STANDARD BID SOLICITATION DOCUMENT

GOVERNMENT OF GUYANA

Design, Supply, Installation and Commissioning of Solar PV Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grid Systems, lots:

Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1

Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2

Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 6

Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 9

GUYANA ENERGY AGENCY

NATIONAL PROCUREMENT & TENDER ADMINISTRATION
16 FEB 2026
APPROVED

February , 2026

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

Request for additional information can be forwarded to:

The Guyana Energy Agency
295 Quamina Street, South Cummingsburg, Georgetown
Tel Numbers: 226-0394 ext. 223/241
gea@gea.gov.gy
https://gea.gov.gy/

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INVITATION FOR BIDS (IFB)

The Guyana Energy Agency hereinafter referred to as "the Procuring Entity", invites eligible bidders to submit bids for the **Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids, lots:**

Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1
Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2
Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 6
Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 9

Bidders may submit bids for individual lots or for any combination of lots

1. Required period of supply: **One Hundred and Eighty (180) days from the signing of the Contract**.

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

2. 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 Two thousand dollars Guyana Dollars (G$2,000) from the Cashier at the *Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown,* telephone 226-0394 or fax 226-5227, email at **gea@gea.gov.gy**. Alternatively, interested eligible bidders may download a free copy of the Bidding Documents from the GEA website at **www.gea.gov.gy**

3. 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 the March 17, 2026 at the: **National Procurement & Tender Administration Board, Ministry of Finance, 49 Main & Urquhart Streets, Georgetown.**

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

4. Bids shall be valid for one hundred and twenty (120) days after the date of bid opening.

5. 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 March 17, 2026 at the address: 49 Main and Urquhart Streets, Georgetown.

6. Bidders are required to complete the Bidders Registration via the following NPTA website: **https://www.npta.gov.gy/bidders-registration/**.

Dr. Mahender Sharma-Chief Executive Officer
Guyana Energy Agency

INSTRUCTIONS TO BIDDERS

A. Introduction

1. Description of the Procurement

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

2. Eligibility and Qualifications of Bidders

2.1 In order to be awarded a procurement contract, Bidders should possess the technical and financial capacity needed to perform the contract, should fulfill their tax and social insurance fund liabilities in Guyana, should not currently be subject to a debarment penalty, and must comply with the specific eligibility and qualification requirements referred to in the *Bid Data Sheet and Evaluation Criteria.*

2.2 The bidders should not have conflicts of interest, including involvement in more than one bid in this proceeding, should not be associated nor have been associated in the past, directly or indirectly, with any agency or any of its representative(s), affiliate(s), that have been engaged by the Procuring Entity to provide consulting services at the preparation stage of the bidding documents, technical specifications and other documentation that are subject to be used in the procurement of goods which must be purchased in accordance with the Invitation for Bids. In cases when the indicated facts are discovered, the Bidder's bid shall be rejected.

B. Bidding Documents

3. Clarification and Amendment of Bidding Documents

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

3.2 At any time before the deadline for submission of bids, the Procuring Entity may amend the bid documents by issuing an Addendum to the bidders.

C. Preparation of Bid

4. Language of Bid

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

5. Documents Included in Bid

5.1 The bid prepared by the Bidder should contain the Form of Bid, the Price Schedules and the other

documents to be submitted in accordance with these Instructions to Bidders, Bid Data Sheet and Evaluation Criteria.

6. Bid Price

6.1. Subject to the choice of INCOTERMS as indicated in the Bid Data Sheet, the prices given in the Price Schedule shall include all transportation costs to the destination point indicated in the Contract, all taxes, duties, payments collected, in accordance with the laws of Guyana and delivery related and other costs on performing of contractual obligations.

6.2. The prices offered by the Bidders shall remain fixed during the whole period of Contract performance and shall not be modified in any circumstance.

7. Bid and Payment Currency

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

8. Bid Security

8.1 Unless otherwise provided in the *Bid Data Sheet*, the Bidder shall furnish, as part of his bid, an original Bid Security, in the form, currency and amount specified in the *Bid Data Sheet* with a validity period for not less than two (2) weeks upon the expiry of the bid validity period and in accordance with the specified form.

8.2 The bid security may be forfeited, if the Bidder:

(a) withdraws their bid after it is opened during the period of validity specified in the bid; or,

(b) having been awarded the contract fails:

(1) to sign the contract on the terms and conditions provided in their bid; or

(2) to furnish the Performance Security, if required to do so.

9. Period of Validity of Bid

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

10. Format, Signing and Submission of Bid

10.1 The Bidder shall prepare one (1) original bid and one (1) hard copy which shall be completed in writing in indelible ink and shall be signed by the Bidder, or by the person (persons) duly authorized to sign the bid in accordance with the power of attorney and 2 (two) exact electronic PDF copies of the bid on Flash Drive, to be submitted with the bid. All pages of the bid where new information, modifications or erasures entered shall be initialed (signed) by the person or persons signing the bid. In the event of discrepancies between them, the original shall prevail.

10.2 The bid shall contain no interlineations, erasures or overwriting, except the cases when the Bidder needs to correct errors which must be initialed by the person or persons signing the bid.

10.3 The Bidder shall seal the original and Electronic PDF copies of the bid in different envelopes, marking them "**ORIGINAL**" and "**COPIES**", as appropriate. The envelopes shall then be sealed in an outer envelope.

10.4 The outer envelope shall:

(a) be addressed to the **Chairman, National Procurement & Tender Administration Board (NPTAB), Main & Urquhart Streets, Georgetown** (the address specified in the Invitation for Bids);

(b) **bear the Name of the Project *"Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids, lots:***

Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1
Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2
Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9
Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6

and the words: "**DO NOT OPEN BEFORE"** 9:00 hours on March 17, 2026.

11. Deadline for Submission of Bids

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

12. Modification and Withdrawal of Bids

12.1 The Bidder may modify or withdraw their bid after the bid's submission, provided that the Procuring Entity will receive a written notice of modification, substitution or withdrawal of bid before the deadline for submission of bids.

12.2 The Bidder's modification, substitution or withdrawal notice shall be prepared, sealed, marked, and sent in accordance with the provisions of ITB Clause 10. In that case the outer and inner envelopes will be additionally marked as "**MODIFICATION**" or "**WITHDRAWAL**", as appropriate. A withdrawal notice may also be sent by email with a subsequent written confirmation not later than the deadline for submission of bids.

D. Opening and Evaluation of Bids

13. Opening of Bids

13.1 The Procuring Entity will open all bids in the presence of bidders' representatives who wish to attend, at the time, on the date, and at the address specified in the *Bid Data Sheet.* The bidders' representatives who are present shall sign a register evidencing their attendance.

13.2 The bidders' names, bid prices, including alternatives (if permitted), information on the presence or absence of required bid security, information on the presence (absence) of tax debts and debts of social insurance payments will be announced at the opening. No bid shall be rejected at the opening, exclusive of late bids and unidentified Bids to be returned to the Bidder unopened.

13.3 Bids and modifications sent pursuant to ITB Clause 12.2 that are not opened and read out during the bid opening shall not be accepted for further evaluation, regardless of circumstances.

14. Evaluation of Bids

14.1 During the evaluation of bids, the Procuring Entity may, at its discretion, request the Bidder to provide clarification of their bid. The request for clarification and the response thereto shall be made in writing, and in that case no change in price or substance of the bid shall be sought, offered, or permitted.

14.2 The Procuring Entity shall determine the responsiveness of each bid to requirements of the bidding documents. For the purposes of this Clause a substantially responsive bid is one which satisfies all the indicated provisions without a material deviation or reservation.

14.3 The Procuring Entity may regard a tender as responsive if it contains any minor deviations, that do not materially alter or depart from the characteristics, terms and conditions and other requirements of the bid solicitation documents, or if it contains errors or oversights that are capable of being corrected without touching the substance of the tender. To the extent feasible and appropriate, for the purposes of comparing bids, acceptable deviations shall be quantified in monetary terms and reflected in adjustments to the bid price (for the purposes only of comparison of bids).

