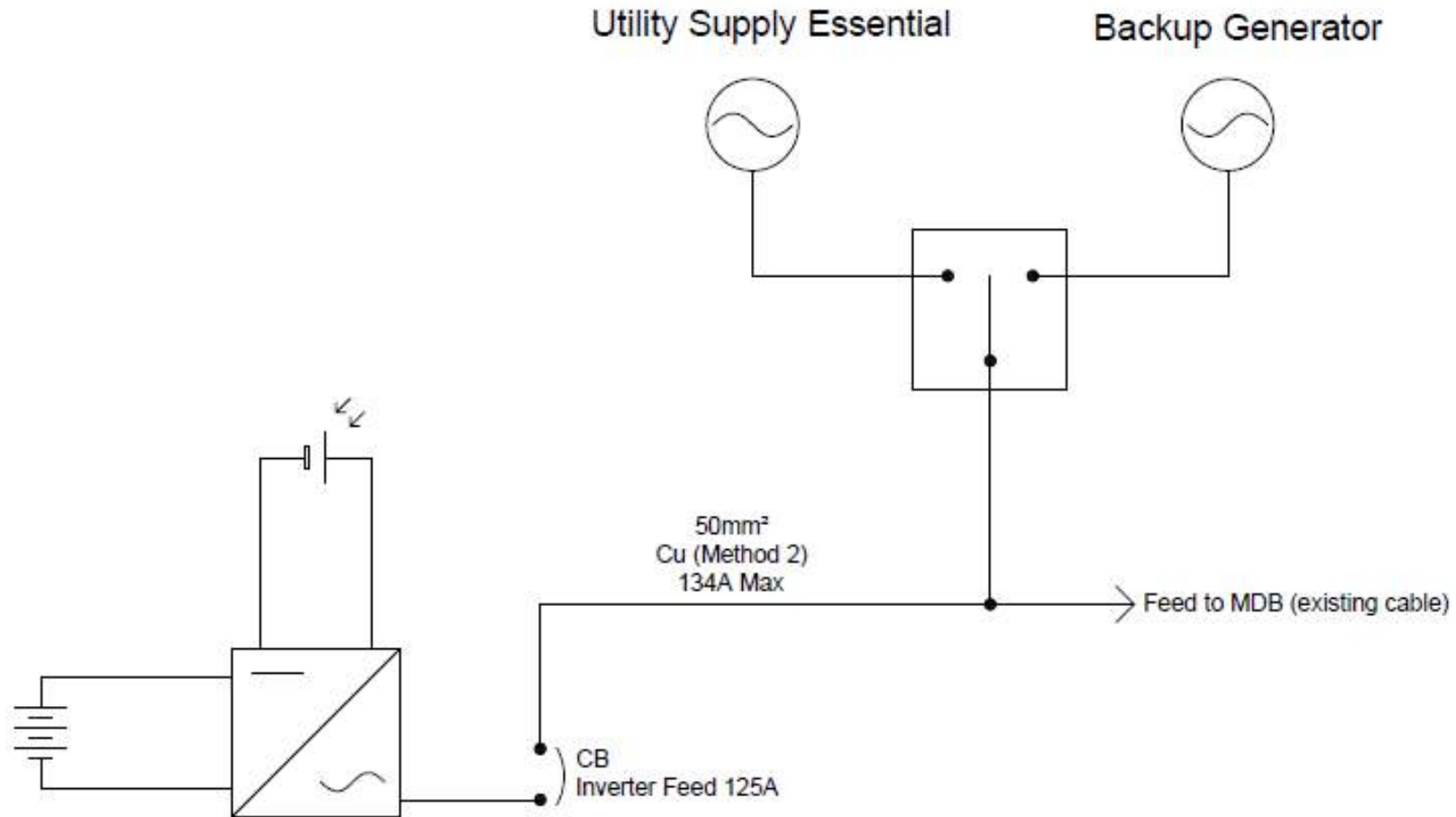
The inverter shall be installed in the storage room next to the main distribution board plantroom and there is sufficient space for wall mounting of the equipment. The cables shall run through the roof exit at the PSA plant. The cables shall be trenched underneath the road and into medical gas plantroom where it shall enter the roof to the second array of panels.



