



GOVERNMENT OF GUYANA

STANDARD BID SOLICITATION DOCUMENT

Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy

*Initiative executed through the support of the European Union in the
framework of the Euroclima Programme, co-funded by the German Federal
Government through the Federal Ministry for Economic Cooperation and
Development (BMZ)*

NPTA # 447/2025/02

GUYANA ENERGY AGENCY

October , 2025



GOODS AND RELATED SERVICES (VALUE G\$15 million and above)

Introduction

Preface

This Standard Bid Solicitation Document (SBSD) has been prepared by the National Procurement and Tender Administration Board (NPTAB) for use by Procuring Entities for the procurement of goods and services. The procedures and methods presented in this document have been developed on the basis of practical experience and are mandatory for use in the procurement carried out in whole or in part from the state funds in accordance with the provisions of Guyana's Public Procurement Legislation.

In order to simplify the preparation of the bid document for each individual procurement proceeding, the SBSB groups the provisions that are not intended to be changed in "the Instructions to Bidders" and in "the General Conditions of Contract". Data and provisions specific to each procurement and contract should be included in the Bid Data Sheet, the Special Conditions of the Contract, Technical specifications, price schedule, schedule of requirements and the Evaluation Criteria. The applicable forms are listed in the table of contents, below.

Request for additional information can be forwarded to:

The Guyana Energy Agency

295 Quamina Street, South Cummingsburg, Georgetown

Tel Numbers: 226-0394 ext. 223/241

gea@gea.gov.gy

<https://gea.gov.gy/>

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INVITATION FOR BIDS (IFB)

1. **The Guyana Energy Agency** hereinafter referred to as “the Procuring Entity”, invites eligible bidders to submit bids for the “*Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy*”, as per the required specifications mentioned in the Bidding Documents.
2. Required period of supply: **One hundred and Eighty (180) days from the signing of the Contract.**

Bidders are required to visit the site to carry out their own assessment of how the electrification infrastructure will be installed. GEA would facilitate contacting the appropriate entities and request access to the site by the bidders upon the bidder’s request. The costs of visiting the site shall be at the bidder’s own expense.

3. The bidding documents may be obtained and be examined by any interested bidder. Hard copies of the Bidding Documents can be purchased for a non-refundable fee in the amount of Two thousand dollars Guyana Dollars (G\$2,000) from the Cashier at the *Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown*, telephone 226-0394 or fax 226-5227, email at gea@gea.gov.gy. Alternatively, interested eligible bidders may download a free copy of the Bidding Documents from the GEA website at www.gea.gov.gy
4. All Bidders should submit their bids together with an original bid security of 2% of the tendered amount not later than 9:00 hours on **November 25, 2025** at the: **National Procurement & Tender Administration Board, Ministry of Finance, 49 Main & Urquhart Streets, Georgetown.**

Clarifications must be submitted in writing to the GEA’s email address at gea@gea.gov.gy no later than one week prior to the deadline for bid submission.

5. Bids shall be valid for one hundred and twenty (120) days after the date of bid opening.
6. Bids shall be opened by the National Procurement and Tender Administration Board in the presence of Bidders’ representatives who wish to attend, at 9:00 hours **on November 25, 2025** at the address: 49 Main and Urquhart Streets, Georgetown.
7. Bidders are required to complete the Bidders Registration via the following NPTA website: <https://www.npta.gov.gy/bidders-registration/>.

NATIONAL PROCUREMENT
& TENDER ADMINISTRATION

09 OCT 2025

APPROVED

Scan the QR Code Below to access the
Tender Opening Process Virtually
via Microsoft Teams
(TUESDAYS)



<https://bit.ly/390kC5N>

https://teams.microsoft.com/l/meetupjoin/19%3ameeting_YTgzNzliN2MtYzQ4Yi00N2EzLWFjMzYtOGRkY2Y3Nzk0YzUw%40thread.v2/0?context=%7b%22Tid%22%3a%22ff1d4318-046e-4143-8bac-9d503f00d12b%22%2c%22Oid%22%3a%22a0f8d988-3b0f-4653-a082-3a86d9ff7a9e%22%7d

Dr. Mahender Sharma-Chief Executive Officer
Guyana Energy Agency

INSTRUCTIONS TO BIDDERS

A. Introduction

1. Description of the Procurement

The Procuring Entity identified in the *Bid Data Sheet* intends to procure the goods identified in the *Bid Data Sheet* and in the Schedule of Requirements.

2. Eligibility and Qualifications of Bidders

- 2.1. In order to be awarded a procurement contract, Bidders should possess the technical and financial capacity needed to perform the contract, should fulfill their tax and social insurance fund liabilities in Guyana, should not currently be subject to a debarment penalty, and must comply with the specific eligibility and qualification requirements referred to in the *Bid Data Sheet and Evaluation Criteria*.
- 2.2. The bidders should not have conflicts of interest, including involvement in more than one bid in this proceeding, should not be associated nor have been associated in the past, directly or indirectly, with any agency or any of its representative(s), affiliate(s), that have been engaged by the Procuring Entity to provide consulting services at the preparation stage of the bidding documents, technical specifications and other documentation that are subject to be used in the procurement of goods which must be purchased in accordance with the Invitation for Bids. In cases when the indicated facts are discovered, the Bidder's bid shall be rejected.

B. Bidding Documents

3. Clarification and Amendment of Bidding Documents

- 3.1. The Procuring Entity, in not more than three (3) working days, will respond in writing or electronic mail to any request for clarification of the bidding documents to be received (in writing or electronic mail) not later than seven (7) days before the expiry of a deadline for submission of bids. At the same time, the Procuring Entity's response shall without identifying its source of the request, be distributed to all bidders who have received the bidding documents from the Procuring Entity.
- 3.2. At any time before the deadline for submission of bids, the Procuring Entity may amend the bid documents by issuing an Addendum to the bidders.

C. Preparation of Bid

4. Language of Bid

- 4.1. The bid prepared by the Bidder, as well as all correspondence and documents related to that bid and exchanged by the Bidder and the Procuring Entity shall be written in the language specified in the *Bid Data Sheet*.

5. Documents Included in Bid

- 5.1. The bid prepared by the Bidder should contain the Form of Bid, the Price Schedules and the other documents to be submitted in accordance with these Instructions to Bidders, Bid Data Sheet and Evaluation Criteria.

6. Bid Price

- 6.1. Subject to the choice of INCOTERMS as indicated in the Bid Data Sheet, the prices given in the Price Schedule shall include all transportation costs to the destination point indicated in the Contract, all taxes, duties, payments collected, in accordance with the laws of Guyana and delivery related and other costs on performing of contractual obligations.
- 6.2. The prices offered by the Bidders shall remain fixed during the whole period of Contract performance and shall not be modified in any circumstance.

7. Bid and Payment Currency

- 7.1. The prices shall be indicated in Guyana Dollars, unless otherwise specified in the *Bid Data Sheet*.

8. Bid Security

- 8.1. Unless otherwise provided in the *Bid Data Sheet*, the Bidder shall furnish, as part of his bid, an original Bid Security, in the form, currency and amount specified in the *Bid Data Sheet* with a validity period for not less than two (2) weeks upon the expiry of the bid validity period and in accordance with the specified form.
- 8.2. The bid security may be forfeited, if the Bidder:
 - (a) Withdraws their bid after it is opened during the period of validity specified in the bid; or,
 - (b) Having been awarded the contract fails:
 - (1) To sign the contract on the terms and conditions provided in their bid; or
 - (2) To furnish the Performance Security, if required to do so.

9. Period of Validity of Bid

- 9.1. Bids shall remain in force during the period specified in the *Bid Data Sheet* after the date of bid opening.

10. Format, Signing and Submission of Bid

- 10.1. The Bidder shall prepare one (1) original bid and one (1) hard copy which shall be completed in writing in indelible ink and shall be signed by the Bidder, or by the person (persons) duly authorized to sign the bid in accordance with the power of attorney and 2 (two) exact electronic PDF copies of the bid on Flash Drive, to be submitted with the bid. All pages of the bid where new information, modifications or erasures entered shall be initialed (signed) by the person or persons signing the bid. In the event of discrepancies between them, the original shall prevail.
- 10.2. The bid shall contain no interlineations, erasures or overwriting, except the cases when the Bidder needs to correct errors which must be initialed by the person or persons signing the bid.
- 10.3. The Bidder shall seal the original and Electronic PDF copies of the bid in different envelopes, marking them “ORIGINAL” and “COPIES”, as appropriate. The envelopes shall then be sealed in an outer envelope.

10.4. The outer envelope shall:

- (a) Be addressed to the **Chairman, National Procurement & Tender Administration Board (NPTAB), Main & Urquhart Streets, Georgetown** (the address specified in the Invitation for Bids)
- (b) **Bear the Name of the Project** “*Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy*” and the words: **“DO NOT OPEN BEFORE” 9:00 hours on November 25, 2025.**

11. Deadline for Submission of Bids

- 11.1. Bids must be received by the Procuring Entity at the address and within the periods specified in the Bid Data Sheet. All bids received by the Procuring Entity upon the expiry of a period established for submission of bids as indicated by the Procuring Entity shall be rejected and returned to the Bidder unopened.

12. Modification and Withdrawal of Bids

- 12.1. The Bidder may modify or withdraw their bid after the bid’s submission, provided that the Procuring Entity will receive a written notice of modification, substitution or withdrawal of bid before the deadline for submission of bids.
- 12.2. The Bidder’s modification, substitution or withdrawal notice shall be prepared, sealed, marked, and sent in accordance with the provisions of ITB Clause 10. In that case the outer and inner envelopes will be additionally marked as **“MODIFICATION”** or **“WITHDRAWAL”**, as appropriate. A withdrawal notice may also be sent by email with a subsequent written confirmation not later than the deadline for submission of bids.

D. Opening and Evaluation of Bids

13. Opening of Bids

- 13.1. The Procuring Entity will open all bids in the presence of bidders’ representatives who wish to attend, at the time, on the date, and at the address specified in the Bid Data Sheet. The bidders’ representatives who are present shall sign a register evidencing their attendance.
- 13.2. The bidders’ names, bid prices, including alternatives (if permitted), information on the presence or absence of required bid security, information on the presence (absence) of tax debts and debts of social insurance payments will be announced at the opening. No bid shall be rejected at the opening, exclusive of late bids and unidentified Bids to be returned to the Bidder unopened.
- 13.3. Bids and modifications sent pursuant to ITB Clause 12.2 that are not opened and read out during the bid opening shall not be accepted for further evaluation, regardless of circumstances.



14. Evaluation of Bids

- 14.1. During the evaluation of bids, the Procuring Entity may, at its discretion, request the Bidder to provide clarification of their bid. The request for clarification and the response thereto shall be made in writing, and in that case no change in price or substance of the bid shall be sought, offered, or permitted.
- 14.2. The Procuring Entity shall determine the responsiveness of each bid to requirements of the bidding documents. For the purposes of this Clause a substantially responsive bid is one which satisfies all the indicated provisions without a material deviation or reservation.
- 14.3. The Procuring Entity may regard a tender as responsive if it contains any minor deviations, that do not materially alter or depart from the characteristics, terms and conditions and other requirements of the bid solicitation documents, or if it contains errors or oversights that are capable of being corrected without touching the substance of the tender. To the extent feasible and appropriate, for the purposes of comparing bids, acceptable deviations shall be quantified in monetary terms and reflected in adjustments to the bid price (for the purposes only of comparison of bids).
- 14.4. Arithmetical errors shall be rectified in the following manner. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words shall prevail. If the Bidder disagrees with such correction of errors, their bid shall be rejected.
- 14.5. The Procuring Entity shall evaluate and compare only the bids that are determined to be responsive to the Bid Solicitation Document.

15. Confidentiality and Contacting the Procuring Entity

- 15.1. No Bidder shall contact the Procuring Entity on any matter related to their bid from the date of bid opening until the date of contract award, except for requests related to clarification of the bid. Information concerning the evaluation of bids is confidential.
- 15.2. Any effort by the Bidder to influence the Procuring Entity's decision on bid evaluation and comparison, or contract award may result in the rejection of that Bidder's bid and subjected to debarment in accordance with Regulation 3(1)(b) of the Procurement (suspension and debarment) Regulations 2019.

E. Award of Contract

16. Award Criteria

- 16.1. Subject to ITB Clause 18, the Procuring Entity will award the Contract to the Bidder whose bid is determined to be substantially responsive to the requirements of the bid solicitation document, and who offered the **highest score** provided that the Bidder has been determined:
 - (a) To be eligible pursuant to Clause 2;
 - (b) To comply with qualification requirements, in accordance with Clause 2, and any technical requirements and evaluation criteria disclosed in the bid solicitation documents.

17. Procuring Entity's Right to Vary Quantities at Time of Entering into a Contract

- 17.1. The Procuring Entity reserves the right, when entering into a contract, to increase or decrease the quantity of goods and related services specified in the Schedule of Requirements, by the percentage indicated in the *Bid Data Sheet*, no change in the unit price or other conditions shall be made (an increase of quantity not exceeding 10 percent variation)

18. Procuring Entity's Right to Accept Any Bid and to Reject All Bids

- 18.1. The Procuring Entity reserves the right to accept or reject any bid or all bids, and to cancel the bidding process at any time prior to award of contract, without thereby incurring any liability to Bidders and without being required to inform the Bidder or Bidders of reasons of such actions.

19. Notification of Award

- 19.1. The bidder whose bid is accepted will be notified of the award of contract by the Purchaser prior to expiration of the bid validity period.
- 19.2. The notice of acceptance shall be given to the successful bidder within fourteen (14) days of the award of contract.
- 19.3. At the same time that the Procuring Entity notifies the successful Bidder in accordance with sub-clause (1), the Procuring Entity will notify all other Bidders of the name of successful Bidder, and their bid price.

