

STANDARD BID SOLICITATION DOCUMENT

GOVERNMENT OF GUYANA



***Design, Supply, Installation and
Commissioning a Total of 82.0 kWp Hybrid
Solar Photovoltaic Systems in Region 1***

GUYANA ENERGY AGENCY

March 2021

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:

Guyana Energy Agency
295 *Quamina Street, South Cummingsburg, Georgetown*
Telephone number: 592-226-0394
E-mail: gea@gea.gov.gy
Website: www.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 their bids for the **Design, Supply, Installation and Commissioning a total of 82.0kWp Hybrid Solar Photovoltaic Systems in Region 1**, 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 sites to carry out their own assessment of how the systems will be installed. GEA would contact the entities and request access to the sites by the bidders upon the bidder’s request. The costs of visiting the sites shall be at the bidder’s own expense

3. The bidding documents may be obtained and be examined by any interested bidder. Bids can be purchased for a non-refundable fee in the amount of \$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.
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 6th day of April 2021 at the address: **National Procurement & Tender Administration Board, Ministry of Finance, Main & Urquhart Streets, Georgetown.**

Clarifications must be submitted in writing to the GEA’s email address at gea@gea.gov.gy.

5. Bids shall be valid for ninety (90) 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 **6th day of April 2021** at the address: 49 Main and Urquhart Streets, Georgetown.
7. All Bidders are advised to attend a pre-bid meeting to be held on the **25th day of March, 2021** at 13:00hours via zoom meeting, details of which will be provided to all bidders by the Procuring Entity.

Representative of Procuring Entity

/Full name/

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*.

The project is in keeping with the country's Low Carbon Development Strategy. The benefits of this initiative are detailed below.

Generally, this project will assist in decreasing the reliance on imported fossil fuels, lower electricity consumption from the utility and lead to avoided CO₂ emissions.

The hybrid inverter in this document refers to a grid-connected inverter/charger that is primarily used for purposes of providing backup power to a facility (and in some cases selected/priority loads) via energy stored in 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 (at nights) or when power failure occurs, thereby minimising the amount of energy used from the standby generator. It should be capable of providing rapid response when the intermittent source cannot meet the energy requirement of the building.

Electricity generated from the PV arrays would be used for internal consumption and recharging the batteries. The project will also seek to demonstrate the applicability of photovoltaic system operation with energy storage and its energy contribution to Guyana. It is expected to contribute towards Guyana's efforts to reduce reliance on imported fossil fuels through the popularization and deployment of Renewable Energy Technologies.

Bidders are advised that all batteries to be installed will be provided by the Procuring Entity and is not part of the procurement. The specification of the batteries can be found in the 'Schedule of Requirements' and the 'Technical Specification' section of this document.

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 an original bid 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 (Design, Supply, Installation and Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region I)** and the words: “**DO NOT OPEN BEFORE,**” 9:00 hours on 6th day of April 2021.

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 over sights 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 Lowest Evaluated Bid**, 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	<p>Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown, tel:226-0394, gea@gea.gov.gy.</p> <hr/> <p>The subject of the procurement is: Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1</p>
ITB 2.1	To qualify for award of the Contract, the bidders shall meet the qualification requirements set out in the <i>Evaluation Criteria</i>
ITB 4.1	<p>Language of Bid shall be English Language</p> <p>All submission must be in English or translated to English if different. Such translations must be signed and stamped by a registered translator or embassy or consulate</p>
ITB 5.1	<p>The Bidder shall submit the following additional documents in its bid:</p> <ol style="list-style-type: none"> 1. Evidence of Financial Capability in the amount of 30% of the tendered sum in the form of a bank statement as at January 2021 or letter of credit from a commercial bank in the name of the bidder. Letter of Credit must state an amount. The letter of credit 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. Where bidder is part of an unincorporated joint venture, a legible copy of the joint venture agreement is required. Copy of joint venture agreement must state the joint venture partner to which invoice will be paid and contract 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 <i>Evaluation Criteria</i>. 3. Valid certificates of compliance from GRA and NIS, TIN certificate and VAT registration (only applicable to Bidders resident in the country of the Procuring Entity); Bidders registered outside of Guyana must provide certificate of incorporation/registration including list of registered Directors. 4. 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 <i>Evaluation Criteria</i>. 5. 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.