14.4 Arithmetical errors shall be rectified in the following manner. If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail, and the total price shall be corrected. If there is a discrepancy between words and figures, the amount in words shall prevail. If the Bidder disagrees with such correction of errors, their bid shall be rejected.

14.5 The Procuring Entity shall evaluate and compare only the bids that are determined to be responsive to the Bid Solicitation Document.

15. Confidentiality and Contacting the Procuring Entity

15.1 No Bidder shall contact the Procuring Entity on any matter related to their bid from the date of bid opening until the date of contract award, except for requests related to clarification of the bid. Information concerning the evaluation of bids is confidential.

15.2 Any effort by the Bidder to influence the Procuring Entity's decision on bid evaluation and comparison, or contract award may result in the rejection of that Bidder's bid and subjected to debarment in accordance with Regulation 3(1)(b) of the Procurement (suspension and debarment) Regulations 2019.

E. Award of Contract

16. Award Criteria

16.1 Subject to ITB Clause 18, the Procuring Entity will award the Contract to the Bidder whose bid is determined to be substantially responsive to the requirements of the bid solicitation document, and who offered **the 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	Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown, Tel:226-0394, gea@gea.gov.gy. The subject of the procurement is: **Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-Grids, lots:** **Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1** **Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2** **Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9** **Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6** ***Bidders may submit bids for individual lots or for any combination of lots.***
ITB 2.1	To qualify for award of the Contract, the bidders shall meet the qualification requirements set out in the evaluation criteria (page 68-69)
ITB 4.1	Language of Bid shall be **English Language** All submission must be in **English**
ITB 5.1	The Bidder shall submit the following additional documents in its bid: 1. Evidence of **Financial Capability** in the amount of 30% of the bid price in the form of a bank statement as at January 2023 or letter of credit from a commercial bank in the name of the bidder. Letter of credit must state a figure. The document must be dated within one month of the bid opening date and be clearly legible. When a photocopy of the letter of credit or bank statement is presented, it must be certified a "true copy of the original' by the issuing company. 2. Submission of a **valid business registration or certificate of incorporation**, inclusive of list of directors, that is clearly legible. Where bidder is part of an unincorporated joint venture, a legible copy of joint venture agreement is required. Copy of joint venture agreement must state the joint venture partner to which invoice will be paid and contract to be signed. Where bidder is a joint venture company, a legible copy of certificate of incorporation is to be submitted. Each party must submit valid compliance as per items 2 and 3 of the Evaluation Criteria. 3. Written confirmation of **authorizing signatory** must be provided. For the incorporated company this must be in the form of a Power of Attorney endorsed by a Commissioner of Oaths or Justice of Peace. For a registered business that has appointed an employee to sign the bid, a letter of authorizing signatory must be provided.

	4. Valid certificates of compliance from **GRA and NIS and VAT registration** (only applicable to Bidders resident in the country of the Procuring Entity). 5. Completed **litigation form** on page 70 of the bidding documents. 6. A **letter stating any or no termination or abandonment** of projects. The letter must be dated within one month of the bid opening date. 7. Provide documentary evidence that the goods are ISO certified and Tropic resistant; 8. Provide documentary evidence that the PV modules comply with **IEC 61215, IEC 62804 and UL 1703 listed for Crystalline Silicon PV Modules** (or equivalent) standards, and that the inverters are UL 1741 listed or equivalent. 9. 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; 10. A detailed schematic design layout for the solar PV systems (schematic should be NEC 2023 Compliant), including explanatory notes for sizing of equipment and components that comprise the system, and energy production calculations using a PV modelling software; 11. **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; 12. Documentary evidence that batteries comply with **IEC 61427:1999** and the manufacturing process conformed to environmental management standard ISO 14001. 13. An **implementation schedule** indicating important milestones such as equipment delivery to site, installation, testing and commissioning. Frequent (at least monthly) progress reports and work plan are to be provided to the Procuring Entity as required by the procuring entity during project execution. 14. Bidder must provide **audited financial statements** for the past three years for incorporated companies. Financial statements must be audited by a Chartered accountant/accountancy firm and include an auditor's note. OR Registered businesses must provide Balance Sheets, Profit and Loss Accounts, and Income and Expenditure Accounts for the past three years. These financial statements must be approved by a Chartered accountant/accountancy firm. The detailed evaluation criteria can be found on Page 68-69 of the bidding documents
ITB 6.1	The price quoted by bidders shall be on the basis of CIF to port Georgetown for goods delivered to Guyana, including cost for transport to the site. 2010 incoterms are applicable. Bidders shall quote for the ***Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids in lots*** on a "**per lot**" basis such that the total Bid price covers all the Contractor's obligations mentioned in or to be reasonably inferred from the bidding document in respect to the ***Design, Supply, Installation and Commissioning of***

NATIONAL PROCUREMENT & TENDER ADMINISTRATION
16 FEB 2026
APPROVED

	Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids. Items against which no price is entered by the Bidder for the ***Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids in lots*** will not be paid for by the Employer when executed and shall be deemed to be covered by the prices for other items.
ITB 7.1	Currency of Bid shall be in Guyana Dollars.
ITB 8.1	A bid security of two percent (2%) of the tendered sum is required in the form of a Bank guarantee or a bond from an Insurance company licensed by the Bank of Guyana.
ITB 9.1	The period of validity of bid is one hundred and twenty (120) days
ITB 11.1	Deadline and place for submission of bids: 9:00 hours on the March 17, 2026 *at* ***The National Procurement & Tender Administration Board, Ministry of Finance, Main & Urquhart Streets, Georgetown, Guyana***
ITB 13.1	Time and place for opening of bid: 9:00 hours on March 17, 2026 at ***The National Procurement & Tender Administration Board, Ministry of Finance, Main & Urquhart Streets, Georgetown, Guyana.***
ITB 17.1	Increase or decrease in the quantity of goods and services not exceeding 10%
ITB 20.2	The amount of the performance security is 10% of the contract price. Performance Security must be in the form of a Bank Guarantee or a bond from an Insurance company licensed by the Bank of Guyana. This shall be valid for the duration of the contract period.
ITB 21.1	Disputes that may arise in the performance of the contract shall be settled in accordance with the applicable Laws of Guyana.
ITB 24.1	The duration of the defect's liability period is six (6) months following provisional acceptance.

GENERAL CONDITIONS OF CONTRACT (GCC)

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

1. Definitions and application

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

(a) **"Contract"** means the agreement entered into between the Procuring Entity and the Supplier, as recorded in the Form of Contract signed by the parties, including all attachments and appendices thereto and all the documents referenced therein.

(b) **"Contract Price"** means the price payable to the Supplier under the Contract for complete and proper performance of his contractual obligations.

(c) **"Goods"** means the item (s) referred to in the Schedule of Requirements contained in the Bid Solicitation Document.

(d) **"GCC"** means the General Conditions of Contract contained in this Section.

(e) **"SCC"** means the Special Conditions of Contract.

(f) **"Procuring Entity"** – means the Procuring entity carrying out the procurement of Goods, specified in the SCC.

(g) **"Supplier"** means an individual or legal entity, or a combination of any abovementioned forms which operate under the existing agreement as a joint venture and supply the Goods and Services under the Contract.

(h) **"Day"** means calendar day.

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

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

2. Contract Documents

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

3. Performance Security

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

4. Packing

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

5. Delivery, Transportation, Mobilization Advance

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

6. Payment

6.1 The payment to the Supplier for the Goods delivered shall be made in accordance with the Contract in the form and within the periods specified in the SCC.

6.2 If the Procuring Entity does not pay the Supplier the sum due within the periods specified in the Contract, in that case the Procuring Entity shall pay the Supplier [interest at the rate specified or determined pursuant to the Special Conditions of Contract].

7. Prices

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

8. Assignment

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

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

9.1 Delivery of the Goods shall be carried out by the Supplier, in accordance with the schedule indicated by the Procuring Entity in the *Schedule of Requirements*.

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

10. Termination

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

(a) if the Supplier fails to deliver a portion or all of the Goods within the periods provided for in the Contract, or within an extension period of that Contract, or to perform any of his obligations under the Contract.

(b) if bankruptcy procedures are applied to the Supplier, or it is declared insolvent.