20. Signing of Contract and Performance Security

- 20.1. The Procuring Entity will send the successful Bidder the Form of Contract contained in the bid solicitation document. The successful Bidder shall sign and date the Contract and return it to the Procuring Entity within seven (7) days of receipt of notice of award.
- 20.2. Together with the signed Contract, the Bidder shall, if required to do so by the *Bid Data Sheet*, furnish the Procuring Entity with a Performance Security in the amount and form specified in the *Bid Data Sheet*.
- 20.3. If the successful Bidder fails to furnish the performance security, if required to do so, or within 7 (seven) days fails to return the Contract signed by them, then it shall be a sufficient ground to refuse the award of Contract, and to forfeit the bid security. In that case the Procuring Entity shall award the Contract to the next lowest evaluated Bidder, subject to the right of the Procuring Entity to reject all bids.

21. Settlement of Disputes

- 21.1. To settle the disputes which may arise during the execution of Contract, the parties shall follow the procedure referred to in the *Bid Data Sheet*.

22. Corrupt and Fraudulent Practices

- 22.1. The Procuring Entity requires that Bidders observe the highest standards of ethics during the bidding process and execution of such contracts. In pursuance of this policy, the Procuring Entity:

- (a) Will reject the bid if it establishes that the Bidder recommended for award has engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract in question.
- (b) Refer the matter to the Public Procurement Commission (PPC) in accordance with the provisions of Procurement (Suspension and Debarment) Regulations 2019.

23. Compliances

- 23.1. Bidder must submit valid certificates of compliances from Guyana Revenue Authority (GRA), National Insurance Scheme (NIS), and VAT registration (*where applicable*).

24. Defects Liability:

- 24.1. The “Defects Liability Period” for the goods and related services is six (6) months from the date of taking over possession or such other period as may be specified in the Bid Data Sheet. During this period, the supplier will be responsible for rectifying any defects or replacement of goods free of cost to the Procuring Entity.



BID DATA SHEET (BDS)

The following specific data to clauses of the provisions of Instructions to Bidders which supplement or amend the provisions of the Instructions to Bidders (ITB). Whenever there is a conflict, the provisions herein shall prevail over those in ITB.

Item No.	
ITB 1.1	Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown, Tel:226-0394, gea@gea.gov.gy . The subject of the procurement is: <i>"Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy"</i>
ITB 2.1	To qualify for award of the Contract, the bidders shall meet the qualification requirements set out in the evaluation criteria (page 57-61)
ITB 4.1	Language of Bid shall be English Language All submission must be in English
ITB 5.1	The Bidder shall submit the following additional documents in its bid: 1. Evidence of Financial Capability in the amount of 30% of the bid price in the form of a bank statement as at June 2025 or letter of credit from a commercial bank in the name of the bidder. Letter of credit must state a figure. The document must be dated within one month of the bid opening date and be clearly legible. When a photocopy of the letter of credit or bank statement is presented, it must be certified a "true copy of the original" by the issuing company. 2. Submission of a valid business registration or certificate of incorporation, inclusive of list of directors, that is clearly legible. Where bidder is part of an unincorporated joint venture, a legible copy of joint venture agreement is required. Copy of joint venture agreement must state the joint venture partner to which invoice will be paid and contract to be signed. Where bidder is a joint venture company, a legible copy of certificate of incorporation is to be submitted. Each party must submit valid compliance as per items 2 and 3 of the Evaluation Criteria. 3. Written confirmation of authorizing signatory must be provided. For the incorporated company this must be in the form of a Power of Attorney endorsed by a Commissioner of Oaths or Justice of Peace. For a registered business that has appointed an employee to sign the bid, a letter of authorizing signatory must be provided. 4. Valid certificates of compliance from GRA and NIS and VAT registration (only applicable to Bidders resident in the country of the Procuring Entity). 5. Completed litigation form on page 62 of the bidding documents. 6. A letter stating any or no termination or abandonment of projects. The letter must be dated within one month of the bid opening date. 7. Provide documentary evidence to demonstrate that the Goods offered meet all the technical specifications (page 24-46) of the bidding document. Technical literature must include data sheets and specific technical information on each of the items of equipment and components proposed for the photovoltaic system;



	8. A detailed schematic design layout for the solar PV systems (schematic should be NEC 2017 Compliant), including explanatory notes and hypotheses used for sizing of the required equipment and components, and justification of the energy production calculations considered; 9. Certificates of product quality (modules and inverters) issued by a recognized laboratory accredited by the International Laboratory Accreditation Cooperation (ILAC) and which must be valid up to the date of commissioning of the system; 10. An implementation schedule indicating important milestones such as equipment delivery to site, installation, testing and commissioning. Frequent (at least monthly) progress reports and work plan are to be provided to the Procuring Entity as required by the procuring entity during project execution. 11. Bidder must provide audited financial statements for the past three years for incorporated companies. Financial statements must be audited by a Chartered accountant/accountancy firm and include an auditor's note. OR Registered businesses must provide Balance Sheets, Profit and Loss Accounts, and Income and Expenditure Accounts for the past three years. These financial statements must be approved by a Chartered accountant/accountancy firm. The detailed evaluation criteria can be found on Page 57-61 of the bidding documents
NATIONAL PROCUREMENT & TENDER ADMINISTRATION BOARD 09 OCT APPROVED	ITB 6.1 The price quoted by bidders shall be on the basis of CIF to port Georgetown for goods delivered to Guyana, including cost for transport to the site. 2010 incoterms are applicable. Bidders shall quote for the <i>“Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy”</i>. on a “single responsibility” basis such that the total Bid price covers all the Contractor’s obligations mentioned in or to be reasonably inferred from the bidding document in respect to the <i>““Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy”</i>. Items against which no price is entered by the Bidder for the <i>““Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy.”</i> will not be paid for by the Employer when executed and shall be deemed to be covered by the prices for other items.
ITB 7.1	Currency of Bid shall be in Guyana Dollars.
ITB 8.1	A bid security of two percent (2%) of the tendered sum is required in the form of a Bank guarantee or a bond from an Insurance company licensed by the Bank of Guyana.
ITB 9.1	The period of validity of bid is one hundred and twenty (120) days
ITB 11.1	Deadline and place for submission of bids: 9:00 hours on the November 25, 2025 at The National Procurement & Tender Administration Board, Ministry of Finance, Main & Urquhart Streets, Georgetown, Guyana
ITB 13.1	Time and place for opening of bid: 9:00 hours on November 25, 2025 at The National Procurement & Tender Administration Board, Ministry of Finance, Main & Urquhart Streets, Georgetown, Guyana.
ITB 17.1	Increase or decrease in the quantity of goods and services not exceeding 10%
ITB 20.2	The amount of the performance security is 10% of the contract price. Performance Security must be in the form of a Bank Guarantee or a bond from an Insurance company licensed by the Bank of Guyana. This shall be valid for the duration of the contract period.

ITB 21.1	Disputes that may arise in the performance of the contract shall be settled in accordance with the applicable Laws of Guyana.
ITB 24.1	The duration of the defect's liability period is six (6) months following provisional acceptance.

GENERAL CONDITIONS OF CONTRACT (GCC)

The General Conditions are the Standard General Conditions of Contract. No alteration shall be made on the pages of these Conditions. The Procuring Entity, when amending or supplementing the General Conditions of Contract should do so only in the Special Conditions of Contract. Any amendment or addenda of the General Conditions of Contract shall conform to the legislation of Guyana.

1. Definitions and application

1.1. This Contract lists below the terms that have the following interpretation:

- (a) **“Contract”** means the agreement entered into between the Procuring Entity and the Supplier, as recorded in the Form of Contract signed by the parties, including all attachments and appendices thereto and all the documents referenced therein.
- (b) **“Contract Price”** means the price payable to the Supplier under the Contract for complete and proper performance of his contractual obligations.
- (c) **“Goods”** means the item (s) **referred** to in the Schedule of Requirements contained in the Bid Solicitation Document.
- (d) **“GCC”** means the General **Conditions** of Contract contained in this Section.
- (e) **“SCC”** means the Special **Conditions** of Contract.
- (f) **“Procuring Entity”** – means the **Procuring** entity carrying out the procurement of Goods, specified in the SCC.
- (g) **“Supplier”** means an individual or legal entity, or a combination of any abovementioned forms which operate under the existing agreement as a joint venture and supply the Goods and Services under the Contract.
- (h) **“Day”** means calendar **day**.

1.2. The General Conditions of Contract shall apply in the procurement of goods; the specific amendment, addition and alteration shall be indicated in the Special Conditions of Contract.

1.3. Warranty requirements are as specified in the Special Conditions of Contract.

2. Contract Documents

2.1. Subject to the order of precedence set forth in the Contract Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory. The contract shall be read as a whole.

3. Performance Security

3.1. If required by the SCC, within seven (7) days of receipt of notification of award, the successful Bidder shall furnish the Procuring Entity with the performance security the amount and form of which are indicated in the SCC.

4. Packing

- 4.1. The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to the final destination specified in the Contract, and as may be required by the Special Conditions of Contract.

5. Delivery, Transportation, Mobilization Advance

- 5.1. The Supplier must deliver the Goods within the periods and to the Destination point indicated in the Schedule of Requirements and shall provide the documentation indicated in the SCC. Subject to the SCC, transportation of the Goods to the place specified by the Procuring Entity shall be carried out and paid by the Supplier and related costs shall be included in the Contract Price.

6. Payment

- 6.1. The payment to the Supplier for the Goods delivered shall be made in accordance with the Contract in the form and within the periods specified in the SCC.
- 6.2. If the Procuring Entity does not pay the Supplier the sum due within the periods specified in the Contract, in that case the Procuring Entity shall pay the Supplier [interest at the rate specified or determined pursuant to the Special Conditions of Contract].

7. Prices

- 7.1. Prices established by the Supplier in the Contract for goods delivered shall not vary from the prices quoted by the Supplier in his bid.

8. Assignment

- 8.1. The Supplier shall not assign, in whole or in part, his obligations under the Contract to a third party for the execution without the Procuring Entity's prior written consent.

9. Delays in the Supplier's Performance and Liquidated Damages

- 9.1. Delivery of the Goods shall be carried out by the Supplier, in accordance with the schedule indicated by the Procuring Entity in the *Schedule of Requirements*.
- 9.2. Except as provided under GCC Clause 13, any delay in the Supplier's performance of their delivery obligations shall render the Supplier liable for payment of liquidated damages in the amount specified in the SCC, unless an extension of time is agreed upon by the parties without application of liquidated damages. Once the maximum deduction specified in the SCC is reached, the Procuring Entity may consider termination of the Contract, in accordance with Clause 10 of the General Conditions of Contract.

10. Termination

- 10.1. The Procuring Entity, without detriment to any other sanctions of infringement of the provisions of Contract, by written notice of default sent to the Supplier, may terminate this Contract in whole or in part:

- (a) If the Supplier fails to deliver a portion or all of the Goods within the periods provided for in the Contract, or within an extension period of that Contract, or to perform any of his obligations under the Contract.
 - (b) If bankruptcy procedures are applied to the Supplier, or it is declared insolvent.
 - (c) If the Supplier, in the Procuring Entity's opinion, has engaged in corrupt, fraudulent, collusive or coercive practices when entering into or executing the Contract.
 - (d) If the Procuring Entity deems that continued implementation of the contract would no longer be expedient from the standpoint of the public interest.
- 10.2. The notice of termination shall specify the reason of termination, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.
- 10.3. Notwithstanding clauses 9 and 10.1(d), the Supplier shall not forfeit their performance security, and shall not be liable for payment of liquidated damages, or termination for default, if delay in executing the Contract or failure to perform obligations under the Contract is the result of an event of force majeure. When force majeure arises, the Supplier shall promptly notify the Procuring Entity in writing of such circumstance and its causes.
- 10.4. When the contract is terminated in accordance with clause 10.1(d), the Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring Entity at the Contract terms and prices. For the remaining Goods, the Procuring Entity may elect:
- (a) To have any portion completed and delivered at the Contract terms and prices; and/or
 - (b) To cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

11. Settlement of Disputes

- 11.1. If any dispute or disagreement arises between the Procuring Entity and the Supplier for the Contract or in connection with it, the parties shall make every effort to resolve the dispute or disagreement amicably by mutual consultation.
- 11.2. If during twenty one (21) days, the parties failed to resolve their dispute or disagreement by mutual consultation; either the Procuring Entity or the Supplier may send the other party the notice of intent to commence arbitration, if an arbitration is incorporated in the Contract in the Special Conditions of Contract or otherwise agreed by the parties, or in the Court of General Jurisdiction if no arbitration is envisaged, and no arbitration or litigation in respect of that matter may be commenced unless such notice is given.
- Any dispute or disagreement in respect of which the notice of intent is sent to commence trial shall be heard by the [Court of General Jurisdiction].
- 11.3. Notwithstanding any reference to dispute settlement herein, the parties shall continue to perform their obligations under the Contract, unless they agree otherwise.

12. Applicable Law

12.1. The Contract shall be interpreted in accordance with the Laws of Guyana.

13. Formal Communication between the Procuring Entity and the Supplier

13.1. Any notice given by one party to the other pursuant to the Contract shall be in force if it is done in writing and sent at the address of other party in the SCC.

13.2. A notice shall be effective when delivered or on the specified date, whichever is later.

14. Taxes and Duties

14.1. The Supplier shall be fully responsible for all taxes, duties, license taxes, etc., levied in accordance with the legislation of Guyana, and subject to the application of INCOTERMS in accordance with the SCC.

