DEPARTMENT OF ENERGY
(Kagawaran ng Enerhiya)
Procurement Management Division
3F DOE Main Bldg., Energy Center, Rizal Drive Bonifacio
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BIDDING DOCUMENTS

Demonstration Project on Promoting Solar PV Technology for Offices Covered under the Government Energy Management Program as Provided by the EE&C Act

(Purchase Request No. 02-0151-2023-EP-0023)

6th Edition
July 2020

Section I. Invitation to Bid

DEMONSTRATION PROJECT ON PROMOTING SOLAR PV TECHNOLOGY FOR OFFICES COVERED UNDER THE GOVERNMENT ENERGY MANAGEMENT PROGRAM AS PROVIDED BY THE EE&C ACT

1. The ***Department of Energy (DOE)*** is undertaking this procurement for the Demonstration Project on Promoting Solar PV Technology for Offices Covered under the Government Energy Management Program as Provided by the EE&C Act, intends to apply the sum of Php30,000,000.00 that will be sourced from the GAA with an Approved Budget for the Contract (ABC) to payments for the contract under Purchase Request No. 02-0151-2023-EP-0023. Bids received in excess of the ABC shall be automatically rejected at bid opening:

2. The DOE now invites bids for Procurement of Services for Assessment and Demonstration Project on Promoting Solar PV Technology for Offices Covered under the Government Energy Management Program as Provided by the EE&C Act. Delivery of the Goods and Services is required **one hundred eighty (180) calendar days** upon receipt of Notice to Proceed. Bidders should have completed, **within four (4) years** from the date of submission and receipt of bids, a contract similar to the Project. The description of an eligible bidder is contained in the Bidding Documents, particularly, in Section II. Instructions to Bidders.

3. Bidding will be conducted through open competitive bidding procedures using a non-discretionary "pass/fail" criterion as specified in the 2016 Revised Implementing Rules and Regulations (IRR) of Republic Act (RA) 9184, otherwise known as the "Government Procurement Reform Act".

   Bidding is open to all interested bidders, whether local or foreign, subject to the conditions for eligibility provided in the IRR of RA 9184.

4. **The DOE is implementing an Alternative Work Arrangement setting the working day of DOE from Mondays to Thursdays** and interested bidders may obtain further information from *Department of Energy – Procurement Management Division* and inspect the Bidding Documents at the address given below during office hours from Mondays to Thursdays 8:00am to 4:00pm**.**

   Procurement Management Division
   Department of Energy
   3F DOE Main Building, Energy Center,
   Rizal Drive, Bonifacio Global City
   Taguig City, Philippines 1632

The DOE also accepts payment for the bid documents through bank payment (Landbank of the Philippines**)**:

Payment for	:	Bidding Documents for [Item to be Bidded]
Payee Account Name	:	DOE Trust Fund
Account Number	:	0052-1155-58
Swift Code	:	TLBPPHMM
Beneficiary Address	:	Department of Energy, Energy Center, BGC, Taguig City

Copy of the payment receipt must be emailed to:

Jaymee Joy A. Deogracias:
bacsecretariat@doe.gov.ph **or** jdeogracias@doe.gov.ph

For pre-bid conference purposes, the bid documents may be downloaded free of charge from the website of the Philippine Government Electronic Procurement System (PhilGEPS) and the website of the Procuring Entity. The bidder shall pay the Bidding Documents not later than the submission of their bids.

Bidders are encouraged to download a copy of the Bid Documents for pre-bid conference purposes instead of physically securing a hard copy at the DOE-BAC Secretariat office.

5. A complete set of Bidding Documents may be acquired by interested Bidders on **18 March 2023** from the address below and upon payment of the applicable fee for the Bidding Documents, pursuant to Section 5 of Appendix 8 of the 2016 in the amount **of Php25,000.00.**

The Department of Energy will hold a Pre-Bid Conference on **30 March 2023** which **will start at 09:00 AM** at the DOE – **Audio Visual Room** DOE BAC Main Office.

If the Bidder has constraints, they have the options to attend the Prebid thru Video conferencing using MS Teams, prospective bidders are advised to download MS Teams app prior to the date of the Pre-bid Conference. The bidders are required to submit the following information through bacsecretariat@doe.gov.ph or jdeogracias@doe.gov.ph on or before **29 March 2023:**

1. Complete name of the authorized company representative who will participate in the Pre-Bid Conference. Complete company Name, address and contact details;
2. Active email addresses where the invitation/link will be sent; and
3. Indicate the item/s the company would like to participate.

6. Bids must be duly received by the BAC Secretariat through manual submission at the office address indicated below on or before **9:00 AM of 13 April 2023** or submission could be made through courier service provided it will be stamped-received by the DOE Records Management Division or the BAC Secretariat on or before **9:00 AM of 13 April 2023**. Online submission is not yet available. Late bids shall not be accepted.

Procurement Management Division
Department of Energy
3F DOE Main Building, Energy Center,
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7. All Bids must be accompanied by a bid security in any of the acceptable forms and in the amount stated in **ITB** Clause 14.

   Bid opening shall be on **10:00 AM of 13 April 2023,** DOE – Audio Visual Room, DOE-Main Building. Bidder's authorized representative, as stated in the bid submission, is required to attend the Bid Opening at the DOE AVR. Bids will be opened in the presence of the bidders' representative.

   Department of Energy
   DOE Main Building, Energy Center,
   Rizal Drive, Bonifacio Global City
   Taguig City, Philippines 1632

   The official representative as stated in the bid submission is required to attend the bid opening. Attendees shall be subject to the DOE Protocol for Visitors; compliance to social distancing, wearing of masks, body temperature screening, filling up of self-screening form which must be filled-up prior to the arrival at DOE (the form can be downloaded at the DOE website). Visitors who show signs of COVID-19 related symptoms such as, cough, flu, fever, high body temperature, sneezing are advised not to proceed to DOE since they will not be allowed to enter the DOE compound. Virtual participation of the opening bids for Bidders can be witnessed through the MS Teams platform.

   If the Bidder has constraints, they have the options to attend the Opening of Bids thru Video conferencing using MS Teams, prospective bidders are advised to download MS Teams app prior to the date of the Pre-bid Conference. The bidders are required to submit the following information through bacsecretariat@doe.gov.ph or jdeogracias@doe.gov.ph on or before **12 April 2023.**

8. To minimize errors in the preparation of bids, bidders are strongly enjoined to send the person or representative actually preparing their bids to attend/participate in the Pre-bid Conference. The bidders' representative shall carefully consider all the discussions during the Pre-bid Conference and be guided by them in the preparation of bids.