(c) if the Supplier, in the Procuring Entity's opinion, has engaged in corrupt, fraudulent, collusive or coercive practices when entering into or executing the Contract.

(d) If the Procuring Entity deems that continued implementation of the contract would no longer be expedient from the standpoint of the public interest.

10.2 The notice of termination shall specify the reason of termination, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

10.3 Notwithstanding clauses 9 and 10.1(d), the Supplier shall not forfeit their performance security, and shall not be liable for payment of liquidated damages, or termination for default, if delay in executing the Contract or failure to perform obligations under the Contract is the result of an event of force majeure. When force majeure arises, the Supplier shall promptly notify the Procuring Entity in writing of such circumstance and its causes.

10.4 When the contract is terminated in accordance with clause 10.1(d), the Goods that are complete and ready for shipment within twenty-eight (28) days after the Supplier's receipt of notice of termination shall be accepted by the Procuring Entity at the Contract terms and prices. For the remaining Goods, the Procuring Entity may elect:

(a) to have any portion completed and delivered at the Contract terms and prices; and/or

(b) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

11. Settlement of Disputes

11.1 If any dispute or disagreement arises between the Procuring Entity and the Supplier for the Contract or in connection with it, the parties shall make every effort to resolve the dispute or disagreement amicably by mutual consultation.

11.2 If during twenty one (21) days, the parties failed to resolve their dispute or disagreement by mutual consultation; either the Procuring Entity or the Supplier may send the other party the notice of intent to commence arbitration, if an arbitration is incorporated in the Contract in the Special Conditions of Contract or otherwise agreed by the parties, or in the Court of General Jurisdiction if no arbitration is envisaged, and no arbitration or litigation in respect of that matter may be commenced unless such notice is given.

Any dispute or disagreement in respect of which the notice of intent is sent to commence trial shall be heard by the [Court of General Jurisdiction].

11.3 Notwithstanding any reference to dispute settlement herein, the parties shall continue to perform their obligations under the Contract, unless they agree otherwise.

12. Applicable Law

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

13. Formal Communication between the Procuring Entity and the Supplier

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

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

14. Taxes and Duties

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

15. Retention

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

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

SPECIAL CONDITIONS OF CONTRACT (SCC)

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

GCC Clause No.	Special Conditions of Contract
1.1	**Definitions** The Procuring Entity is the Guyana Energy Agency, 295 Quamina Street, South Cummingsburg, Georgetown, Tel:226-0394, Fax:226-5227, gea@gea.gov.gy. The Supplier is _____ *(indicate full name, legal address, phone, fax and e-mail of Supplier)* The Subject of procurement is ***Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-Grids, lots:*** ***Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1*** ***Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2*** ***Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9*** ***Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6*** **Warranty** The supplier warrants all Goods supplied under the contract are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the contract. The supplier further warrants that all Goods supplied under this contract shall have no defect, arising from design, materials or workmanship or from any act or omission of the supplier, that may develop under normal use of the supplied Goods in the conditions prevailing in the country of final destination. 24 months complete system warranty is applicable from provisional acceptance date. A final completion certificate shall be issued upon satisfactory commissioning of the systems.
3.1	**Performance Security** The amount and form of Performance Security is: 10% of the contract price in the form of a Bank Guarantee or a bond from an insurance company licensed by the Bank of Guyana. The bond shall be valid for the entirety of the contract period.
3.2	**Advance Payment Guarantee** The amount and form of Advance Payment Guarantee is 10% of the contract price in the form of a Bank Guarantee or a bond from an insurance company licensed by the Bank of Guyana to the release of the advance. The Guarantee shall be valid for the entirety of the contract period and shall remain valid until the advance has been fully recovered.
4.1	**Packing:** The Supplier shall provide such packing of the Goods as is required to prevent damage or deterioration during transit to final destination, as indicated in the Contract. The packing shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit.

5.1	**Delivery, Transportation** **The following documentation is to be provided by the Supplier to the Procuring Entity:** (1) Copies of Supplier's invoice(s) indicating a description, quantity, unit price of the Goods and sum total. (2) Shipping order, railway receipt or truck receipt. (3) Warranty certificate of Manufacturer or Supplier; (4) Inspection certificate issued by the authorized inspection service, and the supplier's factory inspection report (if any);
6.1	**Payment schedule:** ***Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids, lots:*** ***Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1*** ***Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2*** ***Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9*** ***Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6*** *as per Price Schedule below:* (a) **Ten percent (10 %)** of the contract price within 14 days of signing the contract and the submission of the performance security and advance payment security bonds or bank guarantee. (b) **Fifty percent (50 %)** of the contract price, upon **submission and approval of:** - Design drawings (5 %), and **physical verification by the Procuring Entity that major components as follows:** - Solar PV modules and Mounting structure (10 %) - Hybrid Inverters (15 %) - Battery Energy Storage System, Battery Racks & Transformers (20 %) have been installed by the supplier and have complied with the technical specifications. (c) **Thirty percent (30 %)** of the contract price upon acceptance of the completed, integrated and fully functional system by the Procuring Entity. Including provision of as-built drawings and all programing parameters, sign-ons and passcodes to procuring entity. (d) **Ten percent (10 %)** of the contract price upon expiry of the defects' liability period barring the correction of defects.
9.2	**Liquidated Damages** Applicable rate: 0.05% per week for untimely execution of order. Maximum deduction: 10% of the delayed works/delivery
11.2	**Settlement of Disputes** Disputes arising out of or in connection with the Contract shall be settled in accordance with the Laws of Guyana.

14.1	**Taxes and Duties** The version edition of INCOTERMS shall be: 2010
16.1	**Defects Liability** The duration of the defect's liability period is ***6 MONTHS*** following provisional acceptance. During this period, the contractor will be responsible for rectifying any defects free of cost to the Procuring Entity.

DELIVERY SCHEDULE/ SCHEDULE OF REQUIREMENTS

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

Lot No.	Brief Description of Goods	Quantity To be determined by bidder	Place of Delivery	Procuring Entity's Completion Schedule (----days as of signing of the contract	Bidder's Offered Completion Schedule	
					Earliest Delivery	Latest Delivery
Lot 1: ***DSI of Solar PV and integration of solar PV mini-grid in Region 1***						
	1.1. Design, Supply, Installation and Commissioning of a 19kWp Solar Photovoltaic inclusive of a 86kWh energy storage system in Sebai, Region 1 as follows: a) Design Drawing b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Replacement of the existing 30kVA Pad-mounted Transformer with a 60kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolator and a singular isolator to the Transformer Input) j) Fire Extinguisher	To be determined by bidder	7.61909°N; 58.99331°W	**180 days**		

	k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night-time hours at the site n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programing parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
	1.2 Design, Supply, Installation and Commissioning of a 19kWp Solar Photovoltaic inclusive of an 86kWh energy storage system in Karaburi, Region 1 as follows: b) Design Drawing c) PV modules d) Ground mounting structure e) Hybrid Inverters f) Batteries and Management System g) Web-based system energy monitoring system h) Cabling and miscellaneous components i) Grounding system and overcurrent protection devices	To be determined by bidder	**7.61909°N; 58.99331°W**	**180 days**		

	j) Replacement of the existing 30kVA Pad-mounted Transformer with a 75kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolator and a singular isolator to the Transformer Input) k) Fire Extinguisher l) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi__33 network to enable online monitoring of the PV Minigrid Installation) m) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters n) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, o) Lightning Protection equipment integrated into the Solar PV Array and BoS System. p) As-Built Drawing q) Programing parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
	1.3 Design, Supply, Installation and Commissioning of a 32kWp Solar Photovoltaic inclusive of a 96kWh energy storage system in Kwebanna, Region 1 as follows: a) Design Drawing b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System	To be determined by bidder	**7.55568°N; 59.14191°W**	**180 days**		

	f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Integration of the new Solar PV System supply into the existing 60kVA Pad-mounted Transformer (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programming parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
	1.4 Design, Supply, Installation and Commissioning of a 32kWp Solar Photovoltaic inclusive of a 94kWh energy storage system in Baramita, Region 1 as follows: a) Design Drawing	To be determined by bidder	**7.37415°N; 60.47733°W**	**180 days**		