	<p>6. Provide documentary evidence that the goods are ISO certified and Tropic resistant;</p> <p>7. Provide documentary evidence that the PV modules comply with IEC 61215 & IEC 62804 for Crystalline Silicon PV Modules (or equivalent) standards, and that the inverters are UL 1741 listed;</p> <p>8. Provide documentary evidence to demonstrate that the Goods offered meet all the technical specifications 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;</p> <p>9. A detailed schematic design layout for the solar PV system and distribution network (schematic should be NEC 2017 Compliant), including explanatory notes for sizing of equipment and components that comprise the system, and energy production calculations using a PV modelling software;</p> <p>10. 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;</p> <p>11. An implementation schedule indicating important milestones such as equipment delivery to site, installation, testing and commissioning. Frequent progress reports and work plan are to be provided to the procuring entity as required by the procuring entity during project execution.</p> <p>The detailed evaluation criteria can be found on page 38 of the bidding documents</p>
ITB 6.1	The price quoted by bidders shall be on the basis of CIF for goods delivered from abroad, and for goods delivered from Guyana. Incoterms 2010 are applicable
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 ninety (90) days
ITB 11.1	Deadline and place for submission of bids at 9:00 hours on the 6 th day of April 2021 at the address: 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 the 6th day of April 2021 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% in accordance with ITB Clause 17.1
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 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 for provided under GCC Clause 13, the 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	<p>Definitions</p> <p>The Procuring Entity is the Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown, tel:226-0394, Fax:226-5227, gea@gea.gov.gy.</p> <p>The Supplier is _____ <i>(indicate full name, legal address, phone, fax and e-mail of Supplier)</i></p> <p>The Subject of procurement is the Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1 as follows:</p> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 5%;">No</th> <th style="width: 30%;">Buildings</th> <th style="width: 15%;">Location</th> <th style="width: 15%;">Solar Photovoltaic (kWp)</th> <th style="width: 10%;">Energy Storage (kWh)</th> <th style="width: 10%;">Number of Batteries</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td>RDC Administrative Building</td> <td>Mabaruma</td> <td style="text-align: center;">8.5</td> <td style="text-align: center;">35</td> <td style="text-align: center;">24</td> </tr> <tr> <td style="text-align: center;">2</td> <td>Mabaruma NCN Radio Station</td> <td>Mabaruma</td> <td style="text-align: center;">30.0</td> <td style="text-align: center;">140</td> <td style="text-align: center;">96</td> </tr> <tr> <td style="text-align: center;">3</td> <td>RDC Building</td> <td>Mabaruma</td> <td style="text-align: center;">10.0</td> <td style="text-align: center;">52</td> <td style="text-align: center;">36</td> </tr> <tr> <td style="text-align: center;">4</td> <td>Teachers Living Quarters</td> <td>Mabaruma</td> <td style="text-align: center;">6.5</td> <td style="text-align: center;">26</td> <td style="text-align: center;">18</td> </tr> <tr> <td style="text-align: center;">5</td> <td>Hosororo Primary School</td> <td>Hosororo</td> <td style="text-align: center;">6.5</td> <td style="text-align: center;">26</td> <td style="text-align: center;">18</td> </tr> <tr> <td style="text-align: center;">6</td> <td>Wauna Primary School</td> <td>Wauna</td> <td style="text-align: center;">2.5</td> <td style="text-align: center;">8</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">7</td> <td>Red Hill Health Post</td> <td>Mabaruma</td> <td style="text-align: center;">2.5</td> <td style="text-align: center;">8</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">8</td> <td>Moruca Admin Building (Big)</td> <td>Moruca</td> <td style="text-align: center;">8.5</td> <td style="text-align: center;">35</td> <td style="text-align: center;">24</td> </tr> <tr> <td style="text-align: center;">9</td> <td>Hobodehia Health Post</td> <td>Moruca</td> <td style="text-align: center;">2.5</td> <td style="text-align: center;">8</td> <td style="text-align: center;">6</td> </tr> <tr> <td style="text-align: center;">10</td> <td>Moruca Guest House</td> <td>Moruca</td> <td style="text-align: center;">4.5</td> <td style="text-align: center;">17</td> <td style="text-align: center;">12</td> </tr> <tr> <td colspan="3" style="text-align: center;">TOTAL</td> <td style="text-align: center;">82</td> <td style="text-align: center;">355</td> <td style="text-align: center;">246</td> </tr> </tbody> </table> <p style="margin-top: 10px;">Bidders are advised that all batteries to be installed will be provided by the procurement entity and is not part of the procurement. A total of two hundred and forty-six (246) batteries will be handover to the successful bidder for allocation as indicated in the above table. The handover to the successful bidder will take place at the Mabaruma Power plant, thereafter, the bidder is responsible for the safe transportation of the batteries to the identified sites.</p>	No	Buildings	Location	Solar Photovoltaic (kWp)	Energy Storage (kWh)	Number of Batteries	1	RDC Administrative Building	Mabaruma	8.5	35	24	2	Mabaruma NCN Radio Station	Mabaruma	30.0	140	96	3	RDC Building	Mabaruma	10.0	52	36	4	Teachers Living Quarters	Mabaruma	6.5	26	18	5	Hosororo Primary School	Hosororo	6.5	26	18	6	Wauna Primary School	Wauna	2.5	8	6	7	Red Hill Health Post	Mabaruma	2.5	8	6	8	Moruca Admin Building (Big)	Moruca	8.5	35	24	9	Hobodehia Health Post	Moruca	2.5	8	6	10	Moruca Guest House	Moruca	4.5	17	12	TOTAL			82	355	246
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	<p>The specification of the batteries can be found in the ‘Technical Specification’ section of this document.</p> <p>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.</p> <p>24 months complete system warranty is applicable from provisional acceptance date. A final completion certificate shall be issued upon satisfactory commissioning of the systems.</p>
<p>3.1</p>	<p>Performance Security The amount and form of Performance Security is 10% of the contract price. The performance bond shall be issued from a local commercial bank within 14 days of signing of the contract. The bond shall be valid for the entirety of the contract period.</p>
<p>4.1</p>	<p>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.</p>
<p>5.1</p>	<p>Delivery, Transportation</p> <p>The following documentation is to be provided by the Supplier to the Procuring Entity:</p> <ul style="list-style-type: none"> (1) Copies of Supplier’s invoice 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
<p>6.1</p>	<p>Payment</p> <ul style="list-style-type: none"> (a) Ten percent (10%) of the contract price within 14 days of signing the contract and the submission of the performance bond. (b) Thirty percent (30%) of the contract price upon physical verification by the Procuring Entity that major components such as PV panel mounts, PV modules, inverters and batteries have been installed by the supplier and have complied with the technical specifications.