   Official communication or notification shall be sent through the official email provided by the suppliers and are considered official and duly received by the supplier even without confirmation of such receipt.

9. The Department of Energy (DOE) reserves the right to reject any and all bids, declare a failure of bidding, or not award the contract at any time prior to contract award in accordance with Sections 35.6 and 41 of the 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.

10. For further information, please refer to:

Jaymee Joy A. Deogracias
Procurement Management Division
3F DOE Main Bldg., Energy Center,
Rizal Drive Bonifacio Global City,
Taguig City, Philippines 1632
Email address: bacsecretariat@doe.gov.ph
Telephone/Facsimile: (02) 3479-2900 local 383 (02) 8541-4105
Website: www.doe.gov.ph

(sgd)

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Usec. Giovanni Carlo J. Bacordo
Chairperson
Bids and Awards Committee

Section II. Instructions to Bidders

1. Scope of Bid

The Procuring Entity, Department of Energy wishes to receive Bids for the Demonstration Project on Promoting Solar PV Technology for Offices Covered under the Government Energy Management Program as Provided by the EE&C Act under Purchase Request No. 02-0151-2023-EP-0023.

2. Funding Information

2.1. The GOP through the source of funding as indicated below for GAA **FY2023** in the amount of Php30,000,000.00

3. Bidding Requirements

The Bidding for the Project shall be governed by all the provisions of RA No. 9184 and its 2016 revised IRR, including its Generic Procurement Manuals and associated policies, rules, and regulations as the primary source thereof, while the herein clauses shall serve as the secondary source thereof.

Any amendments made to the IRR and other GPPB issuances shall be applicable only to the ongoing posting, advertisement, or **IB** by the BAC through the issuance of a supplemental or bid bulletin.

The Bidder, by the act of submitting its Bid, shall be deemed to have verified and accepted the general requirements of this Project, including other factors that may affect the cost, duration and execution or implementation of the contract, project, or work and examine all instructions, forms, terms, and project requirements in the Bidding Documents.

4. Corrupt, Fraudulent, Collusive, and Coercive Practices

The Procuring Entity, as well as the Bidders and Suppliers, shall observe the highest standard of ethics during the procurement and execution of the contract. They or through an agent shall not engage in corrupt, fraudulent, collusive, coercive, and obstructive practices defined under Annex “I” of the 2016 revised IRR of RA No. 9184 or other integrity violations in competing for the Project.

5. Eligible Bidders

5.1. Only Bids of Bidders found to be legally, technically, and financially capable will be evaluated.

5.2. Foreign ownership limited to those allowed under the rules may participate in this Project.

5.3. Pursuant to Section 23.4.1.3 of the 2016 revised IRR of RA No.9184, the Bidder shall have an SLCC that is at least one (1) contract similar to the Project the value of which, adjusted to current prices using the PSA’s CPI, must be at least equivalent to at least fifty percent (50%) of the ABC.

5.4. The Bidders shall comply with the eligibility criteria under Section 23.4.1 of the 2016 IRR of RA No. 9184.

6. Origin of Goods

There is no restriction on the origin of goods other than those prohibited by a decision of the UN Security Council taken under Chapter VII of the Charter of the UN, subject to Domestic Preference requirements under **ITB** Clause 18.

7. Subcontracts

7.1. The Procuring Entity has prescribed that: **Subcontracting is not allowed.**

8. Pre-Bid Conference

The Procuring Entity will hold a pre-bid conference for this Project on the specified date and time and either at its physical address and/or through videoconferencing as indicated in paragraph 6 of the **IB.**

9. Clarification and Amendment of Bidding Documents

Prospective bidders may request for clarification on and/or interpretation of any part of the Bidding Documents. Such requests must be in writing and received by the Procuring Entity, either at its given address or through electronic mail indicated in the **IB**, at least ten (10) calendar days before the deadline set for the submission and receipt of Bids.

10. Documents comprising the Bid: Eligibility and Technical Components

10.1. The first envelope shall contain the eligibility and technical documents of the Bid as specified in Section VIII (Checklist of Technical and Financial Documents).

10.2. The Bidder's SLCC as indicated in **ITB** Clause 5.3 should have been completed **within four (4) years** prior to the deadline for the submission and receipt of bids.

10.3. If the eligibility requirements or statements, the bids, and all other documents for submission to the BAC are in foreign language other than English, it must be accompanied by a translation in English, which shall be authenticated by the appropriate Philippine foreign service establishment, post, or the equivalent office having jurisdiction over the foreign bidder's affairs in the Philippines. Similar to the required authentication above, for Contracting Parties to the Apostille Convention, only the translated documents shall be authenticated through an apostille pursuant to GPPB Resolution No. 13-2019 dated 23 May 2019. The English translation shall govern, for purposes of interpretation of the bid.

11. Documents comprising the Bid: Financial Component

11.1. The second bid envelope shall contain the financial documents for the Bid as specified in **Section VIII (Checklist of Technical and Financial Documents)**.

11.2. If the Bidder claims preference as a Domestic Bidder or Domestic Entity, a certification issued by DTI shall be provided by the Bidder in accordance with Section 43.1.3 of the 2016 revised IRR of RA No. 9184.

11.3. Any bid exceeding the ABC indicated in paragraph 1 of the **IB** shall not be accepted.

11.4. For Foreign-funded Procurement, a ceiling may be applied to bid prices provided the conditions are met under Section 31.2 of the 2016 revised IRR of RA No. 9184.