15. Retention

15.1. No retention shall be applied on consumables, but warranties, guarantees and expiry dates to apply.

15.2. Retention on fixed assets shall be determined by the Procuring Entity on a case-by-case basis.



SPECIAL CONDITIONS OF CONTRACT (SCC)

The following Special Conditions of Contract shall supplement the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract.

GCC Clause No.	Special Conditions of Contract
1.1	Definitions The Procuring Entity is the Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown, Tel:226-0394, Fax:226-5227, gea@gea.gov.gy. The Supplier is _____ (indicate full name, legal address, phone, fax and e-mail of Supplier) The Subject of procurement is <i>“Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy”</i> Warranty The supplier warrants all Goods supplied under the contract are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract. The supplier further warrants that all Goods supplied under this contract shall have no defect, arising from design, materials or workmanship or from any act or omission of the supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination. 24 months’ complete system warranty is applicable from provisional acceptance date. A final completion certificate shall be issued upon satisfactory commissioning of the systems.
3.1	Performance Security The amount and form of Performance Security is: 10% of the contract price in the form of a Bank Guarantee or a bond from an Insurance company licensed by the Bank of Guyana. The bond shall be valid for the entirety of the contract period.
4.1	Packing: The Supplier shall provide such packing of the Goods as is required to prevent damage or deterioration during transit to final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit.
5.1	Delivery, Transportation The following documentation is to be provided by the Supplier to the Procuring Entity: (1) Copies of Supplier’s invoice(s) indicating a description, quantity, unit price of the Goods and sum total. (2) Shipping order, railway receipt or truck receipt. (3) Warranty certificate of Manufacturer or Supplier; (4) Inspection certificate issued by the authorized inspection service, and the supplier’s factory inspection report (if any);



	(5) Certificate of origin; (6) Certificate of conformity (7) Certificate of Quality
6.1	Payment schedule <i>“Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy” as per Price Schedule below:</i> (a) Ten percent (10%) of the contract price within 14 days of signing the contract and the submission of the performance bond. (b) Ten percent (10%) of the contract price upon physical verification by the Procuring Entity that the poles have been installed by the contractor and have complied with the technical specifications (c) Ten percent (10%) of the contract price upon physical verification by the Procuring Entity that the LV Cables and Main Line Hardware have procured and available at the installation site and a schedule for their installation has been presented and confirmed in compliance with the technical specifications (d) Ten percent (10%) of the contract price upon physical verification by the Procuring Entity that the Solar PV modules and Mounting structures have been procured and available at the installation site and a schedule for their installation has been presented and confirmed in compliance with the technical specifications (e) Fifteen percent (15%) of the contract price upon physical verification by the Procuring Entity that the Hybrid Inverters have been procured and available at the installation site and a schedule for their installation has been presented and confirmed in compliance with the technical specifications (f) Fifteen percent (15%) of the contract price upon physical verification by the Procuring Entity that the Battery Energy Storage System and Battery Racks have arrived in the country and comply with the technical specifications (g) Twenty percent (20%) of the contract price upon acceptance of the completed, fully integrated and functional system by the Procuring Entity. (h) Ten percent (10%) of the contract price upon expiry of the defects’ liability period barring the correction of defects.
9.2	Liquidated Damages Applicable rate: 0.05% per week for untimely execution of order. Maximum deduction: 10% of the delayed works/delivery
11.2	Settlement of Disputes Disputes arising out of or in connection with the Contract shall be settled in accordance with the Laws of Guyana.
14.1	Taxes and Duties The version edition of INCOTERMS shall be: 2010
16.1	Defects Liability The duration of the defect’s liability period is 6 MONTHS following provisional acceptance. During this period, the contractor will be responsible for rectifying any defects free of cost to the Procuring Entity.



DELIVERY SCHEDULE/ SCHEDULE OF REQUIREMENTS

The delivery schedule expressed as days specifies hereafter the date of delivery to destination point. In column "the delivery schedule", the Procuring Entity shall indicate the date from which schedule starts. It should be either the date of award, or the date of signing of Contract, or the date of opening of letter of credit, or the date of confirming the letter of credit (subject to circumstances). The Form of Bid shall specify only reference to that schedule.

Item No.	Brief Description of Goods	Quantity	Place of Delivery	Procuring Entity's Completion Schedule (----days as of signing of the contract)	Bidder's Offered Completion Schedule	
					Earliest Delivery	Latest Delivery
1	Electrification of one (1) Isolated Remote Village in the Hinterland through Solar Photovoltaic Energy financed by GIZ and EU. System capacity: 143.4kWp/458kWh a) PV modules b) Roof-mounting structure c) PV Inverters d) Hybrid Inverters e) Batteries and Battery Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous electrical components h) Grounding system and overcurrent protection devices i) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the community/public buildings mains AC Circuits and interconnection to the nearest community Wifi network to enable online monitoring of the PV Minigrid Installation)	To be determined by bidder	Waramuri: 7.609962°; -58.870493°	120 days		



Item No.	Brief Description of Goods	Quantity	Place of Delivery	Procuring Entity's Completion Schedule (----days as of signing of the contract)	Bidder's Offered Completion Schedule	
					Earliest Delivery	Latest Delivery
	j) Auxiliary Services: Housing Infrastructure for PV Balance of System components & Electrical Interconnection Devices k) Internal and External Lighting for the battery/inverter building, l) Lightning Protection equipment integrated into the Solar PV Array and BoS System.					
3.1	Design, Supply & Construction of a 0.965km Overhead Low Voltage 120/240Vac Electrical Distribution Network at Waramuri, Region 1: - Supply and Installation of Secondary Poles (9 meters) inclusive of all hardware (using the shortest feasible route from the roof-mounted Solar PV Array (mounted on the roofs of the school buildings located in the centre of the community) to the associated community and public buildings. The LV Network poles will also be fitted with 100W Integrated Stand-alone Solar Street Lighting for additional nighttime illumination in the community. - Supply and stringing of 19 strand 4/0 AWG Lepas strand 4/0 AWG Lepas with bare Aluminum Conductor and all required hardware for LV Distribution network (inclusive of pierce insulators,	To be determined by bidder	Waramuri: 7.609962°; -58.870493°	120 days		

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Item No.	Brief Description of Goods	Quantity	Place of Delivery	Procuring Entity's Completion Schedule (---days as of signing of the contract)	Bidder's Offered Completion Schedule	
					Earliest Delivery	Latest Delivery
	single spool rack and ball insulators etc.) - Supply and Installation of service drops from the LV distribution network to the respective buildings. Termination of the service drops must be at the closest point to the existing building main breaker/switch. The aluminum service drop must be connected via suitably sized (30A/60A/100A rated electrically insulated) pierce connectors to at minimum 10mm² Copper Cable (Split phase connections with earth) - Supply and Installation of Complete Guy Sets (Guys are required at the Take-off Structure, End Poles, Branch Poles, Heavy Angle Structures and on pole structures that are deemed to be susceptible to heavy loading (vertical, longitudinal, transverse and wind loads must be considered). Overhead Guy-sets are to be employed if direct guy connections are not possible due to space constraints. Guy sets must be suitably tensioned and insulated according to sound electrical network installation practices. - The use of pole stub must be employed in areas where the soil requires the additional support to maintain the pole in an upright and steady manner. Installation of Earth Sets					

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Item No.	Brief Description of Goods	Quantity	Place of Delivery	Procuring Entity's Completion Schedule (----days as of signing of the contract)	Bidder's Offered Completion Schedule	
					Earliest Delivery	Latest Delivery
	(Earth Sets are required at the take-off structure, all end poles and at poles from which service drops to the buildings are connected. - Vegetation Clearing along distribution network/cable route as required must be done - Transportation of Material					

Duly authorized to sign for and on behalf of

(name of Bidder)

(Full name)

(Title)

(Signature and seal)



TECHNICAL SPECIFICATIONS

1. General

The tender calling for convenient bids is dedicated to identifying and contracting a Supplier and Installer for the following services:

“Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy”

1.1. The minimum capacities required for the Solar Photovoltaic Systems are as follows:

The Solar PV System to be installed in Waramuri will be required to provide electricity to the following public buildings

Names of Public Buildings - Existing	Latitude	Longitude
Guesthouse	7°36'30.17"N	58°52'22.55"W
Doctor's Quarters	7°36'30.55"N	58°52'15.43"W
Medex Quarters	7°36'31.50"N	58°52'14.88"W
Health Centre	7°36'31.74"N	58°52'14.94"W
ICT Hub	7°36'32.46"N	58°52'15.24"W
Village Office	7°36'32.39"N	58°52'14.22"W
Nursery School Kitchen	7°36'32.60"N	58°52'11.88"W
Nursery School	7°36'32.66"N	58°52'11.70"W
Teacher's Quarters (New)	7°36'34.86"N	58°52'10.64"W
Primary School	7°36'34.93"N	58°52'11.55"W
Primary School Kitchen	7°36'36.10"N	58°52'12.18"W
Vicarage	7°36'36.74"N	58°52'11.59"W
Anglican Church	7°36'36.36"N	58°52'12.84"W
Primary (Top) School	7°36'35.50"N	58°52'13.30"W
Sports Pavilion	7°36'36.65"N	58°52'15.07"W
Names of Public Buildings – Under Construction	Latitude	Longitude
Secondary School Classrooms	7°36'35.53"N	58°52'12.12"W
Science Laboratory	7°36'35.86"N	58°52'13.77"W
Admin Building	7°36'34.45"N	58°52'13.56"W

Note: Image quality is not the best, but way points in table above are exact locations within the image, and drone imagery (pg, 63-64) also correspond with these locations



Provide all technical documentation including user and operational manuals within your submission to the GEA. **The bidder must include all brochures, applicable certifications, technical specifications, brand, and models for ALL equipment provided in one location in their submission in the following order:**

- 1) PV Modules
- 2) Solar PV Roof-mounting Hardware
- 3) Balance of Systems
- 4) Hybrid Inverter
- 5) Battery Energy Storage System
- 6) Integrated Stand-alone Solar Street Lighting
- 7) Monitoring System
- 8) Energy Management System
- 9) Schematic Diagram in accordance with NEC 2017 Article 690 and NEC 705

Bidders must ensure that all equipment supplied under the contract is new, unused and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.

- 1.2. Provide three (3) years' After Sales Services to GEA. Bidders must provide a statement indicating its acceptance or otherwise of this requirement.

2. Climate and Site Conditions

Altitude	: <1000m above sea-level
Maximum daily mean temperature	: 35 °C
Maximum outdoor ambient shade temperature	: 50 °C
Minimum outdoor ambient shade temperature	: 15 °C
Maximum relative humidity	: 100%
Wind Velocity	: 18mph
Isokeraunic level	:70
Average Number of days with Rain p.a.	:120
Average Annual rainfall, cm	:150

Bidders are required to conduct site visits and to carry out their own assessment of how the system will be installed and in consultation with the Procuring Entity (GEA) agree on a final installation modality. Installation of the PV Array on the roofs must be done in such a manner as to prevent/limit damage to the roofing sheets/structure and thereby eliminate the possibility of leakages.

3. Specification of Required Hardware – Solar PV System

3.1. General Remark

The whole system must be designed to utilize only components which are resistant to the prevalent climatic and weather conditions of the specific site, specifically in relation to corrosion resistance. Special attention should be paid to the selection and installation of the system components in order that there is reduction/elimination of the risk of theft and vandalism. The contractor is required to make all the necessary provisions for ensuring that the complete PV system is fully commissioned (System Operation confirmed with (AC Output to all interconnected buildings and Monitoring is confirmed).



3.2. Photovoltaic Module

- All PV Modules should be manufactured in accordance with International Standards (IEC 61215, IEC 61730, IEC 61701, IEC 62716, IEC 62804, UL61730 etc.) and the National Electrical Code 2023 primarily Article 690
- **550 watt-peak or higher rated solar PV modules** totaling a minimum of the stated System Capacity must be supplied
- **Total kWp Capacity of the installation must at a minimum meet the kWp figured stated in the Delivery Schedule (Page 20-23)**
- All modules should be made of Crystalline Silicon Solar Cells with conversion efficiency not less than 23 % at Standard Test Conditions (STC).
- All PV Modules shall show the same capacity (Voc/Isc; Vmp/Imp; Wp)
- The Manufacturer must be internationally recognised and provide references and certificates on all applicable module testing
- MC4 connectors for all Modules
- 20 years warranty on Modules

3.3. Solar PV Roof-mounting Hardware

- The mounting structure is to be roof mounted (unless otherwise directed by the procuring entity).
- The PV modules mounting structure must adequately and safely accommodate all the PV modules supplied.
- **Mounting Rail:**
 - Anodized aluminum,
 - At least 14 feet in length,
 - compatible with item L-foot, rail splices, module clamps and grounding lugs
- **Rail splice with self-grounding:**
 - Anodized aluminium with stainless steel bolts,
 - compatible with mounting rail,
 - provides an electrical connection (e.g. built-in grounding pins) between the spliced rails when installed
- **Module Mid-clamp kit with self-grounding:**
 - Anodized aluminium with stainless steel bolts,
 - compatible with mounting rail,
 - compatible with supplied Solar PV Modules,
 - provides an electrical connection (e.g. built-in grounding pins) between the spliced rails when installed
- **Module End-clamp kit with self-grounding:**
 - Anodized aluminium with stainless steel bolts,
 - compatible with mounting rail,
 - compatible with supplied Solar PV Modules,
 - provides an electrical connection (e.g. built-in grounding pins) between the spliced rails when installed

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- **Array Grounding Lug:**
 - Anodized aluminium with stainless steel bolts,
 - compatible with mounting rail,
 - provides an electrical connection (e.g. built-in grounding pins) between the spliced rails when installed
- **L-foot kit:**
 - Anodized aluminium with stainless steel bolts/screws,
 - compatible with mounting rails,
 - complete with rail attachment hardware
- **Hanger Bolt Roof Mount Kit:**
 - Anodized aluminium with stainless steel bolts/screws,
 - compatible with L-foot/rail,
 - compatible for attachment with standard corrugated roof profile (pitch height of approximately $\frac{3}{4}$ " ,
 - provides a water-tight seal when installed
- The PV array mounting structure, including modules, and balance of system components shall be designed to withstand wind loads of at least 60 mph (3-second gust).
- Array mounting hardware supplied shall be compatible with the prevalent specific site environment and weather conditions.
- Mounting structures of anodized aluminium material shall be provided. Mechanical hardware shall be durable and corrosion resistant. The use of ferrous metals (including but not limited to painted or plated steel), dissimilar metals in contact, or any wood or plastic components is not allowed.
- Special attention shall be paid to minimising the risk of equipment damage and personal injury from exposed fasteners and sharp edges. All potentially hazardous hardware must be adequately blinded or shielded for safety.
- PV modules must be oriented in a southern direction (as far as possible) with an inclination (tilt) of between 8 to 10 degrees.