	<p>(c) Fifty percent (50%) of the contract price upon acceptance of the system by the Procuring Entity.</p> <p>(d) Ten percent (10%) of the contract price upon expiry of the defects liability period barring the correction of defects.</p> <p>Withholding tax deductions shall be as follows:</p> <p>(a) For resident contractors: Each payment of G\$500,000 and above shall be subject to a withholding tax of 2% on every payment. The GEA shall provide the contractor with a certificate/statement of the gross amount of the payment received and the amount of tax deducted.</p> <p>(b) For non-resident contractors: Withholding tax shall be deducted at a rate of 20% on gross earnings, except for contractors from Canada, United Kingdom and CARICOM which have the Double Taxation Relief Order with Guyana. In such cases, the relevant rates of withholding taxes are applicable.</p>
9.2	<p>Liquidated Damages Applicable rate: 0.05% for untimely execution of order. Maximum deduction: 10% of the delayed works/delivery</p>
11.2	<p>Settlement of Disputes Disputes arising out of or in connection with the Contract shall be settled in accordance with the Laws of Guyana.</p>
14.1	<p>Taxes and Duties The version edition of INCOTERMS shall be: 2010</p>
16.1	<p>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.</p>

SCHEDULE OF REQUIREMENTS/DELIVERY SCHEDULE

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
	<p>Design, Supply, Install & Commission a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1 as follows:</p> <p>PV module</p> <p>Mounting structure:</p> <p>Inverter</p> <p>Charge Controller</p> <p>Hybrid Inverter</p> <p>Web-based energy monitoring system</p> <p>Cabling and miscellaneous</p> <p>Fire Extinguisher</p> <p>Installation and commissioning materials for PV system (including all materials/components required for interconnection to buildings)</p> <p>Battery rack</p>	To be determined by bidder	As indicated in the detailed breakdown below	180		

No	Buildings	Location	Solar Photovoltaic (kWp)	Energy Storage (kWh)	Number of Batteries
1	RDC Administrative Building	Mabaruma	8.5	35	24
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10	Moruca Guest House	Moruca	4.5	17	12
TOTAL			82	355	246

Breakdown of the proposed locations for installation

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 identify and contract a Supplier and Installer for the following services:

- 1.1 Design, Supply, installation and commissioning **a total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1;**
- 1.2 Provide all technical documentations including user and operational manuals to the GEA. **The bidder must include all brochures, certifications, technical specifications, brand, and models of ALL equipment provided in one location in their submission in the following order.**
 - 1. PV modules
 - 2. PV Array Mounting Structure
 - 3. Charge Controller
 - 4. Hybrid Inverter
 - 5. Energy Monitoring System
 - 6. 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.

- 1.3 Provide 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	: 18 mph
Isokeraunic level	:70
Average Number of days with Rain p.a.	:120
Average Annual rainfall, cm	:150

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3. Existing Power Supply Conditions

Bidders are required to visit the sites to determine appropriate inverter(s) selection, electrical network configuration and obtain any other information required to prepare their bids.