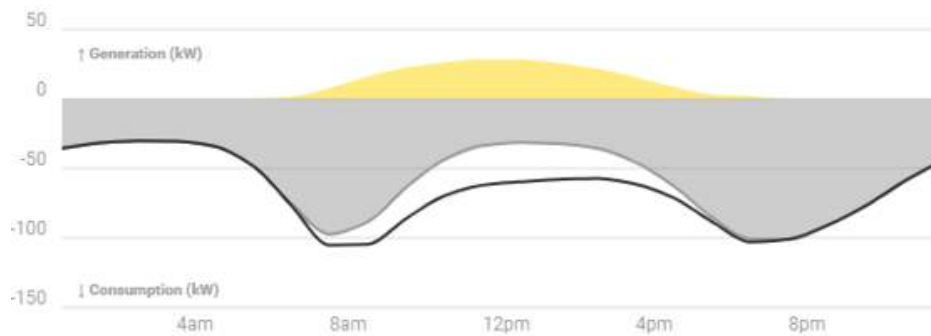
The output feed shall be run out of the building towards the generator into an existing covered trench and pulled into the essential power distribution board where feed-in shall occur into the reticulation.

The circuit breakers, transfer switch and the cable sizes are provided for illustrative/Offering purposes only. The design of the system shall be done by the responsible professional competent person and cable sizes shall be paid at the quoted price in the bill of quantities.