3.4. Balance of System (BoS) Equipment

- PV Wire Stainless Steel Clips: Clips for the purpose of management of the PV wires, Stainless Steel material, clips onto the aluminum frame of PV Module, holds one or two PV wires, 20-year warranty, Nine Fastener DCS-1307 or equivalent clip
- PV Wire - 6mm²: Compatible and applicable for outdoor PV systems, UV resistant, crosslinked polyethylene, frame retardant, 1000Vdc, Black, Fine wire tinned copper conductor, operating between -40°C to +90°C, compliant with NEC 2023
- MC4 Connectors Male and Female: Rated 30A, 600Vdc (UL), -40°C to +90°C, IP67 rated mated, degree of protection, 0.5mM Ω contact resistant, Copper/tin plated contact material, PPO/PC/PA Insulation material, Ssnap-in (nur/only MC4) locking system, Frame Class: UL94-HB/UL94-V0, Safety class 2, Contact System: MC Multilam, Type of termination: crimped, Cable size: 6mm²
- Solar DC Combiner Box with overload protection: Enclosure rating: NEMA 3R, Mounting options: Vertical wall mount, pole mount or sloped roof mount to 14 degrees incline (3 in 12 roof pitch), DIN rail mount for fuse holders or breakers, voltage rating: 600Vdc, Number of PV Strings: minimum of four strings, supplied with overload protection for each string, maximum OCPD rating: 30 amp with fuses, 63 amps with 150-volt breakers, maximum

output amps: 80 amps for fused, 120 amp for breakers, output wire range: 14 to 1/0 AWG, Lug temperature rating: 90°C, fuse holder (if applicable): 30A DC, 1000Vdc, Fuse/Breaker: 20A DC, 1000Vdc, UL1741 Listed, Midnite MNPV6 with Mersen USM1HEL fuse holder and Mersen HP10M20 fuse or equivalent

- DC Surge Protector (300Vdc/ac): Nominal voltage 0 to 300Vdc, 120/240Vac, MCOV: 470V, SCCR: 10kA, VPR Line to Ground: 1200V, Type: UL1449 4th Ed. Type 1, Diagnostic LED: LED indicates when voltage is present between L1 + L2 (PV+ PV-), Thermal Disconnect: Internal Fuse, Response Time: <1 micro sec., MidNite SPD-300-DC or equivalent
- DC Surge Protector (600V): Nominal Voltage: 0 – 600Vdc, MCOV: 780V, SCCR: 10kA, VPR Line to Ground: 1500V, Mounting: Off-grid PV combiners Charge controller inputs up to 600Vdc, Type: UL1449 4th Ed. Type 1, Diagnostic LED: LED indicates when voltage is present between L1 + L2 (PV+ PV-), Thermal Disconnect: Internal Fuse, Response Time: <1 micro sec., MidNite SPD-600-DC or equivalent
- Solar DC Disconnect 125A: Enclosure: no rust in the tropics, Hinged door for easy access to electrical circuits, Inverter breaker included (125A), Din rail for DC circuits such as PV in, Charge Controller out, DC-GFP, DC Loads, PV combiner, Ground bus bar with minimum 10 poles, mounting spots for 250-500 amp, 50mV shunt, mounting spot for insulated bus bar (for PV negative connection point), knockouts for inverter and battery cables, charge control mounting, DC & PV in & out, Stud or bar for battery negative tie point, UL Listed, Three (3) years warranty, MidNite MNDC125 or equivalent
- Solar DC Disconnect 175A: Enclosure: no rust in the tropics, Hinged door for easy access to electrical circuits, Inverter breaker included (175A), Din rail for DC circuits such as PV in, Charge Controller out, DC-GFP, DC Loads, PV combiner, Ground bus bar with minimum 10 poles, mounting spots for 250-500 amp, 50mV shunt, mounting spot for insulated bus bar (for PV negative connection point), knockouts for inverter and battery cables, charge control mounting, DC & PV in & out, Stud or bar for battery negative tie point, UL Listed, Three (3) years warranty, MidNite MNDC175 or equivalent
- Battery Cable: 2/0 AWG: Application: Battery energy storage system, material: Copper, Voltage rating: 600V, Compatible with battery Cable: 2/0AWG, Type: Standard barrel, Tin Plated, One hole, Temperature Rating up to 105°C Dry and 75°C Wet, Stranded Copper Conductor for maximum conductivity (Class K 30 gauge bare copper), Flame retardant insulation with PVC Jacket, Moisture, abrasion, acid, and oil resistant.
- Copper Compression Lug: 2/0AWG: Application: Battery energy storage system, material: Copper, Voltage rating: 600V, Compatible with battery Cable: 2/0AWG, Type: Standard barrel, Tin Plated, One hole, Temperature Rating up to 105°C, hole to accommodate a 3/8" bolt/stud, UL Listed, Burndy YA26L3G1 or equivalent

3.5. Hybrid Inverter

- Capacity totaling between 100 – 120% of PV modules
- Master/Slave or String Type;
- Maximum efficiency of 96% with 94.5% CEC efficiency;
- Intelligent battery management including state of charge calculation for maximum battery life;
- Integrated soft start/generator support;



- Versatile - complete for off-grid management as well as grid-tie battery backup/AC Coupling;
- Suitable for systems from up to 100 kW or greater;
- Excellent overload characteristics with active temperature management;
- Certification UL 1741 / UL 1998; UL 60730
- Modular, stackable design;
- Nominal Frequency 60 Hz;
- Frequency Range ≥ 58.4 to ≤ 61.7 (Field Selectable);
- Pure Sine Wave;
- Automatically transfers between inverter power and incoming AC power source;
- Compatible battery types Flooded, Gel, AGM, LiON;
- Indications of status of operation (e.g. LED);
- Over voltage and under voltage protection;
- Over-temperature protection;
- Overload protection;
- Short circuit protection.
- Features capabilities for remote system monitoring of the PV System, BESS and Inverter Parameters
- 5 Year Standard Warranty;

3.6. Energy Storage System

- Minimum useable storage capacity should match or exceed the stated Battery Energy Storage System of the Community Solar PV System below:
 - Minimum Energy Storage capacity of: 458kWh (OPzV Lead Acid: 50% DoD)
 - Minimum Energy Storage capacity of: 255kWh (Lithium Ion: 90% DoD)
- Batteries should be deep cycle type and rechargeable
 - OPzV Battery Technology or Lithium Ion Technology
- Battery Rating: C10 (If Lead Acid BESS is being proposed)
- **Design for renewable energy applications specifically for hybrid/Off-Grid applications**
- Batteries are to be installed as recommend by the Original Equipment Manufacturer (OEM)
- Batteries are to be placed on racks to minimize the use of space
- Bidders are to supply the racks which are to be supplied with the batteries and therefore suitable for use with the battery. **Racks should be made to minimize the space required for keeping the batteries in a suitable position while allowing optimum charge/discharge operation and effective ventilation. All integrated connectors and fasteners used must be resistant to rust. Racks must be painted in two coats with anti-rust protective layer paint. The preferred colour would be black. The battery racks MUST be adequately grounded.**

Battery terminals and conductors should be guarded/shielded to prevent accidental short circuits. Guards should be removable to aid future maintenance of the battery bank.

System must be supplied with a suitable means of isolating the entire BESS from the rest of the electrical system particularly the load.

Bidders are to supply drawings of the racks with battery bank configuration for approval by the procuring entity

- Manufacturer's data sheets containing battery performance charts and specifications must

be provided. Batteries must be procured from same manufacturer and have same ampere-Hour and voltage rating

- Battery Energy Storage System must comply to UL9540 standard
- 5000 and above cycles at 50% Depth of Discharge
- Communication: CAN/RS485
- Operation Temperature: 10°C to 50°C
- 5 Years Minimum Warranty on Lead Acid batteries and 8 Years Minimum on Lithium Ion batteries
- The battery energy storage system should provide the primary function of allowing the maximum use of energy stored during the periods when solar energy is not available. It should be capable of providing rapid response when the intermittent source cannot meet the energy requirement of the building. A battery management and monitoring system must be included.

3.7. 100W Integrated Solar Street Lighting

LED Characteristics:

Luminous Efficacy: 110LM/W

Color Temperature: 3800-4500K

Life span: 50,000 hours

Max Output Power: 100W

Typical Luminous Flux: 11,000LM

Lighting Distribution/Pattern: Horizontal 140 Degree & Vertical 80 Degree (Batwing pattern)

Photovoltaic Panel:

Technology: Mono-crystalline photovoltaic panels

Power of PV Model: $\geq 140\text{Wp}$ (100W LED)

Battery:

Technology: Lithium

Capacity: Optimized for 12 hrs. Daily Operation

Autonomy: 3 Rainy days

Lifespan: 5 years

Charging Controller:

Technology : MPPT (Maximum Power Point Tracking)

Lifespan: 5 years

General:

Ingress Protection Rating: IP66 or IP65

Working Temperature: 5°C to +60°C

Warranty on Entire Unit: 5 years

Local After sales service: The Supplier shall provide at least three years local after sales service.



Product **Manual** and Label for each equipment are provided

- Voltage / wattage/ current
- Model number
- Serial number
- Certification
- Manufacturer's brand

3.8. Battery Monitoring System

The battery monitoring system shall be capable of (but not limited) the following:

- State of Charge (SOC), state of health (SOH) monitoring of the battery bank based on measured kWh in the battery bank (not based on battery voltage)
- Monitoring charging and discharge rates
- Monitoring (power, voltages, current, etc.)
- Battery Temperature
- These features can be integrated in the inverter
- 2 Years Warranty

3.9. Monitoring System

The installation shall provide real-time monitoring through a computer software that features a local electric energy meter, power meter, data logger and appropriate current transformers to record electric consumption of the loads/buildings from the grid and solar energy produced by the solar PV system and provide a combined recording of all inverters/circuits loads. It should provide:

- Graphical and Numerical real-time energy information and long-term reports (total voltage, frequency, intensity, active power and energy demand of the mini-grid, measured in the output of the solar PV inverter/s and the low voltage side of the transformer; total power generated and energy produced by the solar system, measured in the output of the PV inverters; total power and energy produced by other sources of energy, if any);
- Historic Data; Data export via push or pull with an open data API.
- No service contracts
- 3 years warranty
- Must have at least one (1) ethernet styled registered jack (RJ) 45 data port.
- The monitoring system shall also feature a web-based application for remote monitoring via onsite internet service.

3.10. Housing

The supplier can supply a suitably configured and fully integrated containerised system inclusive of cooling system and all electrical controls for connecting the Solar PV Arrays to the Inverters, BESS and other electrical system equipment.

Alternatively, the successful bidder would be required to construct a suitable concrete building where all components, such as, ESS, charge controllers, inverters, monitoring system, and switchgears will be installed. The structure shall be outfitted with a high SEER Inverter-type AC Unit (at least 18000 BTU) to help the maintenance of the required indoor temperature and conditions to allow for maximum performance of the components installed, it shall be capable of protecting the components from unwanted conditions so as to maximize the lifespan of the system. The building must be constructed of concrete with corrugated zinc sheet roofing and PVC panel ceiling. There must also be a metal door swinging outwards to enable ease of

movement of the installed components and any personnel required to conduct monitoring or repairs and maintenance. Any wooden sections of the building must be made with dressed and treated lumber.