4. Specification of Required Hardware

4.1 General Remark

It is pointed out that the whole system should be designed in such a way that all components are resistant to climate conditions of the specific sites, specifically against corrosion. Special attention should be made in the equipment selection in such a way that the risk of theft and vandalism is minimised. Bolts and nuts of the PV arrays should be affixed in such a way that theft is minimised.

4.2 Photovoltaic Modules

- PV modules should be in accordance with international standards (IEC 61215, IEC 61730, IEC 61701, IEC 62804, UL1703 etc.) and the National Electrical Code 2017 Article 690;
- 260 watts or greater rated solar modules totaling 82.0 kWp
- All modules should be made of crystalline silicon solar cells
- All PV modules shall show the same capacity
- The Manufacturer should be internationally recognised and provide references and certificates on module testing.
- MC4 connectors for all Modules
- 20 years warranty on Modules

4.3 Mounting Structure for PV Modules

- The PV modules mounting structure must accommodate the PV modules supplied.
- 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 site considerations and the environment. Mounting structures of anodised 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 from exposed fasteners, sharp edges, and potential damage to the modules or support structure. All potentially hazardous hardware must be protected or shielded for safety.
- PV modules must be oriented preferably in a southern direction

4.4 Hybrid Inverter

- Capacity totaling between 90 – 120% of PV Array
- 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;

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- Integrated soft start/generator support;
- Versatile - complete for off-grid management as well as grid-tie battery backup/AC Coupling;
- Suitable for systems from 2 to 100 kW;
- Excellent overload characteristics with active temperature management;
- Five-Year Standard Warranty;
- Certification UL 1741 / UL 1998;
- 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.

4.5 Charge Controller

- Charge controller must be rated 25 % over system capacity size
- Nominal Battery voltage: 12/24/48 V
- Maximum Power Point Tracking (MPPT) charging technology
- Charge regulation method: Three stage (bulk, absorption, float) plus manual equalization
- Available monitoring and configuration
- Supported battery types: Flooded, GEL, AGM, Custom
- Compatible with any brand of PV module, any grounding method
- Stand-alone application or integration with inverter charger system
- Certification: UL1741, CSA 107.1, EN 50178/IEC 62477-1
- 5 years Warranty

4.6 Energy Storage System

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.

Bidders are advised that all batteries to be installed will be provided by the Procuring Entity and is not part of the procurement. The handover to the successful bidder will take place at the Mabaruma Power plant, thereafter, the bidder is responsible for the safe transportation of the batteries to the identified sites. Bidders are also advised that they are required to supply and install the appropriate (compatible with the BAE 6PVV 900 batteries) battery interconnect cables for each location.

The specification of the batteries can be found in the data sheet below:

Battery Type: BAE 6PVV 900

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BAE SECURA PVV solar

Technical Specification for Valve Regulated Lead-Acid Batteries (VRLA-GEL)



1. Application

BAE SECURA PVV solar batteries are maintenance-free and used to store electric energy in medium and large solar photovoltaic installations. Due to the robust tubular plate design BAE PVV Batteries are excellent suited for highest requirements regarding cycling ability and long lifetime.

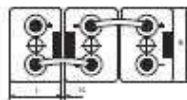
2. Technical data (Reference temperature 20 °C)

Type	C_{4h} Ah	C_{10h} Ah	C_{20h} Ah	C_{22h} Ah	C_{100h} Ah	C_{120h} Ah	C_{240h} Ah	R_i 1)	I_d 2)	Length mm	Width mm	Height mm	Weight kg
U_c [V per cell]	1.65	1.80	1.80	1.80	1.80	1.80	1.80						
2 PVV 140	74	132	143	170	180	182	189	2.400	0.84	105	208	420	15.5
3 PVV 210	100	193	210	252	264	268	277	1.600	1.27	105	208	420	17.7
4 PVV 280	136	239	262	315	329	334	348	1.200	1.70	105	208	420	20.0
5 PVV 350	165	286	314	378	394	400	415	0.960	2.15	126	208	420	23.0
6 PVV 420	198	344	378	453	473	481	499	0.800	2.57	147	208	420	28.8
5 PVV 550	252	444	496	573	587	594	609	0.710	2.88	126	208	535	32.0
6 PVV 660	303	532	596	688	705	712	732	0.600	3.46	147	208	535	36.7
7 PVV 770	341	597	666	763	785	793	813	0.510	4.04	168	208	535	41.0
6 PVV 900	391	700	794	907	932	942	979	0.450	4.58	147	208	710	52.0
8 PVV 1200	506	903	1,022	1,166	1,190	1,200	1,255	0.340	6.10	215	193	710	68.9
10 PVV 1500	647	1,150	1,312	1,504	1,530	1,548	1,620	0.270	7.63	215	235	710	84.6
12 PVV 1800	762	1,360	1,540	1,764	1,800	1,812	1,896	0.230	9.15	215	277	710	99.6
12 PVV 2280	954	1,640	1,854	2,160	2,200	2,220	2,294	0.240	8.58	215	277	855	115.0
16 PVV 3040	1,291	2,240	2,520	2,944	3,010	3,036	3,120	0.180	11.40	215	400	815	156.2
20 PVV 3800	1,618	2,820	3,160	3,700	3,780	3,816	3,936	0.144	14.30	215	490	815	195.0
22 PVV 4180	1,749	3,020	3,400	3,960	4,040	4,080	4,200	0.131	15.67	215	580	815	216.0
24 PVV 4560	1,960	3,430	3,860	4,521	4,610	4,656	4,800	0.120	17.10	215	580	815	236.0
26 PVV 4940	2,067	3,570	4,000	4,680	4,770	4,824	4,968	0.111	18.52	215	580	815	250.0