12. Bid Prices

12.1. Prices indicated on the Price Schedule is inclusive of all Value added tax and all other applicable taxes and charges and shall be entered separately in the following manner:

a. For Goods offered from within the Procuring Entity's country:

i. The price of the Goods quoted EXW (ex-works, ex-factory, ex-warehouse, ex-showroom, or off-the-shelf, as applicable);
ii. The cost of all customs duties and sales and other taxes already paid or payable;
iii. The cost of transportation, insurance, and other costs incidental to delivery of the Goods to their final destination; and
iv. The price of other (incidental) services, if any, listed in e.

b. For Goods offered from abroad:

i. Unless otherwise stated in the **BDS**, the price of the Goods shall be quoted delivered duty paid (DDP) with the place of destination in the Philippines as specified in the **BDS**. In quoting the price, the Bidder shall be free to use transportation through carriers registered in any eligible country. Similarly, the Bidder may obtain insurance services from any eligible source country.
ii. The price of other (incidental) services, if any, as listed in **Section VII (Technical Specifications).**

13. Bid and Payment Currencies

13.1. For Goods that the Bidder will supply from outside the Philippines, the bid prices may be quoted in the local currency or tradeable currency accepted by the BSP at the discretion of the Bidder. However, for purposes of bid evaluation, Bids denominated in foreign currencies, shall be converted to

Philippine currency based on the exchange rate as published in the BSP reference rate bulletin on the day of the bid opening.

13.2. Payment of the contract price shall be made in: Philippine Pesos

14. Bid Security

14.1. The Bidder shall submit a Bid Securing Declaration or any form of Bid Security in the amount indicated in the **BDS**, which shall be not less than the percentage of the ABC in accordance with the schedule in the **BDS**.

14.2. The Bid and bid security shall be valid **11 August 2023***.* Any Bid not accompanied by an acceptable bid security shall be rejected by the Procuring Entity as non-responsive.

15. Sealing and Marking of Bids

Each Bidder shall submit one copy of the first and second components of its Bid.

The Procuring Entity may request additional hard copies and/or electronic copies of the Bid. However, failure of the Bidders to comply with the said request shall not be a ground for disqualification.

If the Procuring Entity allows the submission of bids through online submission or any other electronic means, the Bidder shall submit an electronic copy of its Bid, which must be digitally signed. An electronic copy that cannot be opened or is corrupted shall be considered non-responsive and, thus, automatically disqualified.

16. Deadline for Submission of Bids

16.1. The Bidders shall submit on the specified date and time and either at its physical address or through online submission as indicated in paragraph 7 of the **IB.**

17. Opening and Preliminary Examination of Bids

17.1. The BAC shall open the Bids in public at the time, on the date, and at the place specified in paragraph 9 of the **IB**. The Bidders' representatives who are present shall sign a register evidencing their attendance. In case videoconferencing, webcasting or other similar technologies will be used, attendance of participants shall likewise be recorded by the BAC Secretariat.

In case the Bids cannot be opened as scheduled due to justifiable reasons, the rescheduling requirements under Section 29 of the 2016 revised IRR of RA No. 9184 shall prevail.

17.2. The preliminary examination of bids shall be governed by Section 30 of the 2016 revised IRR of RA No. 9184.

18. Domestic Preference

18.1. The Procuring Entity will grant a margin of preference for the purpose of comparison of Bids in accordance with Section 43.1.2 of the 2016 revised IRR of RA No. 9184.

19. Detailed Evaluation and Comparison of Bids

19.1. The Procuring BAC shall immediately conduct a detailed evaluation of all Bids rated "*passed*," using non-discretionary pass/fail criteria. The BAC shall consider the conditions in the evaluation of Bids under Section 32.2 of the 2016 revised IRR of RA No. 9184.

19.2. If the Project allows partial bids, bidders may submit a proposal on any of the lots or items, and evaluation will be undertaken on a per lot or item basis, as the case maybe. In this case, the Bid Security as required by **ITB Clause 14** shall be submitted for each lot or item separately.

19.3. The descriptions of the lots or items shall be indicated in **Section VII (Technical Specifications)**, although the ABCs of these lots or items are indicated in the **BDS** for purposes of the NFCC computation pursuant to Section 23.4.2.6 of the 2016 revised IRR of RA No. 9184. The NFCC must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder.

19.4. The Project shall be awarded as One (1) Project having several items that shall be awarded as one contract.

19.5. Except for bidders submitting a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation, all Bids must include the NFCC computation pursuant to Section 23.4.1.4 of the 2016 revised IRR of RA No. 9184, which must be sufficient for the total of the ABCs for all the lots or items participated in by the prospective Bidder. For bidders submitting the committed Line of Credit, it must be at least equal to ten percent (10%) of the ABCs for all the lots or items participated in by the prospective Bidder.

20. Post-Qualification

20.2. Within a non-extendible period of five (5) calendar days from receipt by the Bidder of the notice from the BAC that it submitted the Lowest Calculated Bid, the Bidder shall submit its latest income and business tax returns filed and paid through the BIR Electronic Filing and Payment System (eFPS) and other appropriate licenses and permits required by law and stated in the **BDS**.

21. Signing of the Contract

21.1. The documents required in Section 37.2 of the 2016 revised IRR of RA No. 9184 shall form part of the Contract. Additional Contract documents are indicated in the **BDS**

Section III. Bid Data Sheet

Bid Data Sheet

ITB Clause	
5.3	For this purpose, contracts similar to the Project shall be: a. Similar contract on the installation of Solar PV Rooftop b. completed within **four (4) years** prior to the deadline for the submission and receipt of bids
7.1	Subcontracting is not allowed
10.1	Brochures of products being offered is part of the submission for post qualification
12	The price of the Goods shall be quoted DDP – **Department of Energy, Taguig City,** or the applicable International Commercial Terms (INCOTERMS) for this Project.
14.1	The bid security shall be in the form of a Bid Securing Declaration, or any of the following forms and amounts: a. Not less than Php600,000.00 if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit; or b. Not less than Php1,500,000.00 if bid security is in Surety Bond.
15.	Each Bidder shall submit one (1) original and four (4) copies of the first and second components of its bid.
20.2	No further Instructions

Section IV. General Conditions of Contract

1. Scope of Contract

This Contract shall include all such items, although not specifically mentioned, that can be reasonably inferred as being required for its completion as if such items were expressly mentioned herein. All the provisions of RA No. 9184 and its 2016 revised IRR, including the Generic Procurement Manual, and associated issuances, constitute the primary source for the terms and conditions of the Contract, and thus, applicable in contract implementation. Herein clauses shall serve as the secondary source for the terms and conditions of the Contract.

This is without prejudice to Sections 74.1 and 74.2 of the 2016 revised IRR of RA No. 9184 allowing the GPPB to amend the IRR, which shall be applied to all procurement activities, the advertisement, posting, or invitation of which were issued after the effectivity of the said amendment.