	b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Replacement of the existing 60kVA Pad-mounted Transformer with a 90kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolator and a singular isolator to the Transformer Input) j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programming parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers					

	iii. Batteries iv. Communication					
Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2						
	2.1 Design, Supply, Installation and Commissioning of a 28kWp Solar Photovoltaic inclusive of a 83kWh energy storage system in St. Monica, Region 2 as follows: a) Design Drawing b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Integration of the new Solar PV System supply into the existing 60kVA Pad-mounted Transformer (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site,	To be determined by bidder	**7.84150°N; 59.90748°W**	**180 days**		

	n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programing parameters: c. Passcodes: d. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
	2.2 Design, Supply, Installation and Commissioning of a 35kWp Solar Photovoltaic inclusive of a 106Wh energy storage system in Wakapao, Region 2 as follows: a) Design Drawing b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Replacement of the existing 60kVA Pad-mounted Transformer with a 100kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation)	To be determined by bidder	**7.52457°N; 58.77637°W**	**180 days**		

	l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programing parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9						
	3.1 Design, Supply, Installation and Commissioning of a 26kWp Solar Photovoltaic inclusive of a 114kWh energy storage system in Karaudarnau, Region 9 as follows: a) Design Drawing b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Replacement of the existing 60kVA Pad-mounted Transformer with a 75kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side)	To be determined by bidder	**2.40654°N; 59.45567°W**	**180 days**		

	j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programing parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6						
	4.1 Design, Supply, Installation and Commissioning of a 46kWp Solar Photovoltaic inclusive of a 144kWh energy storage system(Li-ion) in Orealla, Region 6 as follows: a) Design Drawing b) PV modules c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components	To be determined by bidder	**5.31480°N; 57.33977°W**	**180 days**		

	h) Grounding system and overcurrent protection devices i) Replacement of the existing 50kVA Pad-mounted Transformer with a 100kVA Pole Mounted Transformer (combining the two 50kVA Transformers from Orealla and Siparuta) integrating the supply of the existing and new solar PV Systems. (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing p) Programming parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					
	4.2 Design, Supply, Installation and Commissioning of a 46kWp Solar Photovoltaic inclusive of a 115kWh energy storage system (Li-ion) in Siparuta, Region 6 as follows: a) Design Drawing b) PV modules	To be determined by bidder	**5.23922°N; 57.29402°W**	**180 days**		

	c) Ground mounting structure d) Hybrid Inverters e) Batteries and Management System f) Web-based system energy monitoring system g) Cabling and miscellaneous components h) Grounding system and overcurrent protection devices i) Replacement of the existing 50kVA Pad-mounted Transformer with a 100kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) j) Fire Extinguisher k) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) l) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters m) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, n) Lightning Protection equipment integrated into the Solar PV Array and BoS System. o) As-Built Drawing					

	p) Programming parameters: a. Passcodes: b. Sign-ons: i. Inverters ii. Charge Controllers iii. Batteries iv. Communication					

Duly authorized to sign for and on behalf of

.....

_____

(name of Bidder)

_____ _____ _____

(Full name) *(Title)* *(Signature and seal)*

TECHNICAL SPECIFICATIONS

1. General

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

Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids, lots:

Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1
Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2
Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9
Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6

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

Region	Location	Installed Capacity	
		PV (kWp)	BESS (kWh)
1	Baramita	32	192
1	Sebai	23	85
1	Karaburi	33	127
1	Kwebana	14	95
2	St. Monica	13	83
2	Wakapao	42	210
9	Karaudarnau	30	113
6	Orealla	24	144
6	Siparuta	10	115

Table 1: List of communities and Solar PV System Installed Capacities

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

1) PV Modules
2) PV Array Mounting Structure
3) Inverter
4) Multimode/Hybrid inverter
5) Battery Energy Storage System
6) Battery Monitoring System
7) Energy Management System (if any)
8) Schematic Diagram in accordance with NEC 202 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 three (3) years' After Sales Services to GEA. Bidders must provide a statement indicating its acceptance or otherwise of this requirement.

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

It is required that Bidders conduct site visits to carry out their *inspections/determinations* of what shall be installed in such a way as to avoid shading of the Solar PV Array and any other obstructions that would decrease the efficiency of the system.

2. Specification of Required Hardware – Solar PV System

4.1 General Remark

The whole system must be designed in such a way that all components are resistant to the prevalent climatic and weather conditions of the specific sites, specifically in relation to corrosion resistance. Special attention should be taken in the selection of equipment in order that there is reduction/elimination of the risk of theft and vandalism. PV Array fixtures (Bolts, Nuts and Fasteners) should be installed in such a way that theft is minimized. The contractor is required to make all the necessary provisions, where applicable, for ensuring that the complete PV system is commissioned (System Operation - AC Output to all interconnected buildings and Monitoring is confirmed).

4.2 Photovoltaic Module

- All PV Modules should be manufactured in accordance with International Standards (IEC 61215, IEC 61730, IEC 61701, IEC 62716, IEC 62804, UL1703 etc.) and the National Electrical Code 2023 primarily Article 690; **and UL 1703 listed for Crystalline Silicon PV Modules** (or equivalent) standards, and that the inverters are UL 1741 listed or equivalent.
- ***500 watts or greater rated solar modules*** totaling a minimum of the stated System Capacity for each community's Solar PV System.
- All modules should be made of Crystalline Silicon Solar Cells with conversion efficiency not less than 20% at Standard Test Conditions.
- All PV Modules shall show the same capacity (Voc/Isc; Vmp/Imp; Wp)
- The Manufacturer must be internationally recognised and provide references and certificates on all applicable module testing
- MC4 connectors for all Modules
- 20 years warranty on Modules

4.3 Ground Mounting Structure for PV Modules

- The mounting structure is to be ground mounted (unless otherwise directed by the procuring entity).
- The PV modules mounting structure must adequately accommodate all 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 prevalent specific site environment and weather conditions.
- 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 of equipment damage and personal injury from exposed fasteners and sharp edges. All potentially hazardous hardware must be adequately blinded or shielded for safety.
- PV modules must be oriented in a southern direction (as far as possible) with an inclination of between 8 to 10 degrees.
- The mounting structure must be able to absorb and transfer the mechanical loads to the ground via the foundation. Thus, the foundation should adhere to the following requirements:

Foundation works

- Excavate to a depth not less than 20" from Existing Ground Level.
- 24"x 24" Pad Foundation with Structural concrete @ 3000 PSI or over at 28 days, using -3/4 stones with a thickness of not less than 12 inches. To be vibrated using Poker Vibrator tested for compressive strength after 28 days.
- ½" diameter corrugated high tensile steel reinforcement as main bars @ 4" top and bottom and 3/8" diameter steel bars as stirrups spaced at 4" crs. to form a cage with a minimum of 2" concrete covers.
- ***Vertically smooth finish formwork (1" x 12") for the foundation is required.***
- Compacted sand fill of 6" or more in two layers under foundation.
- 2" thick cement/sand (1:6) mix blinding upon compacted sand fill before pouring concrete
- Array mounting hardware supplied shall be compatible with the site considerations and the environment. Mounting structures of anodized aluminium material shall be provided. Mechanical hardware shall be durable and corrosion resistant. The use of ferrous metals (including but not limited to painted or plated steel), dissimilar metals in contact, or any wood or plastic components are not allowed.