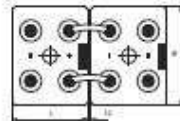
1) R_i and 2) I_d values according to IEC 60896-21

All values given in the table correspond to 100 % DOD. Please consider item 7.

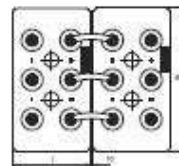
3. Terminal position



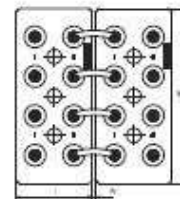
2 PVV 140 - 6 PVV 900



8 PVV 1200 to 12 PVV 2280



16 PVV 3040



20 PVV 3800 to 26 PVV 4940

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Technical Specification of BAE *SECURA PVV solar*

Terminals are designed as female poles with brass inlay M10 for flexible insulated copper cables with cross-section 25, 35, 50, 70, 95 or 120 mm² or insulated solid copper connectors with cross-section 90, 150 or 300 mm².

4. Design

Positive electrode	tubular-plate with woven polyester gauntlet and solid grids in a corrosion-resistant PbCaSn-alloy
Negative electrode	grid-plate in PbCaSn-alloy with long life expander material
Separation	microporous separator
Electrolyte	sulphuric acid with a density of 1.24 kg/l (20 °C), fixed as GEL by fumed silica
Container and lid	high impact, ABS (Acrylonitrile-Butadiene-Styrene), grey coloured, UL-94 rating: HB, on request also in UL-94 rating: V-0
Valve	valve with flame arrestor, opening pressure approx. 120 mbar
Pole-bushing	100 % gas- and electrolyte-tight, sliding, plastic-coated "Panzerpol"
Kind of protection	IP 25 regarding DIN 40050, touch protected according to VBG 4

5. Installation

BAE *SECURA PVV solar* batteries are designed for indoor applications. For outdoor applications please contact BAE.

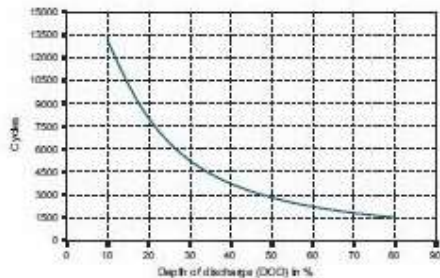
6. Maintenance

Every 6 months	check battery voltage as well as temperature
Every 12 months	check connections, record battery cell voltage as well as temperature

7. Operational data

Depth of discharge (DOD)	max. 80 % ($U_e = 1.91$ V/cell for discharge times >10 h; 1.74 V/cell for 1 h), deep discharges of more than 80 % DOD have to be avoided
Charge current	unlimited, the minimal charge current has to be I_{10}
Charge voltage at cyclic operation	restricted from 2.30 V to 2.40 V per cell, operating instruction is to be observed
Floating voltage/non cyclic voltage	2.25 V/cell
Adjustment of charge voltage	no adjustment necessary if battery temperature is between 10 °C and 45 °C in the monthly average, otherwise $\Delta U/\Delta T = -0.003$ V/cell per K
Recharge to 100 %	within a period of 1 up to 4 weeks
IEC 61427 cycles	>3000 (A+B)
Battery temperature	-20 °C to 45 °C, recommended temperature range 10 °C to 30 °C
Self-discharge	approx. 2 % per month at 20 °C

8. Number of cycles as function of DOD (Depth of discharge)



9. Transport

Batteries are not subject to ADR (road transport), if the conditions of special rule 598 (chapter 3.3) are observed.