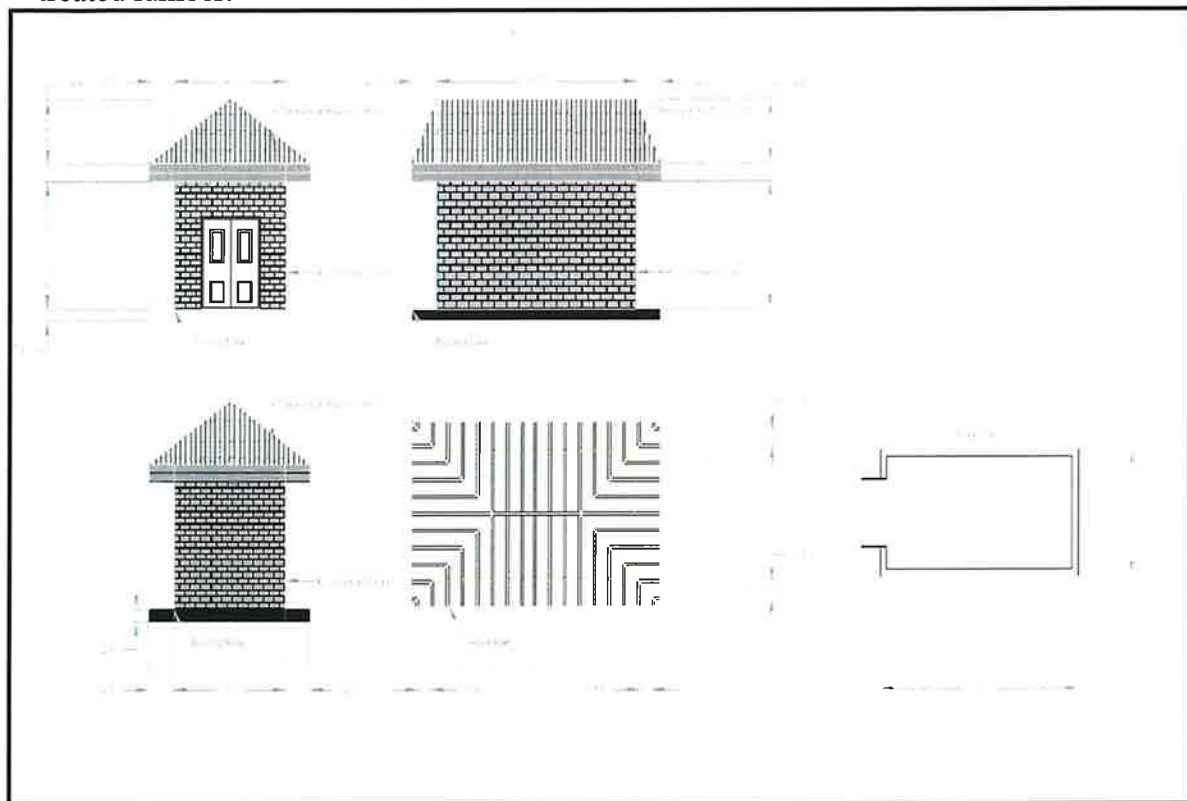


Figure 1 Proposed layout of the PV Balance of System Equipment Installation Building

The entire area surrounding the Solar PV System Installation must be suitably fenced using metal with concrete base or pad foundations for the uprights. This is to ensure safety of the installed equipment. Fencing must be equipped with security means (e.g. razor wiring atop the fencing) to limit unwanted access to the Solar PV System Equipment. This fenced area must also be provided with sufficient lighting for security purposes. Lighting must be of the Integrated Solar PV Type (Solar PV Module and BESS integrated into the luminaire).

3.11. Location

No.	Region	Community	Pop.	Households	Buildings	PV (kWp)	BESS (kWh)
1	1	Waramuri	416	94	18	143.4	458 (OPzV Lead Acid)
						143.4	255 (Lithium Ion)

3.12. Schematic Diagram

A detailed system schematic design layout of all components and system interconnects **MUST** be provided in accordance with NEC 2023 Article 690 and associated Articles 705, 706, 710, 110, 240 and 250.

Drawings provided **MUST** be electrical schematic drawings and show all components and their respective rating (e.g., wires and circuit breaker sizes). ***An as-built electrical schematics of the systems must be submitted to the Procuring Entity for review and approval before commissioning the solar PV system.*** The as-built electrical schematic must include the following:

- Solar PV Array layout



- Size of the solar modules in watts and quantity per string sizing considerations (Series and Parallel Connections)
- The direction/azimuth (deg) and the tilt (deg) of the modules in each string must be stated on the diagram
- Layout of DC combiner boxes showing electrical connections and ratings of fuses, breakers and/or disconnects.
- Model number and basic electrical specifications of major electrical components like inverters, charge controllers, battery cells, transformers, circuit breakers, disconnects, monitoring device, etc. must be included in the electrical schematics.
- The point of interconnection/s of the Solar PV System to the LV Electrical Network must be clearly indicated on the drawing (PV System Mains Disconnect, Size of LV Fuses).
- The sizes of the electrical conductors for AC and DC conductors (AWG or mm² or mm) must be clearly shown on the electrical schematic.
- Grounding circuit of major electrical components and grounding electrode/s.
- The size and position of current transformers used by the solar PV monitoring system (if installed) must be included in the electrical schematic.
- The point/s where voltage and current readings are measured by the monitoring system (if installed) must also be shown in the electrical schematics. Basic specifications of the CTs must be included in the drawing.
- The point of connection of the data cable or wireless signal for the monitoring system (if installed) at the facility data network with internet access must be indicated in the electrical schematic.

3.13. Stand-alone Solar Street Lighting (Supply of 18 Stand-alone Solar Street Lights)

- *100 Watts LED stand-alone Solar Street Lamps:*

LED Characteristics:

Luminous Efficacy: 110LM/W

Colour Temperature: 3800-4500K

Life span: 50,000 hours

Max Output Power: 100W

Typical Luminous Flux: 11,000LM

Lighting Distribution/Pattern: Horizontal 140 Degree & Vertical 80 Degree (Batwing pattern)

- *Photovoltaic Panel:*

Technology: Mono-crystalline photovoltaic panels

Power of PV Model: $\geq$ 140Wp (100W LED)

- *Battery:*
Technology: Lithium
Capacity: Optimized for 12 hrs. Daily Operation
Autonomy: 3 Rainy days
Lifespan: 5 years
- *Charging Controller:*
Technology : MPPT (Maximum Power Point Tracking)
Lifespan: 5 years
- *General:*
Ingress Protection Rating: IP66 or IP65
Working Temperature: 5°C to +60°C
Warranty on Entire Unit: 5 years
Local After sales service: The Supplier shall provide at least three years local after sales service.



The contractor is required to have a laminated copy of the system schematic installed at the location where the system components are sited before the system is commissioned.

3.14. Electrical Cables

Cables exposed to the sun should show an adequate type (UL 44, 83, UL 4703) designed to withstand harsh weather conditions (UV radiation, salty humidity etc.), e.g. type HN07-RNF and cables must be clearly identifiable (colour coded).

- Appropriate length USE-2 #6 AWG Sunlight Resistant Cable to connect solar modules in the designed configuration.
- The appropriate number of Solar Disconnect Switches and Combiner boxes.
- Appropriate size and number of interconnecting cables between combiner boxes and inverters.
- Appropriate size AC Interconnecting cables.

3.15. Protections

The solar PV system should be provided with lightning, & over voltage/over current protection. The main aim in this protection shall be to reduce the overvoltage to a tolerable value before it reaches the PV or other subsystem components. The source of over voltage can be lightning, atmosphere disturbances etc. The protection against induced high-voltages shall be provided by the use of MOV type surge arrestors and suitable earthing such that induced transients find an alternate route to earth. In addition, the lightning arrestor/SPD should also be adequately earthed for the system.

3.16. Fire Extinguisher

- Can be of type: Carbon Dioxide, Dry Chemical, Clean Agent or Dry Powder
- 20 pounds (lbs.)
- Class C rated
- Operation type (P.A.S.S)
- Test Certificate or Test Date Clearly visible
- To be mounted in the PV Balance of System components hut

3.17. LV Distribution Network

Pole Description	Latitude	Longitude
LV Take – off Structure	7°36'34.18"N	58°52'13.84"W
LV – Intermediate Structure	7°36'34.06"N	58°52'12.92"W
LV – Heavy Angle Structure	7°36'33.92"N	58°52'12.06"W
LV – Heavy Angle Structure	7°36'32.75"N	58°52'12.32"W
LV – Intermediate Structure	7°36'32.82"N	58°52'13.31"W
LV – Intermediate Structure	7°36'32.88"N	58°52'14.30"W
LV – Intermediate Structure	7°36'32.91"N	58°52'15.23"W
LV – Intermediate Structure	7°36'32.98"N	58°52'16.39"W
LV – Intermediate Structure	7°36'33.17"N	58°52'17.51"W
LV – Intermediate Structure	7°36'33.50"N	58°52'18.33"W
LV – Heavy Angle Structure	7°36'33.92"N	58°52'19.14"W
LV – Intermediate Structure	7°36'33.13"N	58°52'19.66"W
LV – Intermediate Structure	7°36'32.27"N	58°52'20.24"W
LV – Intermediate Structure	7°36'31.43"N	58°52'20.71"W
Light Angle Pole	7°36'30.59"N	58°52'21.20"W
End Pole	7°36'35.53"N	58°52'12.12"W
End Pole	7°36'34.47"N	58°52'10.61"W
End Pole	7°36'35.95"N	58°52'11.62"W

Figure 2 GPS Coordinates and LV network Structures

The successful bidder will be required to design and construct a new distribution network to provide power (from the PV System to be installed) to the selected buildings in the village. ***Guidance on the length of network and network type (LV) is presented in the Delivery Schedule/Schedule of Requirements.*** The successful bidder is also required to install LV service drops to each of the listed buildings to be interconnected to the Solar PV Mini-grid Systems. This is to be done, wherever possible, with guidance from the building representative/village representative/procuring entity to ensure that the cable is either connected to the building pigtail or in close proximity as possible (within 2-4 feet) of the location of the building mains (or indicated position where no mains exists). The executing agency will be responsible for the termination of these service drops.

The bidder shall provide in their bids a preliminary one-line diagram with the design/route of the distribution network to be built. The successful bidder will be required to submit a final design after the commencement order is issued. The approval of the final design will be based on a review by the contracting agency (GEA).

The works for the distribution network to be built in Waramuri shall include:

- Supply and Installation of Secondary Poles (9 meters) inclusive of all hardware. The quantities should be guided by the requirements listed within the document and on the final design and layout submission after the contractor's site visit.
- Takeoff structure from PV System equipment inclusive of pole, LV Disconnect, insulators, brackets with insulators, etc.
- Supply and Stringing of Aluminum Triplex Conductor 19 strands 4/0 AWG Lepas and all required hardware for LV Distribution network to the public buildings identified based on the final design proposed by the bidder and approved by the procuring entity.

- Supply and Installation of service drops from the LV distribution network to the respective buildings in both villages
- Supply and Installation of Complete Guy Sets based on the design proposed by the bidder.
- Installation of Earth Sets
- Line path clearing of vegetation and other encumbrances

4. Specification of Required Services

4.1. Systems Design

Bidders are required to visit the selected site and determine the best possible methodology for installation of the components and the complete system.

The successful bidder shall be required to provide all necessary infrastructure for mounting/positioning the inverters, controllers, energy storage system, switch gears, etc. The successful bidder shall be required to construct/provide all necessary infrastructure to accommodate the inverters, controllers, energy storage system, switch gears etc. All infrastructure constructed must be structurally sound, secure and provide protection and adequate ventilation/cooling for the equipment installed.

Detailed design drawings of the solar PV and BESS system will be required from the contractor for review and approval by the procuring entity before commencement of construction. As-Built drawings in both hard and soft copies are required by the procuring entity before the system is commissioned.

4.2. System Operation

- a) The system must be configured in a DC coupled configuration. The solar PV system shall be the primary source of energy for the selected buildings. The buildings which have access to the on-site generator or a smaller roof mounted Solar PV System will be connected via a simple manual transfer switch (MTS) to enable switching between the mini-grid and the other sources of electricity available. (This MTS will be procured and installed by the GEA).
- b) Electricity generated from the PV arrays shall be used for real-time consumption, and recharging of the battery energy storage system (BESS).
- c) The battery energy storage system should provide the primary function of allowing the maximum use of energy stored during the periods when solar energy is not available (at nights). It should be capable of providing rapid response when the intermittent source cannot meet the energy requirement of the consumers.
- d) The PV system must be capable of automatically disconnecting the load at a predefined critical SOC of the BESS. The system must also be capable of automatically recharging the BESS from the solar array to a predefined SOC before the load is automatically reconnected. These predefined SOC values must be selectable or adjustable by the operator.

4.3. Solar Photovoltaic System Installation

- a) All installations are to be conducted in accordance with **NEC 2017 Article 690** which covers solar PV systems installation, protection (AC, DC and lightning) and grounding, Chapter 3 of the NEC 2017 which covers wiring method and materials, and **Article 705** for interconnection to the grid. **All labels/ markings are to be provided by the contactor in accordance with the NEC 2017 Article 690 requirements.**
- b) The Government Electrical Inspectorate (GEI) requires that all solar installations must be provided with effective independent grounding/earthing systems. The contractor is therefore required to install a separate grounding system that when tested has ground resistance value of 25 ohms or less. The minimum size copper grounding rod to be use is 5/8inch x 8 feet for the solar PV installation. Bidder should take note of areas with high ground resistance and make provisions for special grounding methods to meet requirements.
- c) ***The GEA also requires that the contractor applies and pay for an independent inspection certificate of all completed installations. This inspection certificate is required by the GEA before a final completion certificate could be issued.***
- d) Damages to internal and external walls e.g. any holes, cuts or any actions/activities resulting in the defacing of any building during installation, must be repaired (neatly covered with appropriate moulding, paint or filling material) and returned to the original state at the expense of the contractor.
- e) All the modules in a string must have the same azimuth and tilt. If strings are connected in parallel, the strings must contain the same number of modules and have the same azimuth and tilt to reduce losses due to module mismatch.
- f) If multiple strings are connected to the same MPPT input of a charge controller or inverter, each string must be identical (number and type of modules, and orientation) to reduce losses due to module mismatch.

4.4. Installation (Electrical Distribution Network)

The bidder is required to supply all materials, specialized equipment and construct an overhead low voltage distribution network of 120/240 volts, three wire (3W), single phase, bundled conductors in the village. This overhead distribution network will be connected to the Solar PV plant to power the selected public buildings **ONLY** in the village identified in the tender.

- (a) All works must be in accordance with the NESC and conform to standard overhead line construction guidelines and practices.
- (b) Sag and Tension of all conductors must confirm to standard overhead line construction guidelines and practices.
- (c) All poles must be treated and can be of wallaba type, concrete or fibre glass (MUST have similar properties with woods used for transmission and distribution poles);
- (d) All works will be subjected to inspections by an Authorized Personnel
- (e) Approved Contractor must have previous experience in design/construction/installation of Overhead Distribution Lines.
- (f) Test and commission completed overhead distribution network after construction.