4.4 Hybrid Inverter

- Capacity totaling between 100 – 120% of PV inverters
- Master/Slave or String Type;
- Maximum efficiency of 96% with 94.5% CEC efficiency;
- Intelligent battery management including state of charge calculation for maximum battery life;
- Integrated soft start/generator support;
- Versatile - complete for off-grid management as well as grid-tie battery backup/AC Coupling;
- Suitable for systems from up to 100 kW or greater;
- Excellent overload characteristics with active temperature management;

- Certification UL 1741 / UL 1998;
- Modular, stackable design;
- Nominal Frequency 60 Hz;
- Frequency Range ≥ 58.4 to ≤ 61.7 (Field Selectable);
- Pure Sine Wave;
- Automatically transfers between inverter power and incoming AC power source;
- Compatible battery types Flooded, Gel, AGM, LiON;
- Indications of status of operation (e.g. LED);
- Over voltage and under voltage protection;
- Over-temperature protection;
- Overload protection;
- Short circuit protection.
- Features capabilities for remote system monitoring of the PV System, BESS and Inverter Parameters
- 5 Year Standard Warranty;

4.5 Energy Storage System

- Minimum useable storage capacity should match or exceed the stated Battery Energy Storage System of each of the Community Solar PV Systems at a DOD of 50%
    - Minimum Energy Storage capacity of:

Region	**Location**	**BESS (kWh)**
1	Baramita	192
1	Sebai	85
1	Karaburi	127
1	Kwebanna	95
2	St. Monica	83
2	Wakapao	210
9	Karaudarnau	113
6	Orealla	144
6	Siparuta	115

Table 2: Locations and the Upgraded BESS (kWh) Capacities

- Batteries should be deep cycle type and rechargeable
    - OPzV Battery Technology
    - Lithium Ion Technology

a. Lithium Ion Technology

- Nominal voltage: 51.2V
- Minimum battery/module capacity: 100 Amp-Hours
- Batteries should be deep cycle type and rechargeable
- Lithium Technology
- Capable of 100% depth of discharge, without any damage to battery performance.
- Design for renewable energy applications specifically for hybrid application
- Sealed maintenance free

- Manufacturer's data sheets containing battery performance specifications must be provided. Batteries must be procured from same make (manufacturer) having same ampere-Hour and voltage rating
- Operating Efficiency: 90% minimum
- Operation temperature: 10°C to 50°C
- Communication: CAN/RS485
- Five (5) years' warranty on batteries
- 5,000 and above cycles at 50% depth of discharge
- C-Rating: **C2** or **0.5C**; 2 hours or less
- **Must** comply to **UL9540** standard
- Manufacturing process must have conformed to environmental management standard ISO 14001
- Battery energy storage system (battery-bank) **must be complete with a battery management system (BMS), connection and communication accessories (cables, lugs, busbars, bolts, etc.,), rack/cabinet and floor mount/support**

b. OPzV Battery Technology

- Nominal voltage; 2 Volts (Cell Level)=
- Battery Rating: C10
- Standards to be conformed to: UL 1989, IEC 60896, IEC 61427-1, UL 2054
- Manufacturing process must have conformed to environmental management standard ISO 14001
- 1,000 and above cycles at 50% depth of discharge
- **Design for renewable energy applications specifically for Hybrid/Off-Grid application**
- Batteries are to be installed as recommend by the OEM
- Batteries are to be placed on racks to minimize the use of space
- Bidders are to supply the racks which are to be supplied with the batteries and therefore suitable for use with the battery. **Racks should be made to minimize the space required for keeping the batteries in a suitable position while allowing optimum charge/discharge operation and effective ventilation. All integrated connectors and fasteners used must be resistant to rust. Racks must be painted in two coats with anti-rust protective layer paint. The preferred colour would be black. The battery racks MUST be adequately grounded.**
- Battery terminals and conductors should be guarded/shielded to prevent accidental short circuits. Guards should be removable to aid future maintenance of the battery bank.
- ***System must be supplied with a suitable means of isolating the entire BESS from the rest of the electrical system particularly the load.***
- Bidders are to supply drawings of the racks with battery bank configuration for approval by the procuring entity
- Manufacturer's data sheets containing battery performance charts and specifications must be provided. Batteries must be procured from same manufacturer and have same ampere-Hour and voltage rating
- 5 Years Minimum Warranty on batteries

The battery energy storage system should provide the primary function of allowing the maximum use of energy stored during the periods when solar energy is not available. It should be capable of providing rapid response when the intermittent source cannot meet the energy requirement of the building. A battery management and monitoring system must be included.

4.6 Battery Monitoring System

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

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

4.7 Monitoring System

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

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

4.8 Housing

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

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

with sufficient lighting for security purposes. Lighting must be of the Integrated Solar PV Type (Solar PV Module and BESS integrated into the luminaire).

4.9 Locations

Region	Location	Installed Capacity	
		PV (kWp)	BESS (kWh)
1	Baramita	32	192
1	Sebai	23	85
1	Karaburi	33	127
1	Kwebanna	14	95
2	St. Monica	13	83
2	Wakapao	42	210
9	Karaudarnau	30	113
6	Orealla	24	144
6	Siparuta	10	115

Table 3: Additional PV Array (kWp) and BESS (kWh) capacities for each location

Location	New Capacity	
	PV (kWp)	BESS (kWh)
Baramita	63	256
Sebai	41.5	170
Karaburi	52	212
Kwebanna	46	190
St. Monica	40	166
Wakapao	77	315
Karaudarnau	55.5	226
Orealla	69.9	288
Siparuta	55.9	230

Table 4: Final PV Array (kWp) and BESS (kWh) capacities after upgrades at each location

4.10 Schematic Diagram

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

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

- Solar PV Array layout
- Size of the solar modules in watts and quantity per string sizing considerations (Series and Parallel Connections)
- The direction/azimuth (deg) and the tilt (deg) of the modules in each string must be stated on the diagram
- Layout of DC combiner boxes showing electrical connections and ratings of fuses, breakers and/or disconnects.

- Model number and basic electrical specifications of major electrical components like inverters, charge controllers, battery cells, transformers, circuit breakers, disconnects, monitoring device, etc. must be included in the electrical schematics.
- The point of interconnection/s of the Solar PV System to the LV/MV Electrical Network must be clearly indicated on the drawing (PV System Mains Disconnect, Size of MV Fuses, Step-up Transformer Rating).
- The sizes of the electrical conductors for AC and DC conductors (AWG or mm^2 or mm) must be clearly shown on the electrical schematic.
- Grounding circuit of major electrical components and grounding electrode/s.
- The size and position of current transformers used by the solar PV monitoring system (if installed) must be included in the electrical schematic.
- The point/s where voltage and current readings are measured by the monitoring system (if installed) must also be shown in the electrical schematics. Basic specifications of the CTs must be included in the drawing.
- The point of connection of the data cable or wireless signal for the monitoring system (if installed) at the facility data network with internet access must be indicated in the electrical schematic.

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

4.11 Electrical Cables

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

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

4.12 Protections

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

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)

- Test Certificate or Test Date Clearly visible

4.14 Transformer

Location	New Capacity		Existing Transformer (kVA)	New Transformer (kVA)	Comments on Transformer Use
	PV (kWp)	BESS (kWh)			
Baramita	63	256	60	90	New Pole Mounted Transformer
Sebai	41.5	170	30	60	New Pole Mounted Transformer
Karaburi	52	212	30	75	New Pole Mounted Transformer
Kwebanna	46	190	60	60	Use existing transformer
St. Monica	40	166	60	60	Use existing transformer
Wakapao	77	315	60	100	New Pole Mounted Transformer
Karaudarnau	55.5	226	60	75	New Pole Mounted Transformer
Orealla	69.9	288	50	100	New Pole Mounted Transformer
Siparuta	55.9	230	50	75	New Pole Mounted Transformer

Table 5: Transformer ratings for Upgraded System Capacities

- Supply and installation of Single-Phase Pole mounted Transformer inclusive of all hardware. Each transformer shall have the required kVA as shown in the table above, ***Inverter Voltage/13.8kV***, 60Hz

- Integrate the new transformer (if required) onto the existing Takeoff structure or a new Takeoff structure to adequately accommodate the upgraded transformer as required from PV System inclusive of pole, all bolts and nuts and fixtures, the RCO and suitably sized cables, standoff brackets with insulators, etc.

- Supply and Installation of Rural Cut-Out (100Amps rated) 15 kV on the HV side of all transformers. The RCO fuse link must be sized according to the Transformer rating utilized

- Supply and Installation of 18 kV Lightning Arresters on the HV side of all transformers, adequately integrated into the transformer tank to enable equipment protection and safe operation.