10. Standards

Test standard	IEC 60896-21, IEC 61427
Safety standard, ventilation	EN 50272-2

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4.7 Battery Rack

- Must be constructed/fabricated with metal and painted with anti-corrosive paint
- Capable of accommodating the entire batter bank
- Must be electrically grounded

4.8 Battery Monitor

The battery monitor shall be capable of (but not limited to) the following:

- Monitoring and display of battery voltage, current, power, ampere-hours consumed and state of charge
- Remaining time at the current rate of discharge - Programmable visual and audible alarm
- Programmable relay, to turn off non critical loads or to run a generator when needed
- Historical data/events logging, which can be used to evaluate usage patterns and battery health
- Wide input voltage range: 6.5 – 95V
- High current measurement resolution: 10 mA (0,01A)
- Low current consumption
- 3 years Warranty

4.9 Schematic Diagram

- A detailed system schematic design layout of all components and how they interconnect with each other **MUST** be provided in accordance with NEC 2017 Article 690. Drawings provided **MUST** be electrical schematic drawings and show all components and their respective rating (e.g. wires and circuit breaker sizes). The contractor is responsible for all interconnections, including the connection of all the buildings to the PV system. This should be done through a micro-grid configuration. All the hardware required for successful interconnection must be provided by the contractor.

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

4.10 Cabling

Cables exposed to the sun should show an adequate type 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 #10 AWG Sunlight Resistant Cable to connect solar panels 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. The distance from the combiner boxes to the inverters is **decided upon visits to the sites**.
- Appropriate size AC Interconnecting cables. The distance from the sites of the inverters to the main switchgear is to be **decided upon visits to the sites** by the Bidder.
- Appropriate size cables for electrical distribution network at the site.
- Power cables, communication cables & control cables of armoured and Solar grade

4.11 Monitoring System

The installation shall provide real-time **web-based** electric energy meter, power Meter, data logger and appropriate current transformers to record electric consumption of the building from the utility and solar energy produced by the solar PV system and also provide a combined recording of all inverters/circuits loads. It should provide:

- Graphical and Numerical real-time energy information and long-term reports (total power demand of the building including from the utility and solar, total energy consumption of the building from the utility and solar, total power generated by the solar system, total energy produced by the solar system, net energy, avoided carbon dioxide emissions);
- Historic Data;
Data export via push or pull with an open data API.
- No service contracts
- Warranty 3 years
- **Must** have at least one (1) ethernet styled registered jack (RJ) 45 data port.

Bidders are responsible for connecting the monitoring system via wireless fidelity (Wi-Fi) or cable to the existing network of the facility. All materials will be provided by bidders.

4.12 Protection

The solar PV system should be provided with lightning & over voltage 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 entire space occupying the solar PV array shall be suitably protected against lightning by deploying the required number of lightning arrestors. Lightning protection should be provided as per IEC62305 standard. 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/masts should also be earthed inside the array field.

4.13 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)

5. Specification of Required Services

5.1 Systems Design

Bidders are required to visit the selected sites and determine the best possible locations for the complete system, voltage and phase requirements for inverters and to become acquainted with the sites for the installation of the systems. ***A detailed schematic diagram is required, showing system layout and include all interconnection equipment and points of connection for DC, AC, lightning and grounding protection.***

The successful bidder shall be required to provide all necessary infrastructure for mounting/positioning the inverters, controllers, energy storage system, switch gears and busbars. The successful bidder shall be required to construct/provide all necessary infrastructure to accommodate the inverters, controllers,

energy storage system, switch gears and busbars. All infrastructure constructed must be structurally sound, secure and provide protection and adequate ventilation for the equipment installed.

The successful bidder is also responsible for designing the complete electrical distribution network and supplying and installation all materials inclusive of poles, line and line hardware, disconnects and other equipment necessary for the installation of a distribution network at this site to provide electricity **TO ALL** buildings. The bidder is also responsible for connecting each building to the network. The end user voltage should be 110/220Vac.

5.2 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 connected loads.
- b) Electricity generated from the PV arrays shall be used for real-time consumption, and recharging of the battery energy storage system.
- 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.

5.3 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. **The Contractor is required to connect the PV system in a micro-grid configuration. All labels/markings are to be provided by the contractor 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 rod 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.
- c) **The GEI 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) The contractor is responsible for ensuring that the monitoring system is connected via wireless fidelity (Wi-Fi) or cable to the existing network of the building. All materials required for this task must be provided by the contractor.
- e) For all hybrid inverter installation, a main circuit breaker 1.25 times the size of the rated output (kW) of the Hybrid inverters is required to be supplied and installed near the existing electrical distribution panels of the building.