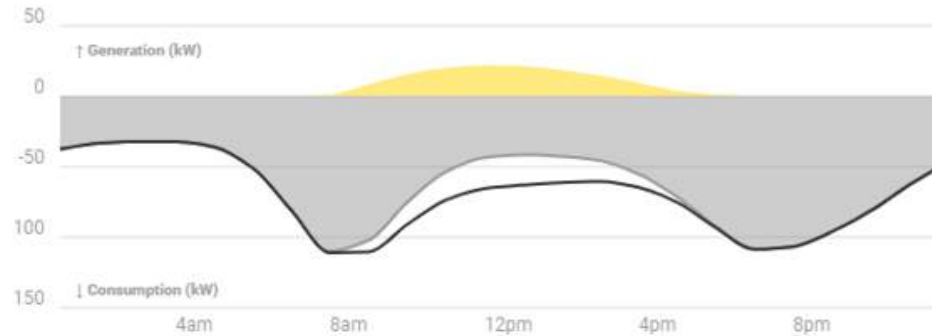
6.3. Reticulation Control Diagram



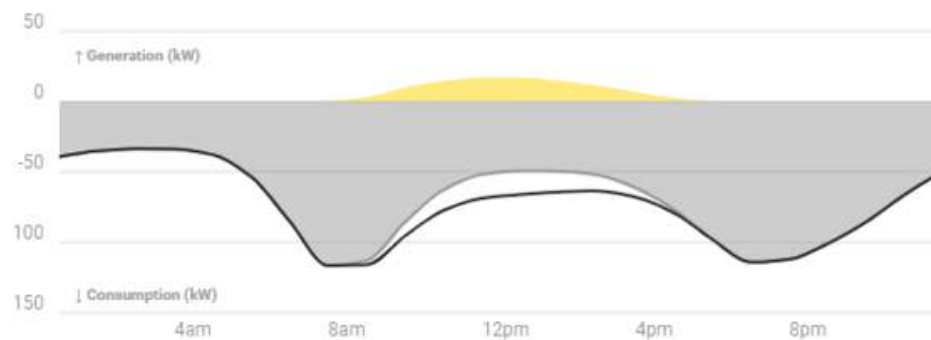
Summer



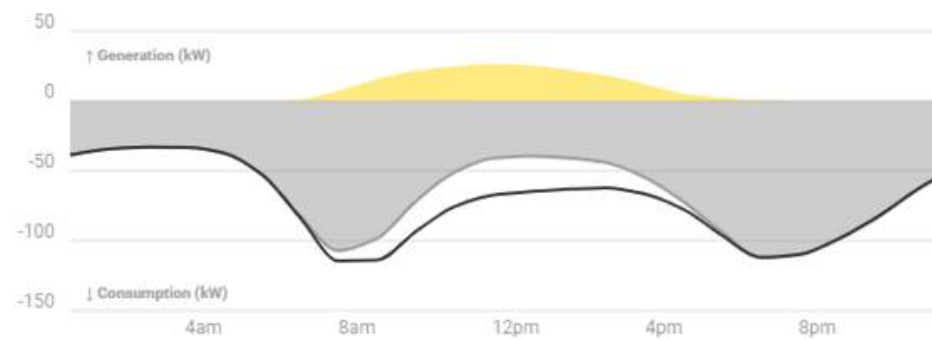
Autumn



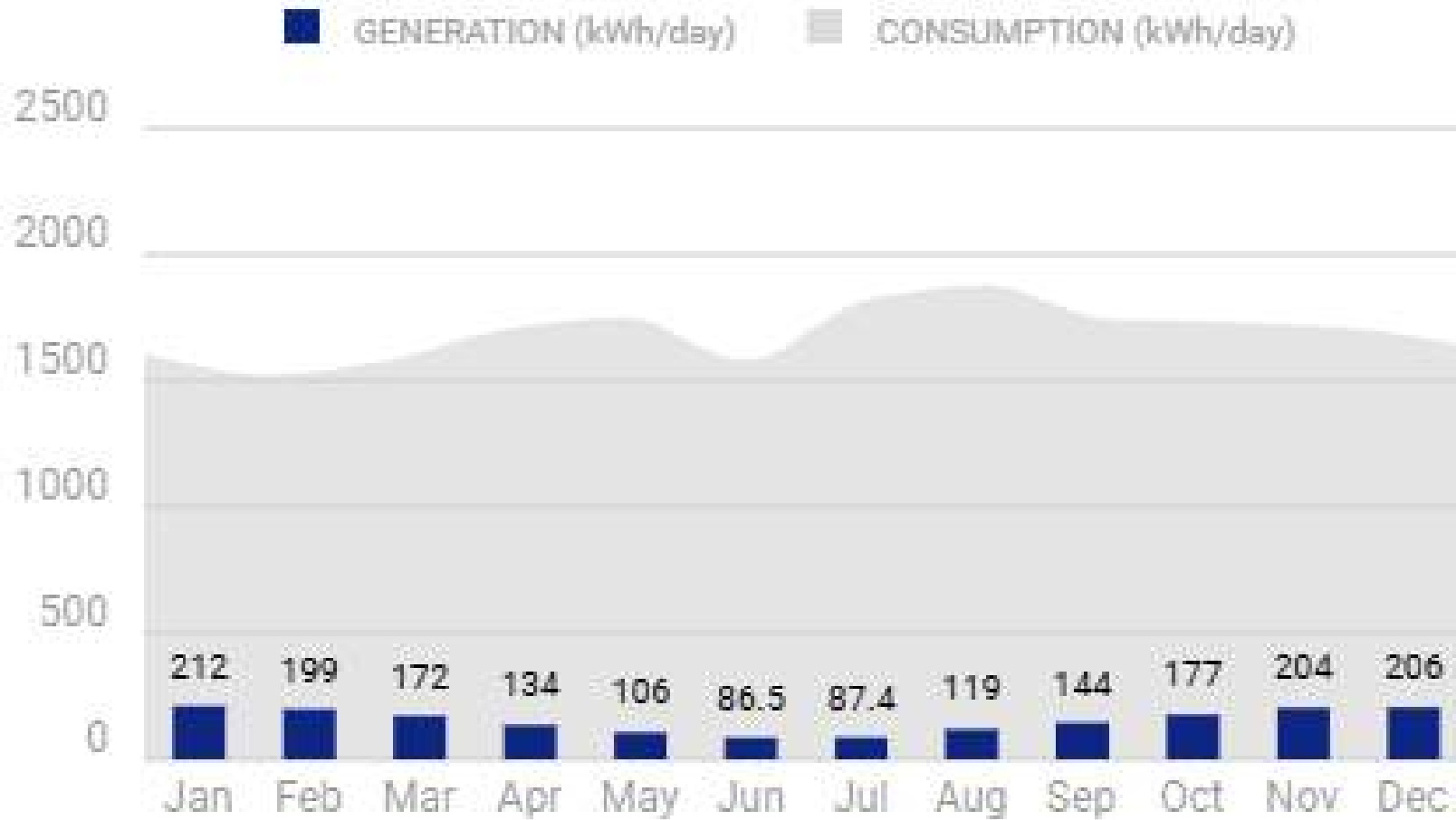
Winter



Spring



■ CONSUMPTION (kWh) ■ GENERATION (kWh) ■ NET CONSUMPTION (kWh) ■ EXPORT TO GRID (kWh)
 ■ BATTERY (kWh) ■ EXPORT LIMITING (kWh)



Appendix – Annexure C Technical Schedule

Technical evaluation Criteria

7. SCHEDULE OF TECHNICAL INFORMATION (To be Completed in by Tenderer)

NB: All schedules which accompany this tender notice form an integral part of it and must be completed in every detail. Failure to do this may render a tender ineligible for consideration

The following Schedule of particulars must be completed in full and the equipment listed must be capable of performing the specified duties and of meeting the requirements of the Specification in all respects. If it transpires that such equipment (even if offered by Make and Model) is incapable of meeting the requirements of the Specification in any respect, the Contractor shall nevertheless be responsible for any extra costs incurred in providing the required or suitable equipment

NOTE: Should the equipment offered deviate from any specified technical requirements, full details must be given. in the event of the available space being insufficient such details must be given on a separate sheet, indicating the relevant paragraph number in the specification.

Tenderers must complete the details of offer in full. Replies such as “comply” or “yes” is not acceptable, Tenderers to fully describe on separate pages the capabilities and specifications of the offer.

The information in the schedule below will be used in evaluating the technical compliance of the offer.