Additional requirements for the completion of this Contract shall be provided in the **Special Conditions of Contract** (**SCC).**

2. Advance Payment and Terms of Payment

2.1. Advance payment of the contract amount is provided under Annex "D" of the revised 2016 IRR of RA No. 9184.

2.2. The Procuring Entity is allowed to determine the terms of payment on the partial or staggered delivery of the Goods procured, provided such partial payment shall correspond to the value of the goods delivered and accepted in accordance with prevailing accounting and auditing rules and regulations. The terms of payment are indicated in the **SCC**.

3. Performance Security

Within ten (10) calendar days from receipt of the Notice of Award by the Bidder from the Procuring Entity but in no case later than prior to the signing of the Contract by both parties, the successful Bidder shall furnish the performance security in any of the forms prescribed in Section 39 of the 2016 revised IRR of RA No. 9184

4. Inspection and Tests

The Procuring Entity or its representative shall have the right to inspect and/or to test the Goods to confirm their conformity to the Project specifications at no extra cost to the Procuring Entity in accordance with the Generic Procurement Manual. In addition to tests in the **SCC**, **Section IV (Technical Specifications)** shall specify what inspections and/or tests the Procuring Entity requires, and where they are to be conducted. The Procuring Entity shall notify the Supplier in writing, in a timely manner, of the identity of any representatives retained for these purposes.

All reasonable facilities and assistance for the inspection and testing of Goods, including access to drawings and production data, shall be provided by the Supplier to the authorized inspectors at no charge to the Procuring Entity.

5. Warranty

5.1 In order to assure that manufacturing defects shall be corrected by the Supplier, a warranty shall be required from the Supplier as provided under Section 62.1 of the 2016 revised IRR of RA No. 9184.

5.2 The Procuring Entity shall promptly notify the Supplier in writing of any claims arising under this warranty. Upon receipt of such notice, the Supplier shall, repair or replace the defective Goods or parts thereof without cost to the Procuring Entity, pursuant to the Generic Procurement Manual.

6. Liability of the Supplier

The Supplier's liability under this Contract shall be as provided by the laws of the Republic of the Philippines.

If the Supplier is a joint venture, all partners to the joint venture shall be jointly and severally liable to the Procuring Entity.

Section V. Special Conditions of Contract

Special Conditions of Contract

GCC Clause	
1	**Delivery and Documents –** For purposes of the Contract, "EXW," "FOB," "FCA," "CIF," "CIP," "DDP" and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows: "The delivery terms applicable to the Contract are DDP delivered Department of Energy, Taguig City. In accordance with INCOTERMS." "The delivery terms applicable to this Contract are Department of Energy, Taguig City. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination." Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements). For purposes of this Clause the Procuring Entity's Representative at the Project Site is: **Ms. Lana Rose A. Manaligod, Chief-EPSMD** **Delivery and Documents** For purposes of the Contract, "EXW," "FOB," "FCA," "CIF," "CIP," "DDP" and other trade terms used to describe the obligations of the parties shall have the meanings assigned to them by the current edition of INCOTERMS published by the International Chamber of Commerce, Paris. The Delivery terms of this Contract shall be as follows: The delivery terms applicable to this Contract are delivered at DOE Main Office. Risk and title will pass from the Supplier to the Procuring Entity upon receipt and final acceptance of the Goods at their final destination." Delivery of the Goods shall be made by the Supplier in accordance with the terms specified in Section VI (Schedule of Requirements). **Packaging** The Supplier shall provide such packaging of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in this Contract. The packaging shall be sufficient to withstand, without limitation, rough handling during transit and exposure to extreme temperatures, salt and precipitation during transit, and open storage. Packaging case size and weights shall take into consideration,

	where appropriate, the remoteness of the Goods' final destination and the absence of heavy handling facilities at all points in transit. The packaging, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified below, and in any subsequent instructions ordered by the Procuring Entity. **Transportation** Where the Supplier is required under Contract to deliver the Goods CIF, CIP, or DDP, transport of the Goods to the port of destination or such other named place of destination in the Philippines, as shall be specified in this Contract, shall be arranged, and paid for by the Supplier, and the cost thereof shall be included in the Contract Price. Where the Supplier is required under this Contract to transport the Goods to a specified place of destination within the Philippines, defined as the Project Site, transport to such place of destination in the Philippines, including insurance and storage, as shall be specified in this Contract, shall be arranged by the Supplier, and related costs shall be included in the contract price. Where the Supplier is required under Contract to deliver the Goods CIF, CIP or DDP, Goods are to be transported on carriers of Philippine registry. In the event that no carrier of Philippine registry is available, Goods may be shipped by a carrier which is not of Philippine registry provided that the Supplier obtains and presents to the Procuring Entity certification to this effect from the nearest Philippine consulate to the port of dispatch. In the event that carriers of Philippine registry are available, but their schedule delays the Supplier in its performance of this Contract the period from when the Goods were first ready for shipment and the actual date of shipment the period of delay will be considered force majeure. The Procuring Entity accepts no liability for the damage of Goods during transit other than those prescribed by INCOTERMS for DDP deliveries. In the case of Goods supplied from within the Philippines or supplied by domestic Suppliers, risk and title will not be deemed to have passed to the Procuring Entity until their receipt and final acceptance at the final destination. **Intellectual Property Rights –**
C	The Supplier shall indemnify the Procuring Entity against all third-party claims of infringement of patent, trademark, or industrial design rights arising from use of the Goods or any part thereof.

2.2	The terms of payment shall be as follows: As per schedule indicated in the TOR which will be paid upon completion of all deliverables and issuance of end-user's acceptance certificate and submission of complete documents. Payment is through List of Due and Demandable Accounts Payable - Advice to Debit Account (LDDAP-ADA) and subject to usual government budgeting, auditing, and accounting procedures. 10% retention shall be deducted for every progress billing 5% of the total contract cost shall be retain as warranty which will released upon completion of the warranty period.
4	Inspection and Tests: As stated in the TOR/Specifications
5.1	No further instructions

Section VI. Schedule of Requirements

The delivery schedule expressed as weeks/months stipulates hereafter a delivery date which is the date of delivery to the project site.