4.5. System Conditions

The following conditions MUST apply to the 13.8kV network.

Frequency	60 Hz	
Nominal system voltages:	120/240Vac	
	LV System (1ph)	120/240 V

4.6. Overhead Lines

Wherever other lines and/or equipment are sharing the same poles as the electricity lines, utmost care must be taken to avoid damage to property. The Contractor shall be responsible for any damage that may occur. It is advisable that the Contractor co-ordinates his activities with the relevant representative of the village prior to and during construction.

4.6.1. Pegging

The Contractor shall peg the pole positions to ensure that the line route is according to their proposed design. A sighting procedure shall be followed to establish straight lines. Normally poles shall be aligned by "eye" using ranging rods. Where the range is too long for the naked eye a theodolite shall be used. The pegging exercise shall be witnessed by the Employer's representative.

4.6.2. Pole Distribution

In distributing the poles, large, choice, close-grained poles shall be used for dead-end, angle, and corner poles.

4.6.3. Pole Setting

The minimum depth for setting poles shall be as follows:

Length of Poles (feet)	Setting in soil (feet)
30	5.5
40	6.0

"Setting in Soil" specifications shall apply as follows:

- Where poles are to be set in soil.
- Where there is a layer of soil of more than two (2) feet in depth over solid rock.
- Where the hole in solid rock is not substantially vertical or the diameter of the hole at the surface of the rock exceeds approximately twice the diameter of the pole at the same level.

On sloping ground, the depth of the hole shall always be measured from the low side of the hole.

Poles shall be set so that alternate crossarm gains face in opposite direction, except at terminals and dead-ends where the gains of the last two poles shall be on the said side facing the terminal or dead-end.

On unusually long spans, the poles shall be set so that the crossarms are fixed on the side of the pole away from the long span. Where pole op pins are used, they shall be on the opposite side of the pole from the gain, with the flat side against the pole.

Poles shall be set in alignment and plumb except at corners, terminals, angles, junction, or other

point of strain, where they shall be set and raked against the strain so the conductors shall be in line.

Poles shall be raked against the conductor strain not less than one inch for each ten feet of pole length nor more than two inches for each ten feet of pole length after conductors are installed at the required tension.

Poles backfill shall be placed as soon as possible after pole erection in layers not exceeding six inches. Each layer shall be evenly placed and thoroughly compacted. Backfill in shall be built up to a minimum of 12" above the surface of the general ground level to allow for consolidation and settlement.

Should excavation be to a greater depth than specified, use sand compacted in 3" deep layers to bring the excavation to the required elevation.

Backfill material shall be sand or other suitable soil when excavated material is considered unsuitable. This material shall be free of leaves, wood and other deleterious matter.

Transformer poles shall also be fitted with one sleeper at ground level (5ft. sleeper). Sleepers shall be bolted to the pole.

In exceptionally wet ground conditions poles may require top and bottom sleepers.

4.6.4. Preparation of Poles and Assembly

Poles (supplied undrilled) shall be gained and drilled. All bolt holes shall be 1/16" larger than the diameter of the bolts. (The correct lengths of bolts as required to match the various sizes of poles shall be used for all connections).

Pole butts shall be coated with an approved mix of tar, oil and creosote, unless otherwise specified, which shall be applied hot from the butt to a point 8 feet above the butt. The roof shall be painted with the same mixture.

Poles should be roofed, drilled, and dressed at the pole dump sites. A power drill should be used to drill the holes efficiently.

Pole steps are to be located 18" apart. Pole steps in the vicinity of the lowest conductor shall be removed after work is completed.

4.7. Grading of Line

When using high poles to clear obstacles such as buildings, foreign wire crossings, wide roads, etc., there shall be no upstrain on pin-type insulators in grading the line each way to lower poles.

4.8. Guys and Anchors

Guys shall be placed before the conductors are strung and shall be attached to the pole.

All anchors and rods shall be in line with the strain and shall be so installed that approximately six inches of the rod remain out of the ground. In cultivated fields or other locations, as deemed necessary, the projection of the anchor rod above earth may be increased to a maximum of 12 inches to prevent burial of the rod eye. The backfill of all anchor holes must be thoroughly

tamped the full depth, and the first 3 feet shall be placed in four well compacted layers of 8" each.

- Anchor blocks shall be 5ft. long.
- Preformed wraps shall be used to fix the guy wire.

4.9. Locknuts

A locknut shall be installed with each nut, eye-nut or other fastener on all bolts or threaded hardware such as insulator pins, upset bolts, double arming bolts, etc., unless otherwise specified.

When installed in the structure, they shall extend at least 1/2" and not more than 2 1/2" beyond the nuts.

4.10. Insulators

Extreme care must be exercised in the distribution, storing and handling of insulators and special precautions taken to prevent chipping or cracking of the discs. Any damage to the insulators caused by the contractors' negligence must be made good by him.

Ball sockets of suspension insulators must be clean inside and free from dust, small stones, etc. before the ball is inserted. The ball shall be prevented from leaving the socket by the insertion of a cotter pin and the ends of all cotter pins shall be spread 1" apart after insertion to prevent their falling out under working conditions.

Pin insulators shall be tight on pins and on target construction, the top groove must be in line with the conductor after tying in. The conductors shall be tied in the top groove of the insulator on tangent poles and on the side of the insulator away from the strain at angles.

Polymeric insulators shall be used for conductor dead-end.

4.11. Conductors

Conductors must be handled with care. Conductors shall not be trampled on nor run over by vehicles. Each reel shall be examined and the wire shall be inspected for cuts, kinks, or other damage. Damaged portions shall be cut out and the conductor spliced. The conductors shall be pulled over suitable rollers or stringing blocks properly mounted on pole or crossarm if necessary, to prevent binding while stringing.

Loading of conductor drums may be performed by a small mobile crane or fork lift. Drums may only be rolled over short distances and must always be rolled in the direction of rotation corresponding with the arrow on the drum.

Drums are not to be dropped from lorries. Any conductor damaged by such mishandling may be rejected by the Engineer and the landed cost of replacement charged to the Contractor.

The lagging on the drums is to be retained until the drums are finally mounted on spindles prior to pull out.

In pulling out conductor the drum shall be supported on suitable jacks levelled and secured with the drum free to revolve. An efficient brake shall be provided to prevent the conductor jumping the drum when pulling ceases. Where convenient, the conductor may be pulled by a towing vehicle to give slack. The conductor shall be lifted by approved means, e.g., a lifting shoe and placed through the above-mentioned stringing blocks.

During pull out, the conductor is to be prevented from rubbing on hard abrasive surfaces. Temporary scaffolding may be required to scale steel fences and other abrasive objects along

the route. Special structures such as temporary poles will be needed to gain clearance at road crossing and navigable waterways as well as existing high voltage wires. Proposals for these crossings must be worked out well in advance and must be approved by the Engineer. During work on such crossings the Engineer will be in attendance and his instructions relating to safety must be adhered to.

In cases where circuits to be crossed can be switched out, the permit to work system will be in force. The Contractor shall be required to obtain written clearance from the Engineer before assuming the circuits are dead.

Wherever possible the conductor must be kept clear of water.

If conductors are damaged beyond repair because of the Contractor's equipment, methods or lack of adequate protection, the damaged section shall be removed and replaced at the expense of the Contractor.

With pin-type insulators the conductors shall be tied in the top groove of the insulator on tangent poles and on the side of the insulator away from the strain at angles. Pin-type insulators shall be tight on the pins and on tangent construction the top groove must be in line with the conductor after tying in.

For neutral and secondary conductors on poles, insulated brackets may be substituted for the single and double upset bolts on angles of 0 to 5 degrees in locations known to be subject to considerable conductor vibration.

All conductors shall be cleaned thoroughly by wire brushing before splicing or the installation of a connector or clamp. A suitable inhibitor shall be used before splicing or applying connectors over aluminum conductor.

4.12. Splices and Dead Ends

In exceptional circumstances conductors may be spliced using a crimped connector. Dead-ends shall be fitted with preformed wraps. There shall be not more than one splice per conductor in any span and splicing sleeves shall be located at least ten feet from the conductor support. No splices shall be used in spans adjacent to section poles, nor in spans of road, railway lines nor in spans of any important crossing.

4.13. Connectors

All connections shall be made using crimped connectors, type Burndy or equivalent.

4.14. Line Clearance to Ground

The minimum line clearances to ground for voltages from 750V to 15kV shall be in accordance with the table below.

Situation	Min. Clearances Metres (Feet)
Over Open Country	4.60 (15)
Over a Road	7.5 (25)
Along A Road	7 (23)
Over Telecommunications Lines	2 (6)
Over Rivers	7.5 (25)
Over Railways	8.6 (28)

Situation	Min. Clearances Metres (Feet)
Over LV Lines	2 (6)
Near Buildings: Vertical* (roof or projection not accessible to pedestrians)	3 (10)
Near Buildings: Vertical* (roof or balconies accessible to pedestrians)	4.6 (15)
Horizontal	2.4 (8)

4.15. Sagging

The sag of the conductors shall be determined in the field from the span length, the section ruling span, the temperature and the sag charts supplied by the Engineer. Sag measurements shall be made on one principal sighting span and up to two check spans for any sag section. These spans and the respective sags will normally be agreed upon beforehand with the Project Manager.

All conductors shall be sagged evenly, except that a maximum increase of three inches of the specified sag in any span will be acceptable. However, under no circumstances will a decrease in the specified sag be allowed.

The work includes stringing and sagging of conductors and the installation of all joints, assemblies and terminals. The entire operation will be observed by the Engineer or his representative and every facility shall be given the observer or engineer to thoroughly inspect every detail of the work. The equipment used for the operation shall be such that the conductors are not pinched, twisted or damaged in any way.

For pulling out and subsequent sagging, the conductors shall be supported in approved stringing blocks, having close fitting but free running aluminium sheaves on roller bearings. These blocks shall be so attached to the structure that they are at the same height as the conductor groove on the insulator.

During stringing/sagging operations, the contractor must ensure that undue stresses are not imposed on the structures or insulators. At no time during pull out and prior to sagging should the tension in the conductor be greater than 50% of its ultimate tensile strength nor should the sag be less than 80% of respective sag for any specific span.

The Contractor shall not use tangent poles as temporary dead ends unless suitably back-guyed. At no time shall the conductor be held in tension by pin insulators.

The Contractor shall have in operation a suitably clear and reliable means of communication between check spans, sighting spans, conductor anchor points and conductors tensioning point throughout the sagging and tensioning exercise. It shall preferably be portable radios, but if not available, flags may be used.

The following are the typical tools/equipment required:-

- Chain jack
- Conductor grips
- Conductor travellers
- Drum jacks
- Tractor with winch

However, the tools/equipment should not be limited to any or all of the above. For long lines use tractor for pulling, preferably all three (3) conductors simultaneously. Use light rope as pilot especially when pulling over the lines on difficult terrain. Ensure conductor on rollers at each support to minimise abrasion and friction, also to prevent loops and kinks. Alternatively, tractor may be used with capstan attached to wheel. This method ensures adequate coiling up of rope.

Pull up and tensioning shall follow the sequence below:

- a) First pull up by vehicle
- b) Next - further tensioning by winch
- c) Final tensioning by chain jack at pole top
- d) Tension - two outer conductors simultaneously
- e) Adjust temporarily to allow structures to lean forward by approximately 2" to compensate for tensioning in succeeding (adjacent) section
- f) Final adjustment to sag
- g) Select longest flat span in section (also) two other spans at opposite extremities if the section is longer than 500 metres;
- h) Use light boards to pull up conductors to correct sag;
- i) After correct sag, mark conductor for permanent clamp position, apply armour tape and tie off.

The following line checks shall be carried out:

- a) Final pole depths use 10' mark as gauge
- b) Balance loading on stays
- c) Damaged insulators
- d) Clearances
- e) Ground
- f) Buildings
- g) Other circuits

4.16. Secondaries and Service Drops

Secondaries and service drops shall be so installed as not to obstruct climbing space. There shall not be more than one splice per conductor in any span, and spicing sleeves shall be located at least ten feet from the conductor support. Where the same covered conductors or service cables are to be used for the secondary and service drop, they may be installed in one continuous run.

4.17. Earthing/Grounding

The following parts of the system are to be grounded:

- Common neutral wire.
- Neutral at consumer's services entrance.
- Transformer windings as specified.
- Tank or frame of transformers, metering equipment, capacitors, regulators and other line equipment.
- Steel platforms and beams in substation or on poles.
- Fencing including gates used to enclose transformer or capacitor installations.
- Cable sheaths.
- GOAB switch handles.

Ground rods shall be driven full length in undisturbed earth. The top shall be at least 12 inches below the surface of the earth. The ground wire shall be attached to the rod with a clamp and secured to the pole with staples. The staples on the ground wire shall be spaced two feet apart

except for a distance of eight feet above the ground and eight feet down from the top of the pole where they shall be six inches apart.

All equipment shall have at least two connections from the frame, case or tank to the multi-grounded neutral conductor.

The equipment ground, neutral wires, and lightning-protective equipment shall be interconnected and attached to a common ground wire.

Temporary earths for the purpose of construction work shall be installed in accordance with standard practice, on both sides of the work area and at a reasonable distance away, so as to provide safe protection against lightning strikes or accidental energising of line or any other electrical hazard, to any personnel during construction.

4.18. Bolts and washers

All bolts and washers should be hot-dipped galvanized.

4.19. Rural Cut-outs (RCO)

RCOs for transformer structures should be combination type (lightning arrestor included).