If the product offered is unknown to the Employer, the Employer reserves the right to have the unit evaluated by a team of technical and clinical expertise with regards to clinical functionality, performance and quality. The decision of this committee will be used as motivation for the acceptance or non-acceptance of the unit. For this reason, a demonstration unit shall be readily available, or the Tenderer shall take two representatives of the Employer to a site where a similar unit is installed in functional order. The cost for this site visit is for the account of the Tenderer, and it will not place any obligation on the Employer to procure from this specific Tenderer.

Tenderers to include in the offer proof that they are the accredited supplier by the original equipment manufacturer (OEM'), and that the OEM undertakes to supply local expertise, training and support to maintain the equipment.

All offers shall be supported by descriptive literature, brochures and technical data sheets to support the responses to the specifications, failing which the Offer will not be considered.

7.1. Solar Panel

The following minimum standards shall be maintained regardless of the brand or model of panel:

	Specified	Offered
Solar Module Technology	Mono-crystalline Half Cell with Efficiency >22%	
Glass	Tempered 2mm Back and Front with Reflective Coating	
Frame Construction	Anodised Aluminium Alloy	
Max Static Load (Back/Front)	>=2400 Pa	
Max Series Fuse Rating	>= 30A	
Power Tolerance	0~+ 1.5% or higher	
Temperature Coefficient at Voc	<= 0.26% / °C	
Temperature Coefficient at Pmax	<= 0.30% / °C	
Temperature Coefficient at Isc	0.04% - 0.05% / °C	
Performance Warrantee Type	Linear 30 year Performance, 10 year material and workmanship	
1st Year Performance degradation	<=1%	
Annual power degradation	<= 0.4%	
Minimum DC Cable	4.0mm ² / 12 AWG	
Connector	MC4EVO2/2A	
Certifications	ISO9001:2015 (Factory) IEC61215 IEC61730 (Panel)	
Brand Certification	Tier 1 – Bloomberg NEF Tier (2020+)	