Samaroo

- f) Damages to internal and external walls e.g. any holes, cuts or any actions/activities resulting in the defacing of the 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.
- g) The contractor is also responsible for interconnecting the inverter/hybrid inverter for systems featuring energy storage to the electrical distribution supply at the building. All materials required for this task must be provided by the contractor.

5.4 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.

5.5 Transfer of Ownership

An Acceptance Inspection will be organised by the **Procuring Entity** and in presence of the Seller will allow for the issuance of a certificate to transfer ownership to the Purchaser.

5.6 Warranty

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

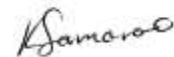
- a) Warranty on hardware failures on all products offered and used according to international established terms;
- b) Warranty on the proper operation of the provided equipment according to the specification and terms fixed in the contract between the Seller and the **Procuring Entity**.

5.7 After Sales Service

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

5.8 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.



SUPPLIER'S BID

TO: Guyana Energy Agency

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 **Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1** 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	Unit Price (GYD)	Delivery Cost plus taxes	Installation Cost plus taxes	Total Cost (GYD)
1	<p><i>Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1</i></p> <ul style="list-style-type: none"> - PV module: - Mounting structure: - Hybrid Inverter - Battery Rack - Charge Controller - Web based monitoring system - Fire Extinguisher - Distribution panels, breakers, disconnects - Cabling and miscellaneous - Installation and commissioning 					

Please note that the Procuring Entity will not be responsible for customs clearance of the goods.

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: **Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1** 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 **Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1** (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(<i>day/ month/ year</i>):
IFB No: <i>[insert number of bidding process]</i>
Alternative No.: <i>[insert identification No if this is a Bid for an alternative]</i>

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 **Design, Supply, Installation & Commissioning a Total of 82.0 kWp Hybrid Solar Photovoltaic Systems in Region 1** (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

NO.	DESCRIPTION	PASS/FAIL
1.	Submission of a valid business registration or certificate of incorporation that is clearly legible. Incorporated companies must submit a list of directors.	
2.	Submission of a valid NIS compliance certificate in the name of the business as per business registration. Document must be clearly legible.	
3.	Submission of a valid GRA compliance certificate in the name of the business as per business registration. Document must be clearly legible.	
4.	Completed and signed supplier's bid page (<i>page 30</i>).	
5.	Completed and signed price schedule must be submitted.	
6.	Completed and signed delivery schedule (<i>page 19</i>) or statement of agreement to supply goods/services within the period specified in the delivery schedule.	
7.	Provision of documentation detailing the technical specifications for the items listed in the Schedule of Requirement (<i>page 19</i>) or evidence to show that the goods match the Technical Specifications as detailed on page (<i>page 21</i>).	
8.	Submission of bid security in the amount of 2% in the form of an insurance bond or bank guarantee or manager's cheque.	
9.	Demonstrate experience and technical capacity by providing documentary evidence that shows the supply of goods/services similar to the items in the Requirement Schedule (<i>page 19</i>). Bidder must provide copies of contracts with previous clients, or copies of valid invoices showing items supplied to clients. Bidder must demonstrate the experience of supplying goods/services to a minimum value of \$2,000,000 for each year over two (2) years including value of each supply.	
10.	Evidence of financial capacity, in the name of the bidder, representing 30% of the bid price. Financial Capacity must be evidence in the form of a bank statement or Line of credit from a bank or an 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.	
11.	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 evidence supplied. The document must be dated within one month of the bid opening date and be clearly legible.	
12.	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.	
13.	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	

	<p>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 2million.</p>	
14.	<p>The Bidder shall provide accurate information on the related bidding form as provided about any litigation or arbitration resulting from contracts completed or on-going under its execution over the last five years.</p> <p><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.</p> <p><u>Litigation History</u>: Non-performance of a contract did not occur as result of supplier's default since 1st January, 2018. If bidder has a history of nonperforming contract the bid will not be considered.</p>	
	<p>Technical Requirements</p>	
15.	<p>Photovoltaic Modules</p> <ul style="list-style-type: none"> • PV Modules are according to International Standards IEC 61215, IEC 61730, IEC 61701, IEC 62804, UL1703 etc.) • All PV modules are of same capacity totaling 82.0 kWp • Manufacturer must be internationally recognised and provided references and certificates on module testing • All modules should be made of crystalline silicon solar cells • MC4 connectors for all Modules • 20 years warranty on Modules 	
16.	<p>Mounting Structure for PV Modules</p> <ul style="list-style-type: none"> • Meets required technical specifications. 	
17.	<p>Hybrid Inverter</p> <ul style="list-style-type: none"> • Capacity totaling between 90 – 100% of PV Array • 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 2 to 100 kW; • Excellent overload characteristics with active temperature management; • Certification UL 1741 / UL 1998; • Modular, stackable design; • Nominal Frequency 60 Hz; • Frequency Range ≥ 58.4 to ≤ 61.7 (Field Selectable); 	