Item no.	Item	QTY/ Unit	Delivery Date
1	Demonstration Project on Promoting Solar PV Technology for Offices Covered under the Government Energy Management Program as Provided by the EE&C Act	1 Lot	As Stated in the TOR

Section VII. Technical Specifications/ Terms of Reference

Terms of Reference/Specifications	
Demonstration Project on Promoting Solar PV Technology for Offices Covered under the Government Energy Management Program as Provided by the EE&C Act **Approved Budget Cost: PhP 30,000,000.00**	**Bidder's Compliance**
TERMS OF REFERENCE **1. BACKGROUND** Republic Act No. 11285 otherwise known as the Energy Efficiency and Conservation Act of 2019 and its governing Implementing Rules and Regulations (EEC IRR) provide among others the establishment of the framework for introducing and institutionalizing fundamental policies on energy efficiency and conservation and promotion. Under Section 35 of the EEC IRR, the Inter-Agency Energy Efficiency and Conservation Committee (IAEECC) was created to evaluate and approve government energy efficiency projects, and to provide strategic direction in the implementation of the Government Energy Management Program (GEMP). IAEECC Resolution No. 1, s. 2020 directs all government entities, including the LGUs and foreign service posts to comply with the GEMP, orders the DOE to conduct energy audits and spot-checks, and submit proposed improvements to the GEMP The GEMP covers all Government Entities (GEs) which includes National Government Agencies (NGAs), Government-Owned and Controlled Corporation (GOCCs), Local Government Units (LGUs) and State Universities and Colleges (SUCs), Government Financing Institutions and Foreign Service Posts, among others. Section 5.1 of the IAEECC Resolution No. 5 s. 2022 provides details for the Implementation of Energy Efficiency and Conservation Program (EECP) where solar rooftop power generation and solar heating systems are listed among the proven energy efficient technology that meets the DOE's Minimum Energy Performance of Products (MEPP) for energy-consuming products which the Government Energy Efficiency Projects (GEEPs) could apply. Further, Section 5 of the Department Order (DO) No. 2022-04-0006, also known as the Guidelines on the Endorsement of GEEPs to the IAEECC Pursuant to the GEMP Guidelines, states that preferential evaluation and implementation shall be provided to priority GEEPs, such as GEEPs with initiatives promoting the development and utilization of efficient renewable energy technologies and systems, and GEEPs that are pilot and demonstration initiatives for energy security, to ensure the unhampered delivery of public services.	

2. OBJECTIVE

The objective of the **Project** is to conduct a demonstration project on the viability and effectiveness of Solar PV technology to promote the utilization of renewable sources of energy in government buildings, offices, and/or facilities as provided under the EE&C Act.

2.1 To promote and encourage the accelerated development and utilization of efficient renewable energy technologies such as Solar PV as one of the effective EE&C solutions to lower electricity costs by reducing dependence and use of fossil fuels and contribute to the mitigation of greenhouse gas emission

2.2 To install Solar PV technology in government buildings, offices, and/or facilities;

2.3 To serve as a model for government buildings/offices to showcase the viability of RE technologies, particularly the Solar PV technology as one important solution that may contribute to cushioning the impact of increasing electricity costs of GEs.

2.4 To improve the capabilities of the EUMB on Solar PV technology through technology transfer.

3. SERVICE PROVIDER ELIGIBILITY

3.1 Should be a DOE registered/certified Energy Service Company (ESCO);

3.2 With relevant experience in supply, installation, testing, commissioning, and handing over of at least 30-40 kWp solar PV system in a single order;

3.3 Safety construction solutions and overall aesthetics consideration in the design and implementation.

3.4 With certified technicians/ technical staff that will be engaged for the project.

4. SCOPE OF WORK

4.1 Solar PV Technology Installation

4.1.1. Pre-Installation Activities

4.1.1.1. Initial Coordination with the target GEs as determined by the EUMB;

4.1.1.2. Conduct structural integrity and site assessment of rooftop/ ground installations for designing the suitable modules;

4.1.1.3. Present the proposed technical specifications of the Solar PV to EUMB for approval;

4.1.1.4. Provide an assessment report of the potential savings and benefits on a per-site basis and perform necessary analysis and estimate of annual power generation; 4.1.1.5. Conduct of Solar PV Technology Orientation/Workshop on Maintenance , Replacement, and disposal; 4.1.1.6. Coordinate signing of relevant government requirements/contracts such as memoranda of understanding/agreement and/or deed of donation; 4.1.1.7. Provide the relevant manual/document for the operation/maintenance of the solar PV installation and its relevant software; 4.1.1.8. Ensure proper compliance of beneficiaries for applicable net-metering agreements and other government requirements; 4.1.1.9. Request for pre-installation documents; 4.1.1.10. Scheduling of the Solar PV technology Installation. 4.1.2. Delivery and Installation of Solar PV technology to qualified government buildings, offices, and/or facilities 4.1.1.1 Install Solar PV technology with a capacity of 30-40kwp; 4.1.1.2 Ensure that the Solar PV installed conform with the technical specifications approved by the DOE *(Please see attached detailed specs)*. 4.1.1.3 Ensure that all installations function correctly in accordance with specified designs. The contractor shall be responsible for any systems that do not function correctly as a result of improper design and/or improper workmanship; 4.1.1.4 Apply the approved DOE label sticker/tag on the installed solar PV. 4.1.3 Testing and commissioning (including warranty period) 4.1.3.1 Ensure 24/7 monitoring and regular maintenance for the first 7 working days after completion; 4.1.3.2 Assume liability for the manufacturer warranties of the respective system components/parts which shall have no less than a minimum warranty period of 5 years for each component except for the solar panels which shall have a minimum warranty period of 10 years.	

4.2 Capacity Building for Personnel in Charge

4.2.1 Conduct training for personnel in charge of maintenance of buildings and facilities on proper use and maintenance of the technology to ensure optimum efficiency;
4.2.2 Provide training to the assigned group of EUMB concerning the project process such as but not limited to the proper use and maintenance of technology to ensure optimum efficiency and shall not withhold any information, tasks, and steps;
4.2.3 Handover of operations manual to personnel in charge;
4.2.4 Establish coordination mechanisms (i.e. focal persons) to facilitate on-site and remote assistance in the operation and troubleshooting of the technology after installation and testing period.

4.3. Other functions to ensure continuity and implementation of the Project

4.3.1. Assign a project manager and staff to handle reportorial requirements, monitoring, and presentations of project performance regarding the project as requested by EUMB;
4.3.2. Submit all reports, models and software used in assessing facilities and operating the solar PV installations to EUMB;
4.3.3. Arrange the conduct of joint site assessment, ceremonial switch-on of the project, turn-over of installations to beneficiaries and other activities.