4.14..1 Pole Mounted Transformer

- Single-Phase Step-up transformer, 60Hz
- Secondary Voltage (where applicable): Compatible with Hybrid Inverter output
- Primary Side Voltage: 13.8 kV
  - Tolerance on the voltage ratio shall be $\geq \pm 0.5\%$;
- The Transformer shall be capable of supplying a continuous load equal to its kVA rating, under the following conditions:
  - the rated secondary voltage held constant by increasing the primary voltage to allow for regulation at all tap positions;
  - constant flux regulation;
  - continuous steady load;
  - design maximum ambient air temperature of 40°C;
  - 65°C average winding temperature rise and 80°C hot spot temperature rise
  - 65°C temperature rise of the insulating oil measured near the top of the tank.
- The transformer may be overloaded during emergency up to 150% of its continuous rating in

accordance with IEC Publication 354. Bushings, tap changer and other current-carrying parts shall also be designed for this condition

- Transformer Core and Windings: The core shall be constructed from high grade, non-ageing, cold rolled grain-oriented silicon steel laminations or superior material. The design shall avoid the presence of pockets that would prevent the complete emptying of the tank through the drain plug. The winding insulation shall be free from insulating compounds that are liable to soften, ooze out, shrink or collapse. It shall be non-catalytic and chemically inert in transformer oil during normal service. The windings and connections are to be braced to withstand shocks during transport, switching, short circuit or other transient conditions. The windings shall be uniformly insulated, and the LV neutral points shall be insulated for full voltage. The windings conductor (both primary and secondary) shall be of **electrolytic copper** to give the optimum economic design.
- Taps shall be provided in the high voltage winding, two 2.5% taps above and below primary rating. Tap changing shall be carried out with the transformer off circuit and the tap changing handle shall be external to the transformer tank. The operating handle shall have provision for padlocking and shall give visual indication of the tap position without unlocking. Each tap-changer position and the tap voltage or percentage associated with it shall be clearly identifiable by reference to nameplate information. All positions of the tap changer shall be operative positions.
- Bushings & Terminations: Bushings shall be of the outdoor type and easily replaceable. All bushings shall have a minimum creepage distance of 20mm/kV for maximum phase to phase system voltage, and shall have a continuous rating of 200% of the transformer rating. Transformers shall have two high voltage bushings for connection of the phases. Three or four LV bushings shall be provided for the connection of the phases and a neutral. High Voltage and Low Voltage bushings shall be sized in accordance with ANSI standard.
- Earthing Terminals: Transformer shall be provided with two earthing terminals comprising an M12 ISO metric bolt and nut that shall be non-ferrous. It shall include a spring washer and a lock washer. External connecting strip between earthing terminal and neutral bushing(s) is not required.
- The transformer shall be capable of withstanding the thermal and dynamic effects of short circuits, as stated in the standards.
- The transformer shall be capable of withstanding for 2 seconds a bolted metallic short circuit on the terminals of either winding with rated voltage on the other winding and the tap-changer in any position.
- The transformer shall be equipped with lightning arrestors, with each arrestor electrically connected to each HV bushing and mechanically secured onto the tank. The lightning arrestors shall be capable of discharging lightning and switching surges and temporary power frequency over voltages. The Arrestors shall be capable of withstanding Maximum Continuous Operating Voltages (M.C.O.V) and rated for operation in 15 kV class distribution system. These arrestors shall be of Heavy Duty, Station Class / Distribution Class and Gapless Zinc Oxide type and shall be hermetically sealed units suitable for outdoor installation and mounting on distribution transformers. Additionally, the arrestors shall be suitable for heavily polluted atmospheric conditions with high incidences of lightning strikes.
- If short circuit tests have been carried out on the particular design of transformer offered, the test results shall be supplied with the bid.
- The flux density at any point of the magnetic circuit when the transformer is connected on the centre tap and operating at normal voltage and frequency shall be stated and shall not exceed 1.7 Tesla. The transformer must be capable of operating at 10% over voltage at 97% of rated frequency without saturation occurring or the flux density exceeding 1.9 tesla.

- The guaranteed impedance voltage measured at 75^0C and at rated voltage shall not exceed 5%.
- Dielectric fluid: Oil/Dimethyl Silicone/Mineral Oil
- Certification: IEEE Std C57.12.28, IEEE Std C57.12.3
- Outdoor rated: NEMA 3R or 4X
- Standard: IEC, ANSI

The following insulation levels and dielectric tests shall apply:

Transformer insulation level

	HV Winding	LV Winding
Basic Impulse Insulation Level (kV)	95	-
Power Frequency voltage withstand level, Dry One-Minute (kV)	34	-
Power Frequency voltage withstand level, Wet 10-Second (kV)	30	10

- Manufacturer MUST be certified to a recognized Quality Management and Quality Assurance Standards such as ISO 9001 or ISO 9002, such certification shall be submitted as part of the bid documentation
- Except where modified by this specification, the transformer shall be designed, manufactured and tested in accordance with the latest editions of the following standards:

ANSI/IEC	Subject
ANSI C57.12.20	Overhead-type distribution transformers
ANSI C57.12.90	Test Code for Distribution transformers
ANSI C76.1	Test Code for Outdoor Apparatus Bushings
IEC 71	Insulation Coordination.
IEC 76	Power Transformers.
IEC 137	Bushings for Alternating Voltages above 1000 V.
IEC 156	Method of determining Electric Strength of Insulating Oils.
IEC 354	Loading Guide for oil immersed Transformers
IEC 437	Radio Influence Voltage Measurement.
IEC 551	Determination of Transformer and Reactor Sound Levels.
IEC 616	Terminal and Tapping markings for power transformers.
IEC 722	Guide to the Lightning and Switching impulse testing of Power Transformers and Reactors.

In case of conflict, the order of precedence shall be:

- This Specification
- ANSI Standards
- IEC Standards
- Other Standards
- The transformer shall be provided with an anodized aluminium laser engraved nameplate, in accordance with IEEE C57.12, Table 9 - Nameplate C. The following attributes should be indicated on the aforementioned nameplate: type of transformer;
  - standard to which it is manufactured and tested;
  - manufacturer's name;
  - transformer serial number;

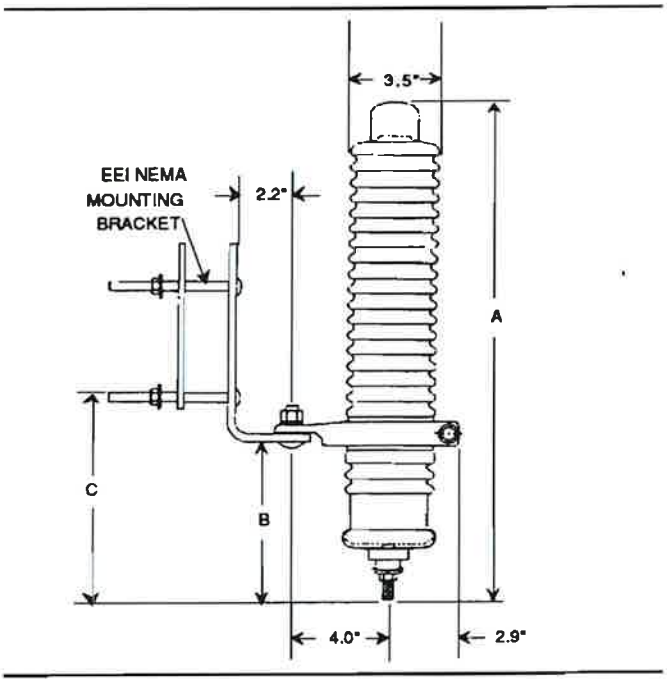
- year of manufacture;
- rated frequency in Hz;
- rated voltages (primary and secondary);
- number of phases;
- rated power in kVA;
- identification of internally mounted protective devices;
- type of cooling (ONAN);
- rated currents in A;
- polarity;
- chopped wave (short time) impulse voltage withstand level in kV;
- power frequency withstand voltage in kV;
- percentage impedance at 85°C;
- load loss in kW at rated current;
- no-load loss in kW at rated voltage and frequency;
- continuous ambient temperature at which ratings apply in degree C (40);
- top oil and winding temperature rise at rated load in degree C;
- winding connection diagram;
- total weight (core, windings and oil) in kg;
- weight of core and windings in kg;
- volume of oil in litres;
- oil with less than 2ppm of PCB; and
- name of the Procuring Entity (Cooperative Republic of Guyana.)