4.20. Clearing of Right-of-Way (RoW)

In preparing the right-of-way, trees shall be removed, underbrush cleared and trees trimmed so that the RoW shall be clear from the ground up and of the width required.

Trees fronting each side of the RoW shall be trimmed symmetrically unless otherwise specified. Dead trees beyond the RoW which would strike the line in falling and which would require topping if not removed, shall either be removed or topped except that shade, fruit, or ornamental trees shall be trimmed and not removed unless otherwise authorised.

Spraying shall be performed in such manner, at such pressure and under such wind conditions that drift of spray material to adjacent vegetation will be avoided. Spraying should be performed the same day that brush and tree cutting removal work is completed but in no event later than 72 hours from the time tree cutting is performed. If moisture or wind conditions prevent treatment in accordance with the above, spraying shall be performed as soon thereafter as possible.

4.21. Safety

The work shall be carried out with every reasonable precaution and provisions being taken for the safety of those concerned in the preparation, excavation, erection, stringing and all other operations as well as for persons in the vicinity.

4.22. Inspection and Testing

Inspection and testing shall conform to the Quality Assurance requirements of this Specification. The Contractor shall inspect the Works prior to testing to ensure compliance with the specified requirements and the drawings. The inspection of the Works shall be attended and witnessed by the procuring entity or representative.

4.23. Drawing and Records

The Contractor will develop the drawings, both layouts and detail guides, required by the Procuring Entity for the construction of the Works. The Procuring Entity will review and approve the drawings in before construction commences.

4.24. Compliance with Regulations

All the equipment and accessories shall comply in every respect with the Regulations and Acts in force in Guyana.

The equipment and connections shall be designed and arranged to minimize the risk of fire and any damage that might be caused in the event of fire.

To ensure that the Works are in accordance with the Specification, with the regulations and with relevant authorised international standards, the Contractor shall have in place suitable Quality Assurance Programmes and Procedures to ensure that all activities are being controlled as necessary.

The quality assurance arrangements shall conform preferably to the relevant requirements of ISO 9001 or ISO 9002 as appropriate.

4.25. Progress Reporting

The Contractor shall submit progress reports on a monthly basis by the end of the first week of the month for the previous month's progress.

4.26. Delivery of Equipment to Installation Sites

The Bidder is fully responsible for organising and guaranteeing timely delivery and transport of the equipment to the installation site.

The Bidder is requested to present detailed information on the schedule of delivery and transport modalities of the equipment to the project site. Close coordination with responsible staff from the procuring entity is recommended. The Bidder is requested to consider site conditions having a potential influence on delivery and installation.

4.27. Transfer of Ownership

An Acceptance Inspection will be organised by the procuring entity in presence of the Installer of the System. The GEA will retain operational control of the system and will supervise the operation and maintenance of the Solar PV Minigrid System by the community's selected and suitably trained personnel.

4.28. Warranty

Two types of warranty have to be offered by the Bidder:

- a) Warranty on hardware failures on all products offered and used according to international established terms (3 years minimum);
- b) Warranty on the proper operation of the provided equipment according to the specification and terms fixed in the contract between the bidder and the procuring entity (3 years minimum).

4.29. After Sales Service

The Supplier must provide a local after-sales service of no less than 3 years.

4.30. Commissioning

Commissioning refers to inspection and testing the solar PV system after installation and certifying that it operates as expected and is installed according to the design plans and complies with NEC 2017 Articles 690 and 705.

4.31. Operation and Maintenance Manual

An Operation and Maintenance Manual has to be provided by the contractor (also referenced in Section 1.2)

SUPPLIER'S BID

NATIONAL PROCUREMENT
& TENDER ADMINISTRATION

09 OCT 2025

APPROVED

TO: _____
(Name and address of Procuring Entity)

Dear Sir / Madam,

Having examined the bidding documents including Annexes and Addenda No _____ [specify numbers], the receipt of which is hereby acknowledged, we offer to execute the "Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy" in accordance with the Contract conditions attached herein for the total amount of

The Value Added Tax (VAT) for our bid is

.....

.....

(amount in words and figures)

The Price of our bid, including VAT is

.....

.....(insert the total bid price in words and figures, in Guyana dollars as per details given in the price schedule attached)

Alternative bids (at the Employer's request):

Also, we offer to execute the works pursuant to alternative bids for the amount of _____ GYD

- (a) We, including all subcontractors, regarding any part of the Contract, in accordance with the bidding documents, have no conflict of interests pursuant to subclause 2 (i) of the Instructions to Bidders;
- (b) We, including all subcontractors, regarding any part of the Contract, in accordance with the bidding documents, have not been declared by the authorized State body on procurement to be ineligible, or are not ineligible, in accordance with the legislation of Guyana.

We undertake, if our Bid is accepted, to supply the Goods, in accordance with a delivery schedule given in the Schedule of Requirements.

If our Bid is accepted, we undertake to furnish the Performance security in the form of _____ to the amount of _____, comprising _____% of the Contract Price in order to execute the Contract properly and within the time period(s) specified in the Bidding Documents.

We hereby confirm that this bid shall be valid during _____ days starting from the date established for bid opening, and it shall be binding until the expiry of the indicated period.

We understand that you are not bound to accept the lowest or any bid you receive.

Dated the _____ day of _____ 202__.

Duly authorized to sign the Bid for and on behalf of

(name of Supplier)

(Full name)

(Title)

(Signature and seal)

PRICE SCHEDULE

Item No.	Brief Description of Goods	Quantity (to be determined by bidders)	Unit Price (GYD)	Delivery Cost plus taxes	Installation Cost plus taxes	Total Cost (GYD)
1	Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy Capacity: <i>143.4kWp/458kWh (Lead Acid) or 143.4kWp/255kWh (Lithium Ion)</i> a) PV modules b) Solar PV Roof-mounting hardware c) Balance of System Equipment d) Hybrid Inverters e) Energy Storage System f) Battery Monitoring System g) Web-based system energy monitoring system h) Housing i) Location j) Schematic Diagram k) Cabling and miscellaneous components l) 100W Stand-alone Solar Street Lighting (18 Pieces) m) Grounding system and overcurrent protection devices n) Fire Extinguisher					

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Item No.	Brief Description of Goods	Quantity (to be determined by bidders)	Unit Price (GYD)	Delivery Cost plus taxes	Installation Cost plus taxes	Total Cost (GYD)
	o) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the community/public buildings mains AC Circuits and interconnection to the nearest community Wifi network to enable online monitoring of the PV Minigrid Installation) p) Internal and External Lighting for the battery/inverter building to provide adequate illumination for evening/night time hours at the site					
1.1	Design, Supply & Construction of an Overhead 0.965km Low Voltage 120/240Vac Electrical Distribution Network at Waramuri: - Supply and Installation of Secondary Poles (9 meters) inclusive of all hardware (using the shortest route from the Solar PV System equipment to the associated community/public buildings). - Supply and stringing of 19 strand 4/0 AWG Lepas Aluminum Triplex Conductor and all required hardware for LV Distribution network. - Supply and Installation of service drops from the LV distribution network to the respective buildings. Service drops must terminate the building with a suitable insulator (pierce insulator). Termination of the service drop must be in close enough proximity to the building's					

Item No.	Brief Description of Goods	Quantity (to be determined by bidders)	Unit Price (GYD)	Delivery Cost plus taxes	Installation Cost plus taxes	Total Cost (GYD)
	main switch to allow for the connection of the service wire to the main via a 2-4 feet length of copper cable. - Supply and Installation of Complete Guy Sets (Guys are required at all End Pole, Branch Poles, Heavy Angle Structures and on any pole structures that are susceptible to heavy loading (vertical, longitudinal, transverse and wind loads must be considered) - Installation of Earth Sets (Earth Sets are required at all transformer structures, transformers, RCOs, the poles before and after the transformer structure and the last pole on any MV/LV circuit) - Vegetation Clearing along distribution network/cable route - Transportation of Material - Training - O&M provision					

Duly authorized to sign for and on behalf of

(name of Bidder)

(Full name)

(Title)

(Signature and seal)

SUPPLY CONTRACT FOR GOODS

THIS CONTRACT made the _____ day of _____ 202__ between *Guyana Energy Agency* (hereinafter referred to as "the Procuring Entity"), on the one hand, and _____ [name of Supplier] from _____ [city and country of Supplier] (hereinafter referred to as "the Supplier"), on the other hand have come to an Agreement on the following:

The Procuring Entity has announced bid for procurement of goods and services, namely "Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy" and has accepted the Supplier's bid for the supply of indicated goods and services to the sum of _____ [Contract Price in words and figures] (hereinafter referred to as "the Contract Price").

THIS CONTRACT WITNESSES AS FOLLOWS:

1. In this Contract, the terms and expressions have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall form the Contract and shall be deemed its integral part, viz.:
 - (a) Procuring Entity's Notification of Award;
 - (b) Bid and Price Schedule submitted by Bidder;
 - (c) Schedule of Requirements;
 - (d) Technical Specifications;
 - (e) General Conditions of Contract;
 - (f) Special Conditions of Contract;
 - (g) Other documents included in the Contract documents;
3. This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.
4. In consideration of the payments to be made by the Procuring Entity to the Supplier as hereinafter mentioned, the Supplier hereby covenants with the Procuring Entity to provide the Goods and Services, and remedy defects therein in conformity in all respects with the provisions of the Contract.
5. The Procuring Entity hereby agrees to pay the Supplier in consideration of the delivery of the Goods and Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS of the aforesaid, the parties hereto have caused this Contract to be executed in accordance with the legislation of Guyana the day and year first above written in the beginning of the document.

Signed and Sealed _____ [Full name and title of Procuring Entity's representative]

Signed and Sealed _____ [Full name and title of Supplier's representative]

BID SECURITY
(Bank Guarantee or Insurance Bond)

Whereas _____ [name of Bidder] (hereinafter referred as "the Bidder") is ready to submit his bid dated _____ [date of bid submission] for the **"Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy"** (hereinafter referred as "the Bid"),

KNOW ALL PEOPLE, that WE _____ [name of Bank / Surety] from _____ [name of country], having our registered office at the address _____ [address of Bank / Surety], (hereinafter referred as "the Bank"), are bound to _____ [name of Procuring Entity] to the sum of _____, by which payment to the indicated Procuring Entity shall be made in whole and in a timely manner; the Bank is bound on behalf of its name, its successors and authorized persons. This is to confirm that the license issued to the Bank shall provide for activity on issuance of the guarantee, and the person(s) signing that guarantee is entitled to act on behalf of the Bank, and if the approval of Board of Directors, or of General Stockholders Meeting is required, it is already received and there is no other approval required.

THE CONDITIONS of this obligation are as follows:

1. If the Bidder:
 - (a) Withdraws their Bid during the period of bid validity specified by the Bidder on the Form of Bid; or
2. If the Bidder having received notice from the Procuring Entity that their bid is accepted within the period of bid's validity:
 - (a) Fails or rejects to sign the Contract at the request of; or
 - (b) Fails or rejects to furnish the performance security in accordance with the Instructions to Bidders;

We undertake to pay the Procuring Entity the above sum upon receipt of their first written request, without needing the Procuring Entity to show grounds or reasons of that request, provided that the sum requested by the Procuring Entity is due to him because of the occurrence of one or two or both conditions, specifying the condition or conditions occurred.

This guarantee shall remain in force during _____ days inclusive following the expiry of the bid validity period, and any request in respect thereof should reach the Bank not later than the abovementioned date.

(Full name of Bank / Surety representative)

(Title)

(Signature and seal)

Dated on _____ day of _____ 202__.

Address of the Bank / Surety issuing guarantee:

MANUFACTURER'S AUTHORIZATION

*The Bidder shall require the Manufacturer to fill in this Form in accordance with the instructions indicated. This letter of authorization should be on the letterhead of the Manufacturer and should be signed by a person with the proper authority to sign documents that are binding on the Manufacturer. The Bidder shall include it in its bid, if so indicated in the **BDS.**]*

Date of Bid Submission (day/ month/ year):
IFB No.: [insert number of bidding process]
Alternative No.: [insert identification No if this is a Bid for an alternative]

To: _____ [insert complete name of Purchaser]

WHEREAS

We _____ [insert complete name of Manufacturer], who are official manufacturers of _____ [insert type of goods manufactured], having factories at _____ [insert full address of Manufacturer's factories], do hereby authorize _____ [insert complete name of Bidder] to submit a bid the purpose of which is to provide the following Goods, manufactured by us _____ [insert name and or brief description of the Goods], and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 1.3 of the General Conditions of Contract, with respect to the Goods offered by the above firm.

Signed: _____ [insert signature(s) of authorized representative(s) of the Manufacturer]

Name: _____ [insert complete name(s) of authorized representative(s) of the Manufacturer]

Title: _____ [insert title]

Duly authorized to sign this Authorization on behalf of: _____ [insert complete name of Bidder]

Dated on _____ day of _____, _____ [insert date of signing]

PERFORMANCE SECURITY
(Bank Guarantee or Insurance Bond)

TO: _____
[Name of Procuring Entity]

WHEREAS _____ [name of the Supplier] (hereinafter called "the Supplier") has undertaken, in accordance with the Contract No. _____ [Contract number] dated _____ 202_ to **"Electrification of one (1) isolated remote village in the Hinterland through Solar Photovoltaic Energy"** (hereinafter called "the Contract"),

AND WHEREAS it has been stipulated by you in the said Contract that the Supplier shall furnish you with a Bank Guarantee or Performance Bond from an Insurance company licensed by the Bank of Guyana, to the sum specified therein as a security for compliance with the Supplier's obligations under the Contract,

AND WHEREAS we have agreed to furnish the Supplier with a security,

THEREFORE WE hereby confirm that we are the Guarantors and are responsible to you on behalf of the Supplier, up to a total of _____ (amount of security in words and figures) and, we undertake to pay you, on your first request notifying of the Contractor's default with the Contract, and without cavil or argument, any sum or sums within the above limits, as aforesaid, without your needing to show grounds or reasons of your request or the sum specified therein.