7.2. Inverters

Tenderers may propose alternative inverter brands or models. Each proposal will be evaluated based on compliance with the specified technical requirements.

All proposed inverters must meet or exceed these criteria as specified in the Project Specification to be considered for approval.

	Specified	Offered
Does Inverters comply with the Basic requirements of this specification in Paragraph 1.6		
Make	Sunsynk, DEYE, SMA, Victron	
Manufacturer Warrantee	5 Year Standard extended to 10 Years	
Maintenance/Technical Support	Local within South Africa, In business for 10+ years	
Off-Site Monitoring	Yes, with internet connection and dongle or on-board	
Weather Rating	>= IP65	
Operating Temperature	-20°C to 60°C	
Derating Temperature	>=45°C	

Solar Characteristics		
Type of Charger	MPPT	
Number of MPPT Trackers	2-4	
Strings per MPPT Tracker	2-4	
Startup Voltage	<200V	
MPPT Full Load Voltage Range	Accommodates 200V - 800V	
Max PV I_{sc}	50A per tracker	

Charger Characteristics		
Max Charging Current	>35A per battery/charger	
Max Discharge Current	>35A per battery/charger	
Li-Ion Battery Strategy	BMS self-adaption	
BMS Communication Protocol	RS485 and CAN BUS	
Battery Voltage Range	Accommodates 200V-600V	

Power Characteristics		
Nominal Output Power (continuous)	3PH >45A @ 400V 50Hz	
Maximum Output Power	3Ph >50A @ 400V 50Hz	
AC Passthrough (continuous)	3Ph >= 100A @ 400V	
Power Factor	0.8 Lagging – 0.8 Leading	
Safety Systems	DC Input Lightning Protection Anti-Islanding Reverse polarity protection Insulation resistance detection Residual current detection Output overcurrent protection Output short circuit protection Output over voltage protection (DC Type II AC Type II) Surge protection	

Efficiency Ratings		
Maximum Efficiency	> 97.5 %	
MPPT Efficiency	> 96.0 %	
European Efficiency Rating	> 99.8 %	

Certification		
Local Approval	City of Cape Town Type Tested Inverters List (NRS 097-2-1)	
Local Regulatory Compliance	NRS 097-2-1: 2017 certification required	

7.3. Battery Specifications

The battery components shall first and foremost be compatible with the specifications of the inverter in-terms of charging voltages and communication bus connections.

	Specified	Offered
Battery Technology	Lithium Ion Phosphate (LiFePO4)	
Continuous Charge Rating	>= Inverter DC Charge Rating	
Continuous Discharge Rating	>= Inverter DC Charge Rating	
Expansion	BMS controlled up to 4 in parallel	
Maximum Discharge BMS Controlled	>= 90% of rated capacity	
BMW Communication	RS485 or CAN connection	
Cycle Rating	10 Year Battery Warrantee at 6000 Cycles @ 80% DoD or equivalent.	
Warrantee	Manufacturer must have: Local technical and maintenance support within Western Cape Replacement parts and stock availability within South Africa	

	The batteries must be assembled/manufactured in South Africa	
Casing	The battery shall feature on-board epoxy coated steel or aluminium casing with a screen/ visual indicator of charge level.	
Mounting	<p>Wall mount preferred</p> <p>Floor mount acceptable</p> <p>Rack mount not acceptable</p>	

Appendix – Annexure D

Directions to Boiler house

Directions to Engineering Services Karl Bremer Site