- 2 years warranty

The Bidder must submit complete technical data sheet, descriptive literature giving full technical details of the transformer offered, outline dimension drawing and general arrangement drawing showing component layout and general schematic diagrams, and sample routine and type test reports for the type and rating of transformer.

4.14..2 Lightning Arrestors

- The arresters shall be fully compliant with ANSI/IEEE C62.11 Standard and be fitted with mounting brackets. The arresters shall be similar to that shown in the diagram below. It shall be the metal oxide surge arrester type.



Arrester Rating	MCOV	Front-of-Wave Protection Level[1]	Maximum Discharge Voltage 8/20 µs Current Wave						Switching Surge[2]
kV rms	kV rms	kV crest	1.5 kA	3 kA	5 kA	10 kA	20 kA	40 kA	kV crest
18	15.3	64.2	49.1	52.1	55.1	60	67.6	81.4	44.1

5. Specification of Required Services

5.1 Systems Design

Bidders are required to visit the selected sites and determine the best possible locations for components and the complete system.

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

[1] Based on a 10 kA current impulse that results in a discharge voltage cresting in 0.5 µs.
[2] 45-60 µs rise time 500 A surge.

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

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 the selected buildings.

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

c) The battery energy storage system should provide the primary function of allowing the maximum use of energy stored during the periods when solar energy is not available (at nights). It should be capable of providing rapid response when the intermittent source cannot meet the energy requirement of the consumers.

d) The PV system must be capable of automatically disconnecting the load at a predefined critical SOC of the BESS. The system must also be capable of automatically recharging the BESS from the solar array to a predefined SOC before the load is automatically reconnected. These predefined SOC values must be selectable or adjustable by the operator.

5.3 Solar Photovoltaic System Installation

a) All installations are to be conducted in accordance with **NEC 2023 Article 690** which covers solar PV systems installation, protection (AC, DC and lightning) and grounding, Chapter 3 of the NEC 2023 which covers wiring method and materials, and **Article 705** for interconnection to the grid. **All labels/ markings are to be provided by the contactor in accordance with the NEC 2023 Article 690 requirements.**

b) The Government Electrical Inspectorate (GEI) requires that all solar installations must be provided with effective independent grounding/earthing systems. The contractor is therefore required to install a separate grounding system that when tested has ground resistance value of 25 ohms or less. The minimum size copper grounding rod to be used is 5/8inch x 8 feet for the solar PV installation. Bidder should take note of areas with high ground resistance and make provisions for special grounding methods to meet requirements.

c) ***The 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) Damages to internal and external walls e.g. any holes, cuts or any actions/activities resulting in the defacing of any building during installation, must be repaired (neatly covered with appropriate moulding, paint or filling material) and returned to the original state at the expense of the contractor.

e) All the modules in a string must have the same azimuth and tilt. If strings are connected in parallel, the strings must contain the same number of modules and have the same azimuth and tilt to reduce losses due to module mismatch.

f) If multiple strings are connected to the same MPPT input of a charge controller or inverter, each string must be identical (number and type of modules, and orientation) to reduce losses due to module mismatch.

5.4 System Conditions

The following conditions MUST apply to the 13.8kV network.

Frequency	60 Hz	
Nominal system voltages:	13.8 kV	
	LV System (1ph)	120/240 V
Maximum system voltages:	13.8 kV System	14.5 kV
Nominal short circuit levels:	13.8 kV System	16 kA
Insulation Levels		
Basic Insulation Level (BIL)	13.8 kV System	95 kV
Power frequency one minute withstand	13.8kV System	34 kV
Neutral earthing arrangements:	13.8 kV System	Delta connected (Not solidly grounded)
	LV System	solidly grounded/earthed

5.5 Earthing/Grounding

The following parts of the system are to be grounded:

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

Ground rods shall be driven full length in undisturbed earth. The top shall be at least 12 inches below the surface of the earth. The ground wire shall be attached to the rod with a clamp and secured to the pole with stables. The staples on the ground wire shall be spaced tow feet apart except for a distance of eight feet above the ground and eight feet down from the top of the pole where they shall be six inches apart.

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

The equipment ground, neutral wires, and lightning-protective equipment shall be interconnected and attached to a common ground wire.
Temporary earths for the purpose of construction work shall be installed in accordance with

standard practice, on both sides of the work area and at a reasonable distance away, so as to provide safe protection against lightning strikes or accidental energising of line or any other electrical hazard, to any personnel during construction.

5.6 Bolts and washers

All bolts and washers should be hot-dipped galvanized.

5.7 Rural Cut-outs (RCO)

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

5.8 Safety

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

5.9 Inspection and Testing

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

5.10 Drawing and Records

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

5.11 Compliance with Regulations

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

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

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

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

5.12 Progress Reporting

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

5.13 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.

5.14 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.

5.15 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 bidder and the procuring entity.

5.16 After Sales Service

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

5.17 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 2023 Articles 690 and 705.

SUPPLIER'S BID

TO: _____

(Name and address of Procuring Entity)

Dear Sir / Madam,

Having examined the bidding documents including Annexes and Addenda No _____ *[specify numbers]*, the receipt of which is hereby acknowledged, we offer to execute the ***Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids in lots*** in accordance with the Contract conditions attached herein for the total amount for the following:

The Price of our bid, including VAT (where applicable) is

Lot 1:.....*(in words)*

.....*(in figure)*

Lot 2:.....*(in words)*

.....*(in figure)*

Lot 3:.....*(in words)*

.....*(in figure)*

Lot 4:.....*(in words)*

.....*(in figure)*

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 10% to the amount 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 120 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 _____ 2026

Duly authorized to sign the Bid for and on behalf of

NATIONAL PROCUREMENT & TENDER ADMINISTRATION
16 FEB 2026
APPROVED

_____

(name of Supplier)

_____ _____ _____

(Full name) *(Title)* *(Signature and seal)*

PRICE SCHEDULE

Item No.	Brief Description of Goods	Quantity To be determined by bidder	Unit Price (GYD)	Total Cost (GYD)
Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1				
	1.1 Design, Supply, Installation and Commissioning of a 19kWp Solar Photovoltaic inclusive of a 86kWh energy storage system in Sebai, Region 1 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Replacement of the existing 30kVA Pad-mounted Transformer with a 60kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolator and a singular isolator to the Transformer Input) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters			

	l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night-time hours at the site m) Lightning Protection equipment integrated into the Solar PV Array and BoS System. n) As-Built Drawing o) Programing parameters: • Passcodes: • Sign-ons: o Inverters o Charge Controllers o Batteries o Communication			
	1.2 Design, Supply, Installation and Commissioning of a 19kWp Solar Photovoltaic inclusive of an 86kWh energy storage system in Karaburi, Region 1 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Replacement of the existing 30kVA Pad-mounted Transformer with a 75kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolator and a singular isolator to the Transformer Input) i) Fire Extinguisher			

	j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, m) Lightning Protection equipment integrated into the Solar PV Array and BoS System. n) As-Built Drawing o) Programing parameters: p) Passcodes: q) Sign-ons: a. Inverters b. Charge Controllers c. Batteries d. Communication			
	1.3 Design, Supply, Installation and Commissioning of a 32kWp Solar Photovoltaic inclusive of a 96kWh energy storage system in Kwebanna, Region 1 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices			

	h) Integration of the new Solar PV System supply into the existing 60kVA Pad-mounted Transformer (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, m) Lightning Protection equipment integrated into the Solar PV Array and BoS System. n) As-Built Drawing o) Programming parameters: p) Passcodes: q) Sign-ons: a. Inverters b. Charge Controllers c. Batteries d. Communication			
	1.4 Design, Supply, Installation and Commissioning of a 32kWp Solar Photovoltaic inclusive of a 94kWh energy storage system in Baramita, Region 1 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System			

	e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Replacement of the existing 60kVA Pad-mounted Transformer with a 90kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolator and a singular isolator to the Transformer Input) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, m) Lightning Protection equipment integrated into the Solar PV Array and BoS System. n) As-Built Drawing o) Programming parameters: p) Passcodes: q) Sign-ons: a. Inverters b. Charge Controllers c. Batteries d. Communication			
		Subtotal for Lot 1 :		

Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2

	2.1 Design, Supply, Installation and Commissioning of a 28kWp Solar Photovoltaic inclusive of a 83kWh energy storage system in St. Monica, Region 2 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Integration of the new Solar PV System supply into the existing 60kVA Pad-mounted Transformer (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, m) Lightning Protection equipment integrated into the Solar PV Array and BoS System.			

	n) As-Built Drawing o) Programing parameters: Passcodes: Sign-ons: Inverters Charge Controllers Batteries Communication			
	2.2 Design, Supply, Installation and Commissioning of a 35kWp Solar Photovoltaic inclusive of a 106Wh energy storage system in Wakapao, Region 2 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Replacement of the existing 60kVA Pad-mounted Transformer with a 100kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters			

	l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, **m)** Lightning Protection equipment integrated into the Solar PV Array and BoS System. **n)** As-Built Drawing **o)** Programing parameters: p) Passcodes: q) Sign-ons: a. Inverters b. Charge Controllers c. Batteries d. Communication			
		Subtotal for Lot 2		
Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9				
	3.1 Design, Supply, Installation and Commissioning of a 26kWp Solar Photovoltaic inclusive of a 114kWh energy storage system in Karaudarnau, Region 9 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Replacement of the existing 60kVA Pad-mounted Transformer with a 75kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) i) Fire Extinguisher			

	j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, **m)** Lightning Protection equipment integrated into the Solar PV Array and BoS System. **n)** As-Built Drawing **o)** Programing parameters: p) Passcodes: q) Sign-ons: a. Inverters b. Charge Controllers c. Batteries **d.** Communication			
			Subtotal for Lot 3	
Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6				
	4.1 Design, Supply, Installation and Commissioning of a 46kWp Solar Photovoltaic inclusive of a 144kWh energy storage system (Li-ion) in Orealla, Region 6 as follows: a) PV modules b) Ground mounting structure c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components			

	g) Grounding system and overcurrent protection devices h) Replacement of the existing 50kVA Pad-mounted Transformer with a 100kVA (combining the two 50kVA Transformers from Orealla and Siparuta) Pad Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, **m)** Lightning Protection equipment integrated into the Solar PV Array and BoS System. n) As-Built Drawing o) Programming parameters: p) Passcodes: q) Sign-ons: a. Inverters b. Charge Controllers c. Batteries **d.** Communication			
	4.2 Design, Supply, Installation and Commissioning of a 46kWp Solar Photovoltaic inclusive of a 115kWh energy storage system (Li-ion) in Siparuta, Region 6 as follows: a) PV modules b) Ground mounting structure			

	c) Hybrid Inverters d) Batteries and Management System e) Web-based system energy monitoring system f) Cabling and miscellaneous components g) Grounding system and overcurrent protection devices h) Replacement of the existing 50kVA Pad-mounted Transformer with a 75kVA Pole Mounted Transformer integrating the supply of the existing and new solar PV Systems (Systems are to have individual isolators/breakers and a singular isolator/breaker to the Transformer Input/LV Side) i) Fire Extinguisher j) Installation and commissioning materials for PV system (including all materials/components required for electrical interconnection to the existing Solar PV Minigrid System and interconnection to the nearest community Wi-Fi network to enable online monitoring of the PV Minigrid Installation) k) Auxiliary Services: Perimeter Fencing and Housing Infrastructure for batteries & Inverters l) Internal and External Lighting for the battery/inverter building, Perimeter Fence Lighting (Using Stand-alone Solar PV Lighting Fixtures) to provide adequate illumination for evening/night time hours at the site, **m)** Lightning Protection equipment integrated into the Solar PV Array and BoS System. n) As-Built Drawing o) Programming parameters: a. Passcodes: b. Sign-ons: c. Inverters d. Charge Controllers e. Batteries f. Communication			
			Subtotal for Lot 4	

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 and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids in lots*** 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 and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids*** *in lots* (hereinafter referred as "the Bid"),

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

THE CONDITIONS of this obligation are as follows:

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

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

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

_____ _____ _____

(Full name of Bank / Surety representative) *(Title)* *(Signature and seal)*

Dated on ____ day of _____202__.

Address of the Bank / Surety issuing guarantee:

_____

Manufacturer's Authorization

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

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

To: _____ *[insert complete name of Purchaser]*

WHEREAS

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

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

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

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

Title: _____ *[insert title]*

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

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

PERFORMANCE SECURITY
(Bank Guarantee or Insurance Bond)

TO: _____
[Name of Procuring Entity]

WHEREAS _____*[name of the Supplier]* (hereinafter called "the Supplier") has undertaken, in accordance with the Contract No. _____*[Contract number]* dated _____ 202 _ to ***Design, Supply, Installation and Commissioning of Solar Photovoltaic Systems in Hinterland Communities in Guyana and integration with existing Solar PV Mini-grids, lots :***

Lot 1: DSI of Solar PV and integration of solar PV mini-grid in Region 1
Lot 2: DSI of Solar PV and integration of solar PV mini-grid in Region 2
Lot 3: DSI of Solar PV and integration of solar PV mini-grid in Region 9
Lot 4: DSI of Solar PV and integration of solar PV mini-grid in Region 6

(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 I*nvitation 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 form (*page 49*).	
5.	Completed and signed **price schedule** (pages 50-61) must be submitted.	
6.	**Completed and signed** delivery schedule (*pages 20-31*) or **statement of agreement** to supply goods/services **within the period specified by the Procuring Entity in the delivery schedule.**	
7.	Provision of **documentation detailing the technical specifications** for the items listed in the Schedule of Requirement (*pages 20-31*) or **evidence to show that the goods match the requirements of the items listed in the Technical Specifications.**	
8.	Submission of bid security **in the amount of 2%** of the bid price **in the form of** a bond from an Insurance company licensed by the Bank of Guyana or a bank guarantee or manager's cheque.	
9.	Demonstrate experience and technical capacity by providing **documentary evidence** that shows the completion of a minimum of two (2) contracts of similar size and scope to the Project over the last two (2) years. Bidder must **provide copies of contracts** with previous clients. Bidder must also demonstrate the experience of completing contracts of a **minimum value of $4,000,000 for each year over two (2) years.**	
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 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** **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	

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APPROVED

	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 8 million.	
14.	The Bidder shall provide accurate information on the related bidding form as provided on page 70 about any litigation or arbitration resulting from contracts completed or on-going under its execution over the last five years. **Pending Litigation**: 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.** **Litigation History**: Non-performance of a contract did not occur as result of supplier's default since 1st January 2023. **If bidder has a history of nonperforming contract the bid will not be considered.**	
15.	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.	
16.	Provision of a signed statement of warranty and/or guarantee for applicable items. At least three (3) years warranty on complete system is required	
	Warranty: Two types of warranty have to be offered by the Bidder: 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 Bidder and the Procuring Entity (3 years minimum)	
17.	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.	
18.	Submission of an implementation schedule indicating important milestones such as equipment delivery to site, installation, testing and commissioning of system. Monthly progress reports and work plans are to be provided to the Procuring Entity during project execution.	

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

Litigation History

Litigation History Format		
☐ No court/arbitral award decisions against the Bidder since 1st January 2023, in accordance with Evaluation Criteria # 14		
Year of award	**Contract Identification**	**Total Contract Amount (current value, currency, exchange rate and USD equivalent)**
	•	
[*insert year*]	• Contract Identification: [*indicate complete Contract name, number, and any other identification* • Name of Purchaser: [*insert full name*] • Address of Purchaser: [*insert street/city/country*] • Matter in dispute: [*indicate main issues in dispute*] • Party who initiated the dispute: [*indicate "Purchaser" or "Supplier"*] • Status of dispute: [*indicate if it is being treated by under Arbitration or being dealt with by the Judiciary*]	[*insert amount*]