Any modification or addition, or amendment in the terms of Contract which may be made by the Procuring Entity and the Supplier by Additional Agreement shall in no way release us from obligations under the Guarantee, and we waive any notice of modification, addition, or amendment. This guarantee shall be valid until full completion of the Contract Conditions by the Supplier. Also, we confirm that the license issued to the Bank shall provide for activity on issuance of a bank guarantee, and the person signing the guarantee is entitled to act on behalf of the Bank, and if the approval of Board of Directors or of General Stockholders Meeting is required, it is already received, and there is no other approval required

This guarantee shall be valid till the ____ day of _____ 202_.

(Full name of Bank / Surety's representative) (Title) (signature and seal)

Dated on _____ day of _____ 202_.

Address of the Bank issuing guarantee:

LETTER OF ACCEPTANCE
(Letterhead paper of Procuring Entity)

_____ (date)

To: _____
(Name of Supplier)

(address of Supplier)

We hereby notify you that your bid dated the _____ day of _____ 202__, for the supply of goods _____ (*description of goods*) up to a total of _____
(*amount in figures and words*)

as amended and modified in accordance with the Instructions to Bidders is hereby accepted by our agency.

Simultaneously, we send you the Form of Contract and request you, pursuant to Clause 20.1 of the Instructions to Bidders, during seven (7) days to sign and date the Form of Contract and return it at our address. Jointly with the signed Contract, we request you to furnish the performance security, in accordance with ITB Clause 20.2.

You hereby entrusted to start supply of the Goods, in accordance with the terms and conditions of a Contract.

Name of Agency

Full name and Title

Signature of Authorized Representative

Annex: The Contract



AFFIDAVIT OF AUTHORIZATION

TO: _____ *[name of Procuring Entity]*

WHEREAS _____ *[name of Supplier]*, who
is the Supplier _____ *[name and/or description of goods]*.

do hereby authorize _____ *[name and address of
Supplier's Representative]* to submit the Bid, and sign the Contract based on *Invitation for Bids* for the
abovementioned goods to be supplied by us, and

[Full name, title, signature for and on behalf of Supplier]

Dated on « _____ » day of _____ 202 _____. (seal)
(date)

Note:

The affidavit of authorization must be drafted on a letterhead of the Supplier and signed by a Commissioner of Oats to Affidavit or Justice of the peace. The Bidder shall include this authorization in their Bid.



EVALUATION AND QUALIFICATION CRITERIA

Criterion	Detailing	Minimum Score	Maximum Score
Administrative, Financial and Legal Submissions	(a) Submission of a valid business registration or certificate of incorporation that is clearly legible . Incorporated companies must submit a list of directors. (0.25 point)	0	2.25
	(b) Submission of a valid NIS compliance certificate in the name of the business as per business registration. Document must be clearly legible. (0.25 point)		
	(c) Submission of a valid GRA compliance certificate in the name of the business as per business registration. Document must be clearly legible. (0.25 point)		
	(d) Submission of bid security in the amount of 2% of the bid price in the form of a bond from an Insurance company licensed by the Bank of Guyana or a bank guarantee or manager's cheque. (0.25 point)		
	(e) Evidence of financial capacity, in the name of the bidder, representing 30% of the bid price. (0.25 point) Financial Capacity must be evidence in the form of a bank statement or Line of credit from a bank or Insurance company licensed by the Bank of Guyana. The line of credit must state a figure. The document must be dated within one month of the bid opening date and be clearly legible . When a photocopy is presented, it must be certified a 'true copy of original' by the issuing company		
	(f) Bidder must provide a letter of Authorization for the Procuring Entity to seek reference from the bidder's Bank/financial institution relating to the financial capacity		

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Criterion	Detailing	Minimum Score	Maximum Score
	evidence supplied. (0.25 point) The document must be dated within one month of the bid opening date and be clearly legible. (g) Bidder must provide audited financial statements for the past three years for incorporated companies. (0.25 point) Financial statements must be audited by a Chartered accountant/accountancy firm and include an auditor's note. OR Registered businesses must provide Balance Sheets, Profit and Loss Accounts, and Income and Expenditure Accounts for the past three years These financial statements must be approved by a Chartered accountant/accountancy firm. The financial analysis would include: Current ratio: >1 for each year of the last 3 years; Net worth: +ve and minimum of 20% of bid value; Average annual turnover: GYD 4million. (h) The Bidder shall provide accurate information on the related bidding form as provided on <i>page 47</i> about any litigation or arbitration resulting from contracts completed or on-going under its execution over the last five years. (0.25 point) <u>Pending Litigation:</u> All pending litigation shall in total not represent more 50% of the Bidder's net worth and shall be treated as resolved against the bidder. If bidder has pending litigation representing more than the stated percentage, the bid will not be considered. <u>Litigation History:</u> Non-performance of a contract did not occur as result of supplier's default since 1st January, 2018. If bidder		



Criterion	Detailing	Minimum Score	Maximum Score
	has a history of nonperforming contract the bid will not be considered. (i) Bidder must provide a letter stating any or no terminated or abandonment of projects. The letter must be dated within one month of the bid opening date. (0.25 point)		
Completeness of Bid	(a) Completed and signed supplier's bid form (<i>page 47</i>). (0.25 point) (b) Completed and signed price schedule must be submitted. (0.5 point) (c) Completed and signed delivery schedule (<i>page 20-23</i>) or statement of agreement to supply goods/services within the period specified by the Procuring Entity in the delivery schedule. (0.5 point) (d) Written confirmation of authorizing signatory must be provided. This must be in the form of an Affidavit of Authorization endorsed by a Commissioner of Oaths or Justice of Peace. (0.25 point) (e) Provision of a signed statement of warranty and/or guarantee for applicable items. At least two (2) years warranty on complete system is required (0.25 point)	0	1,75
Technical Submissions	(a) Provision of documentation detailing the technical specifications for the items listed in the Schedule of Requirement (<i>page 20-46</i>) or evidence to show that the goods match the requirements of the items listed in the Technical Specifications. (0.25 point) (b) Demonstrate experience and technical capacity by providing documentary evidence that	0	1

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Criterion	Detailing	Minimum Score	Maximum Score
	shows the completion of a minimum of two (2) contracts of similar size and scope to the Project over the last two (2) years. Bidder must provide copies of contracts with previous clients. Bidder must also demonstrate the experience of completing contracts of a minimum value of \$4,000,000 for each year over two (2) years. (0.25 point) (c) Bidder must provide a statement for the availability of spare parts and/or after sales services. Bidders statement indicating its acceptance or otherwise in offering Local after sales service of no less than three (3) years. Bidder must state the nature of service that will be provided. (0.25 point) (d) Submission of an implementation schedule indicating important milestones such as equipment delivery to site, installation, testing, training and commissioning of system. Monthly progress reports and work plans are to be provided to the Procuring Entity during project execution. (0.25 point)		
Experience	The company has to have experience in developing similar type and scope of projects as detailed in the document, Scores to be based on evidence of relevant projects involving community level solar PV Systems and LV electrical network implementation in off-grid or remote communities. Evidence of local/regional project implementation will be an asset and afforded 2 additional points.	0 point	10 points
Technical knowledge	The company has to have been operating in the solar PV/electricity network sector for at least 10 years. Relevant scores to be distributed based on the years of experience, distributed in multiples of	0 point	15 points



Criterion	Detailing	Minimum Score	Maximum Score
	5)		
Training	The company has to have expertise in continuous training of operators in the Solar PV System and Electrical Network Project Sectors. This can be shown by documentary evidence of training of own staff or other sector functionaries. Scores will be based on number of training seminars conducted or attended.	0 point	5 points
Project	Technical quality of the project. (Based on the supply of the required equipment that meet the Technical Specifications highlighted in the Tender Document) (a) PV Installation equipment (Inverters, Mounting Structure, PV Modules, BoS Equipment) - 10 (b) Electrical Network Infrastructure – 10 (c) System Operational Philosophy – 5 (d) Monitoring System – 5 (e) Housing - 5	0 point	35 points
Budget	Detailed commercial proposal. Must include costing for all system components and services to be provided.	0 point	20 points
Service Guarantee	The company has to give the warranty period for the service, monitoring and maintenance after the completion of the work (To be evaluated based on the supplied warranty statements) (a) Warranty: Two types of warranty have to be offered by the Bidder: • Warranty on hardware failures on all products offered and used according to international established terms (3 years minimum) • Warranty on the proper operation of the provided equipment according to the specification and terms fixed in the contract between the Bidder and the Procuring Entity (3 years minimum)	0 point	10 points
TOTAL			100 POINTS

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PENDING LITIGATION FORMAT				
☐ No pending litigation in accordance with Evaluation Criteria # 14				
Year of dispute	Amount in dispute (currency)	Outcome as Percentage of Net Worth	Contract Identification	Total Contract Amount (current value, currency, exchange rate and USD equivalent)
[insert year]	[insert amount]	[insert percentage]	- Contract Identification: [indicate complete contract name, number, and any other identification] - Name of Purchaser: [insert full name] - Address of Purchaser: [insert street/ city/ country] - Matter in dispute: [indicate main issues in dispute] - Status of dispute: [indicate if it is being treated under Arbitration or being dealt with by the Judiciary]	[insert amount]

Litigation History

Litigation History Format		
☐ No court/arbitral award decisions against the Bidder since 1 st January 2018, in accordance with Evaluation Criteria # 14		
Year of award	Contract Identification	Total Contract Amount (current value, currency, exchange rate and USD equivalent)
	•	
[insert year]	- Contract Identification: [indicate complete Contract name, number, and any other identification] - Name of Purchaser: [insert full name] - Address of Purchaser: [insert street/city/country] - Matter in dispute: [indicate main issues in dispute] - Party who initiated the dispute: [indicate "Purchaser" or "Supplier"] - Status of dispute: [indicate if it is being treated by under Arbitration or being dealt with by the Judiciary]	[insert amount]



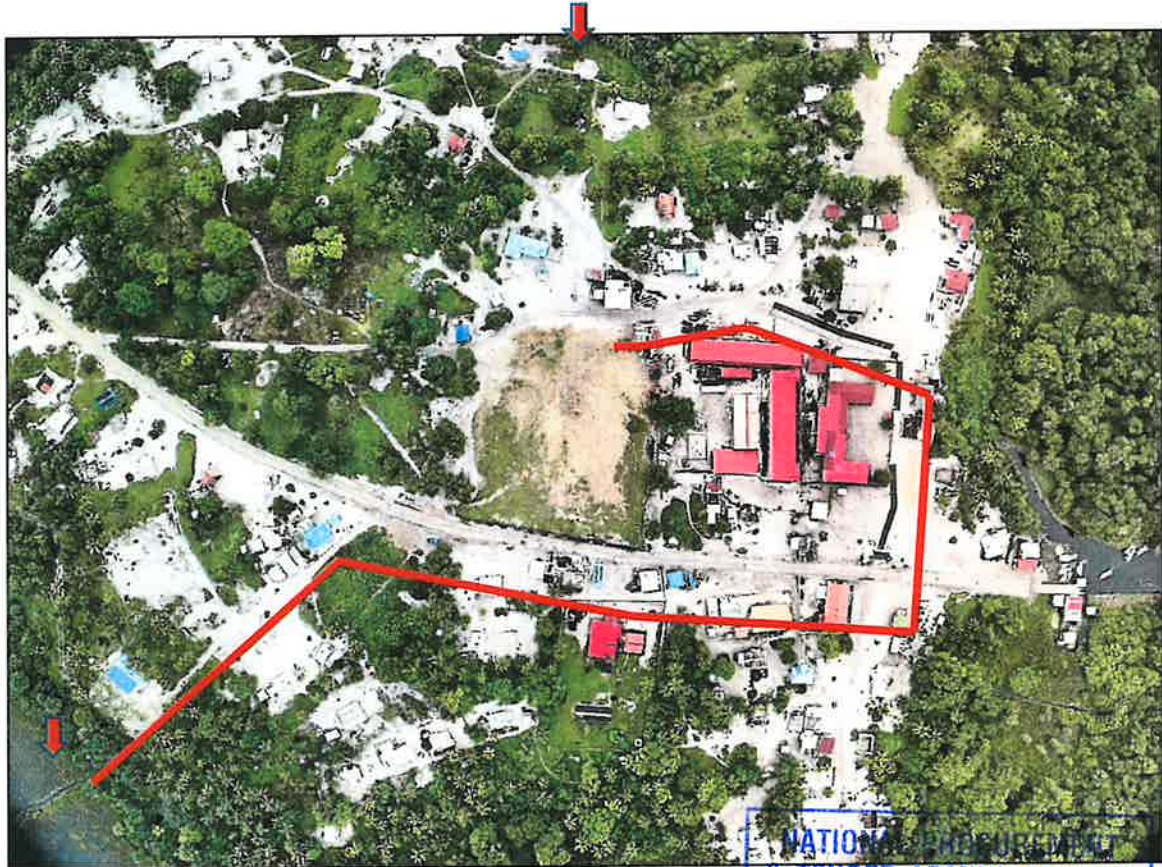
AERIAL IMAGES OF THE INSTALLATION SITE



Aerial image of school roofs for installation of 143kWp the Solar PV Array (Secondary School Classrooms, Laboratory, Administration Building, Primary Top and Primary Schools roofs will be used)



Aerial image of the community of Waramuri showing location of community and public buildings



Aerial image of the community of Waramuri showing location of community and public buildings and line path

NATIONAL MEASUREMENT
& TENDER ADMINISTRATION
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