5. POTENTIAL PROJECT SITES

Area	No. of Target
Luzon	2
Visayas	2
Mindanao	2
Total	**6**

6. EXPECTED OUTPUT OR DELIVERABLES

	DELIVERABLES	TARGET SCHEDULE
A.	Approved and accepted Inception Report	20 Calendar days after receipt of Notice to Proceed
B.	Site Assessment Report of 6 Projects and Approved Technical Specifications	60 Calendar days after receipt of Notice to Proceed 60

C.	Delivery, Installation, Testing and Commissioning of 6 Solar Rooftop Projects	150 Calendar days after receipt of Notice to Proceed
D.	Approved and Accepted Completion Report with Final as Built Design Documentation	180 Calendar days

7. PROJECT COMPLETION

The project should be completed in **six (6) months** upon receipt of the Notice of Proceed.

No.	Activities	Duration in Calendar Days	M1	M2	M3	M4	M5	M6
1	Coordination/ Meetings/ Conduct of Inception Workshop	10						
2	Site Assessment of 6 Projects	20						
3	Preparation and Submission of Site Assessment Report (6) and Technical Specifications of the Solar Rooftop Projects	30						
4	Delivery, installation, testing and commisioning of Rooftop Solar Projects	90						
5	Preparation and submission of completion report for 6 projects	25						
6	Issuance of the Certificate of Completion and Acceptance	5						

8. APPROVED BUDGET FOR THE CONTRACT

The approved budget cost (ABC) for the Demonstration Project is **Thirty Million Pesos (PhP 30,000,000.00)** under LFP-NEECP.

9. SCHEDULE OF PAYMENT

	DELIVERABLES	Requirement	Percentage of Total Contract Amount	Delivery Schedule
A.	Approved and accepted Inception Report	Billing/invoice with End-user acceptance Certificate	10%	20 Calendar days after receipt of Notice to Proceed
B.	Site Assessment Report for 6		30%	60 Calendar days after

	Projects and Approved Technical Specifications			receipt of Notice to Proceed 60
C.	Delivery, Installation, Testing and Commissioning of 6 Solar Rooftop Projects		40%	150 Calendar days after receipt of Notice to Proceed
D.	Approved and Accepted Completion Report with Final as Built Design Documentation		20%	180 Calendar days
10% retention shall be deducted for every progress billing *5% of the total contract cost shall be retain as warranty which will released upon completion of the warranty period.*				

For every deliverable, there should be an Approval and Certificate of Acceptance

10. Warranty for Goods and workmanship:

- For major components: Standard supplier's warranty and as indicted in Annex A
- For other parts and workmanship two years with free labor parts and supplies.

11. TERMS

a. Prices quoted shall be firm and irrevocable and not subject to any change whatsoever, even due to increase in cost of components and fluctuations in foreign exchange rates and excise duties.
b. Progress payments will be released only upon the issuance of the Certificate of Acceptance from the end-user.
c. In reference to GPPB Resolution No. 30-2017, the service provider shall provide performance security to the DOE.

12. PARTICIPATION OF WOMEN, SENIOR CITIZENS, AND PERSONS WITH DISABILITIES (PWDs)

The participation of women, senior citizens, and PWDs in every aspect of this research study implementation is encouraged. The purpose of gender and development is to ensure that both men and women including senior citizens and PWDs can participate in, and benefit from, the development in a way that is equitable. Likewise, the gender and development approach focus on the socially constructed differences between men and women, the need to challenge existing gender roles and relations, and the creation and effects of class differences on development.

Annexes

I. GENERAL SPECIFICATIONS

1.	**General Description of the Project**	The Department of Energy (DOE) through the Energy Utilization Management Bureau (EUMB) aims to conduct a study on the viability and effectiveness of Solar PV technology as one among EE&C Solution for Government Buildings/Offices under the **Project for the Implementation of Rooftop Solar PV System with Energy Storage** The contract will involve the **Design and Build Scheme** for the installation of an alternative hybrid solar power supply for the six (6) government buildings as identified by the EUMB. The DOE-EUMB hereby intends to engage the services of a qualified and experienced local Designer-Builder Firm, through Competitive Public Bidding, to provide the required services for the needs of the six (6) government buildings as identified by the EUMB. The plans and designs shall be in accordance with the existing laws and standards, and as conceptualized by the Designer-Builder, and approved by DOE-EUMB and the beneficiaries.
2.	**Approved Budget for the Contract (ABC)**	₱ 30,000,000.00
3.	**Scope of Works**	
	3.1 Information to be Verified	The Designer-Builder shall be deemed to have visited the DOE-EUMB and have a clear understanding of the requirements for the scope of works and the Technical Specifications prior to the bid tender. A Certification from the DOE-EUMB shall be issued upon the conduct of ocular inspection by the Designer-Builder.
	3.2 Information Security and Non-Disclosure Agreement	The Designer-Builder must agree and adhere to all DOE-EUMB information security protocols, regulations, and policies at all times while inside the DOE-EUMB premises, and must sign, including all its personnel assigned to the job site, the confidentiality and non-disclosure agreement with the DOE-EUMB. DOE Security personnel shall be mobilized to ensure security of the immediate areas of the job site and to ensure that personnel and workers of the Designer- Builder are not loitering in any secured premises of the DOE Building.

		3.3 Scope of Works	The Designer-Builder shall design, supply, install, and commission the **"stand-alone/off-line (inaccessible through the internet)"** Facility, including all necessary works and functions to complete the project. The said Facility includes the following, but not limited to: (1) Grid-connected Facility a) PV Array i. PV Modules ii. Junction Boxes iii. Connection Boxes iv. Inverters b) Power Conditioner with closed loop/stand-alone data gathering, monitoring, processing, and transmission capability c) Control System: Energy/Power Management System d) Support Structures for PV Modules to achieve optimum tilt angle e) Metal-enclosed Switchgear and Power Cables, if not integrated i. Metal-enclosed Switchgear ii. Power Cables f) Low Voltage Distribution Board, if not integrated g) Power Transformer, if not integrated h) Control and Low Voltage Cables i) Installation Work a. Building and Civil Work b. Electrical Work j) Other necessary equipment, apparatus, appurtenances, and materials needed to complete the project. (2) Operation Training Work The Designer-Builder shall conduct the training for the beneficiaries and other concerned parties for the operation, maintenance, and troubleshooting of the Facility. (3) Building Permit Shall apply, in coordination with DOE, for the necessary Building Permits. Generally, all Local Government Units (LGUs) include the application for electrical permits to the procedure for application in accordance with the National Building Code of the Philippines. The processing of building permits falls under the overall control and supervision of the Office of the Building Official (OBO) of the LGU.