	<ul style="list-style-type: none"> • 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. • Five-Year Standard Warranty; 	
18.	<p>Charge Controller</p> <ul style="list-style-type: none"> • Charge controller must be rated 25 % over system capacity size • Nominal Battery voltage: 12/24/48 V • Maximum Power Point Tracking (MPPT) charging technology • Charge regulation method: Three stage (bulk, absorption, float) plus manual equalization • Available monitoring and configuration • Supported battery types: Flooded, GEL, AGM, Custom • Compatible with any brand of PV module, any grounding method • Stand-alone application or integration with inverter charger system • Certification: UL1741, CSA 107.1, EN 50178/IEC 62477-1 • 5 years Warranty 	
19.	<p>Battery Rack</p> <ul style="list-style-type: none"> • Must be constructed/fabricated with metal and painted with anti-corrosive paint • Capable of accommodating the entire batter bank • Must be electrically grounded 	
20.	<p>Battery Monitor</p> <p>The battery monitor shall be capable of (but not limited) the following:</p> <ul style="list-style-type: none"> • Monitoring and display of battery voltage, current, power, ampere-hours consumed and state of charge • Remaining time at the current rate of discharge - Programmable visual and audible alarm • Programmable relay, to turn off non critical loads or to run a generator when needed • Historical data/events logging, which can be used to evaluate usage patterns and battery health • Wide input voltage range: 6.5 – 95V • High current measurement resolution: 10 mA (0,01A) • Low current consumption • 3 years Warranty 	
21.	<p>Design Diagram</p> <ul style="list-style-type: none"> • Provide detailed schematic design layout of the proposed AC or DC coupled 	

	<p>installation including all connections to the generator and utility; explanatory notes for sizing of equipment and components that comprise the system, and energy production calculations.</p> <p>Design complies to NEC 2017 Articles 690 and 705</p>	
22.	<p>Cables</p> <ul style="list-style-type: none"> • Meets required technical specifications. 	
23.	<p>Monitoring System</p> <p>The installation shall provide real-time web-based electric energy, power meter and appropriate current transformers to record electric consumption of the building and solar energy produced and provide a combined recording of all inverter/circuits. It should provide:</p> <ul style="list-style-type: none"> • Graphical and Numerical real time energy information (total power consumed, total energy consumption, net energy); • Graphical and Numerical renewable energy monitoring (solar power generated, solar energy produced, avoided carbon dioxide emissions); • Historic Data; • Data export via push or pull with an open data API. 	
24.	<p>Protection</p> <ul style="list-style-type: none"> • Meets required technical specifications. 	
25.	<p>Fire Extinguisher</p> <ul style="list-style-type: none"> • 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) 	
26.	<p>Installation</p> <ul style="list-style-type: none"> • All installations are to be conducted in accordance with NEC 690 requirements, which cover installation, protection, and grounding of solar PV systems. • Grid interconnection requirements are met • Earthing system requirements are met • Monitoring system connection to existing network of facility. • Hybrid inverter circuit breaker requirement met. 	
27.	<p>Product Manual and Label for each equipment are provided</p> <ul style="list-style-type: none"> • Voltage / wattage/ current • Model number • Serial number • Certification • Manufacturer's brand 	
28.	<p>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.</p>	
29.	<p>Provision of valid manufacturer's authorization or authorized distributor letter</p>	
30.	<p>Provision of a signed statement of warranty and/or guarantee for applicable items. At least three (3) years warranty on complete system is required.</p>	

31.	<p>Warranty: Two types of warranty have to be offered by the Bidder:</p> <ol style="list-style-type: none"> 1. Warranty on hardware failures on all products offered and used according to international established terms (3 years minimum) 2. Warranty on the proper operation of the provided equipment according to the specification and terms fixed in the contract between the Seller and the Procuring Entity (3 years minimum) 	
32.	<p>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.</p>	
33.	<p>Submission of an implementation schedule indicating important milestones such as equipment delivery to sites, installation, testing and commissioning. Frequent progress reports and work plan are to be provided to the Procuring Entity as required by the Procuring Entity during project execution</p>	

Award of contract

The contract will be awarded to the Bidder who is substantially responsive to the bid document and who has offered the lowest bid price.

Pending Litigation Format				
<input type="checkbox"/> 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]	<ul style="list-style-type: none"> 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		
<input type="checkbox"/> 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]	<ul style="list-style-type: none"> 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]