		(4) PV-Net Metering Application and Grid Interconnection The PV-Net Metering application and grid interconnection shall be required between the beneficiaries and the electric cooperative, which shall be processed by the Designer-Builder on behalf of beneficiaries, for the Facility to be connected with the existing 34.5 kV distribution line or 240 V service line. Detailed interfaces between the Facility and the existing distribution lines shall be based on the results of the DIS and the DAS. The DU's interface requirements shall be included in the Scope of Works. The cost of the DU's interface shall be paid by the Designer-Builder to the DU. As a Qualified End-user or Entity with Self-Generation Facilities, the Designer-Builder shall secure a Certificate of Compliance (COC) from the Energy Regulatory Commission before the Commercial Operation of the Solar PV Net Metering Facility. The application for COC shall be in the name of the beneficiary as owner of the Solar PV Net-metering Facility used in the Generation of Electricity. The Designer-Builder shall undertake the detailed engineering design (DED) of the Facility, including all items to be required for the interphase of the Facility to the beneficiary Building Management System (BMS). Although not expressly described in the General Specifications and Technical Specifications, the interphase is necessary to ensure trouble-free operation, ease in the maintenance of the Facility, and to avoid dangerous or faulty operations. The Facility shall be installed with all the equipment completely connected and interconnected with operating switches, interlocks, signalization, alarms, and metering instruments. Should there be any ambiguity or conflict between the Terms of Reference and existing laws and regulations of the country, such as the Philippine Electrical Code, Philippine Distribution Code, National Building Code of the Philippines, National Structural Code of the Philippines, DU's Standards and Regulations for Grid-Interconnection and net metering, and related issuances, the latter shall prevail and govern.

4.	General Information on the Site	
	4.1 Climate and Environmental Conditions	Unless otherwise specified, the Facility shall be suitable for and where necessary specifically treated and protected for delivery, storage, and operations under tropical climatic conditions of high temperature, high humidity, heavy rainfall, mildew, white ants, and fungus-conducive environment, such as but not limited to the following: (1) Ambient Air Temperature a) Annual average ambient air temperature (2021) - Annual maximum temperature : 34°C - Annual Average temperature : 28°C - Annual minimum temperature : 21°C b) Maximum ambient air temperature for design : 40°C. (2) Latitude and Longitude - Latitude : 14° 35' 46.76"N - Longitude : 120° 59' 30.39"E (3) Altitude (Height of the beneficiaries Building) : 52.78m (4) Relative Humidity a) Annual average maximum relative humidity (2021) : 75% b) Maximum relative humidity for design : 95% (5) Rainfall (maximum monthly average) (2021) : 163mm (6) Basic Wind Velocity for Design : 230km/hr (7) Seismic Zone Factor (Z) : 0.4 (National Structural Code of the Philippines)
	4.2 Existing Electrical System	(1) Medium System Voltage : 34.5 kV (2) Low Voltage System Voltage : 440/240V (3) System Frequency : 60 Hz (4) Phase : 3-phase
	4.3 Working Area (if necessary)	(1) The Designer-Builder shall be responsible for its working area and accommodation for its employees at its own expense, including all necessary preparatory work, maintenance, security, and safety. (2) The Designer-Builder shall, at its own expense, provide itself with all necessary facilities for the efficient use of the areas designated by the beneficiaries (3) The Designer-Builder shall be, at its own expense, responsible for maintenance and security of its work areas until the completion of the Facility and restore to its original state the same after completion of the Facility.

		4.4 Electricity and Water Supply and Telephone Connection	The beneficiaries may grant the Designer-Builder permission to use the existing electric and water supply facilities, and telephone for the installation of the Facility. (1) The Designer-Builder shall, at its own expense, provide its own internet connection, and all related equipment and materials, which are necessary to perform its task. (2) The Designer-Builder shall pay for the electricity, water, and telephone it consumed relative to the installation and commissioning of the Facility or any other purpose to beneficiaries at the actual rate. (3) In any case, beneficiaries will not be liable for any failure in the provision of electricity, water supply, and telephone to the Designer-Builder for the said purpose. The Designer-Builder, therefore, shall not be entitled to claim against loss of time or any damage against OP-PMS. (4) The Designer-Builder shall be responsible for maintenance and security until the completion of the Facility and removal of the electricity, water supply, telephone, and internet connection which it has brought in.
5.		**General Provisions for the Installation of the Facility**	The Designer-Builder shall be responsible for any injury to persons and damage to property of the beneficiaries caused by the Designer- Builder or by its workers and shall be liable for any claims of the beneficiaries on account of such injury and/or damage. The Designer-Builder shall likewise take necessary precaution to protect the property of the DOE against rain or other inclemency of the weather or theft due to the performance of its work. The Designer- Builder shall be liable for any such damage or loss. The Designer-Builder shall check the availability of sufficient space for the installation of the Facility before the commencement of the works. The Designer-Builder shall have exclusive occupancy of the affected locations at the Facility site, as designated by the beneficiaries. The Designer-Builder shall also coordinate and cooperate with beneficiaries for the smooth execution and progress of the installation of the Facility as a whole. The Designer-Builder shall coordinate with the beneficiaries on the installation work such as foundation work, cable routes, methods of the conduit pipe and steel cable tray installations, and shall obtain the consent of beneficiaries before commencement of each activity of the installation work. During the installation work, the Designer-Builder shall undertake the following: 1. Provide representative(s) to supervise and monitor the progress of the works. 2. Provide its own security in its working and storage areas at and around the Facility site to protect its personnel (including personnel with any contract relations) and the Facility. 3. Provide sufficient safety measures such as temporary partitions, temporary guardrails, and related installations.

6.	**Standards**	The design, engineering, materials, manufacture, installation, and test of the Facility shall comply with the latest revision or edition of the following standards and/or the regulations: • IEC International Electro-Technical Commission; • ISO International Standards Organization; • Philippine Electrical Code; • Philippine Distribution Code; • Philippine Distribution Services and Open Access Rules; • National Building Code of the Philippines; • National Structural Code of the Philippines; • DU's Standards and Regulations for Grid-interconnection; • Energy Regulation Commission's Rules and Regulations for Net-metering Scheme; • Bureau of Philippine Standards; • Distribution Service Open Access Rule; and • Other standards equivalent to the above and/or recognized international standards, subject to the DOE's approval.

7. Environmental Consideration, Health and Safety

7.1 Environmental Consideration

(1) Basic Rules for Environmental Consideration

1) The Designer-Builder shall comply with the Rules and Regulations stipulated in the laws of the Philippines.

2) Environmental pollution

In principle, the Designer-Builder shall comply with the regulatory standards, such as emission standards of the Philippines under the Clean Air Act and wastewater effusion under the Clean Water Act.

(2) Ambient Noise

Noise abatement measures shall achieve either the following levels or the maximum increase in background levels of 3dB. Measurements shall be taken at noise receptors located outside the Facility site property boundary.

	Maximum Allowable Level (hourly), in dB (A)	
Receptor	Daytime 07:00 – 22:00	Nighttime 22:00 – 07:00
Residential	50	35
Commercial	65	50
Industrial	70	60

3) Solid and Liquid Wastes

a) Solid and liquid wastes shall be recycled or reclaimed whenever possible.

b) If recycling or reclaim is neither possible nor practical, wastes shall be disposed of in the environmentally acceptable manner and in compliance with the related local laws and regulations.

c) All hazardous materials, process residues, solvents, oils, and sludge from raw water, process wastewater and domestic sewage treatment systems shall be disposed of in a safe manner to prevent the contamination of soil, groundwater, and surface waters.

(4) Other General Environmental Requirements

a) Transformers or equipment containing polychlorinated biphenyls (PCBs), or PCB-contaminated oil shall not be installed or allowed.

b) Processes, equipment, and central cooling systems involving the use or potential release to the environment of chlorofluorocarbons (CFCs), including halogen, shall not be installed, or allowed.

c) Storage and liquid impoundment areas for fuels, raw and in-process materials, solvents, wastes during the installation of the Facility shall be designed with secondary containment (e.g., dikes, berms) to prevent spills and the contamination of soil, groundwater, and surface waters.

(5) Workplace Air Quality

a) Periodic monitoring of workplace air quality shall be conducted for air contamination relevant to Designer-Builder's tasks.

b) Ventilation, air contamination control equipment, protective respiratory equipment, and air quality monitoring equipment shall be well maintained.

c) In any case, protective respiratory equipment shall be imposed in the area when the exposure levels for welding fumes, solvents, and other materials present in the workplace exceed local or internationally accepted standards.

(6) Workplace Noise

a) Feasible administrative and engineering control, including sound-insulated equipment and control rooms, shall be employed to reduce the average noise level in normal work areas.

b) Equipment shall be well maintained to minimize noise levels.

c) The Designer-Builder shall use hearing protection when exposed to noise levels above 85dB.

(7) Other Physical Agents

a) The equipment shall be designed and maintained for accepted safe working levels of physical factors that may have adverse health effects (e.g., ionizing, and non- ionizing radiation, magnetic fields).

b) Work areas shall be monitored regularly for radiation and field levels, and equipment integrity (e.g., protective shields, lockouts).

(8) Electrocution

a) Strict procedures for de-energizing and checking of electrical equipment shall be in place before any electrical work or maintenance work is conducted.

b) In cases where electrical work or maintenance work is performed on an energized equipment, a strict safety procedure shall be in place and the work shall be performed under the constant supervision.

c) A safety personnel shall be assigned to undertake revival techniques in case of worker electrocution.

		(9) Work in Confined Spaces a) Prior to entry and occupancy, all confined spaces (e.g., tanks, sumps, vessels, sewers, excavations) shall be tested for the presence of toxic, flammable, and explosive gases or vapors, and for the lack of oxygen. b) Adequate ventilation shall be provided before entry and during occupancy of these spaces c) Personnel shall use air-supplied respirators when working in confined spaces, which may become contaminated or deficient in oxygen during the period of occupancy. d) Observers/assistants shall be stationed outside of confined spaces to provide emergency assistance, if necessary, to personnel working inside these areas. (10) Hazardous Material Handling and Storage a) All hazardous (reactive, flammable, radioactive, corrosive, and toxic) materials shall be stored in clearly labeled containers or vessels. b) Storage and handling of hazardous materials shall be in accordance with the local regulations and appropriate to their hazard characteristics. c) Fire prevention systems and secondary containment shall be provided for storage facilities, where necessary or required by regulation, to prevent fires or the release of hazardous materials to the environment.
	7.2 General Health	(1) Personnel and workers of the Designer-Builder shall adhere to beneficiaries' safety protocols, e.g., undergo temperature checks and antigen testing prior to entry to the building. (2) Sanitary facilities shall be well equipped with supplies (e.g., protective creams) and personnel shall be encouraged to wash frequently, particularly those exposed to dust, chemicals, or pathogens. (3) Ventilation systems shall be provided to control the temperature and humidity of the work areas. (4) Personnel required working in the areas of high temperature and/or high humidity shall be allowed to take frequent breaks away from these areas. (5) Pre-employment and periodic medical examinations and specific surveillance plan shall be instituted for personnel potentially exposed to toxic or radioactive substances.

	7.3 General Safety	In addition to Clause 4. "General Provisions for the Installation Work", the Designer-Builder shall hire and deploy a Construction Occupational Safety and Health (COSH)-certified Safety Officer to implement and monitor the following safety procedures, among others: (1) Shield guards or guard railings shall be installed at all belts, pulleys, gears, and other moving parts. (2) Elevated platforms and walkways, and stairways and ramps shall be equipped with handrails, toe boards, and non-slip surfaces. (3) Electrical equipment shall be grounded, well insulated, and conform to the applicable codes. (4) Personnel shall use special safety footwear, masks, and clothing for works in the areas with high dust levels or contaminated with hazardous materials. 5) Personnel involved in climbing roofs, walls, and similar structures shall be provided with full-body harness, non- slip/safety footwear, gloves, helmets, face protection, leggings and other necessary protective equipment. (6) Appropriate eye protection shall be worn by personnel when in areas where there is a risk of flying chips, sparks, intense light, and similar situations. (7) A safety and evacuation plan shall be established for the construction and operation and maintenance works. (6) A fire prevention and fire safety plan shall be implemented during the construction, operation, and maintenance of the Facility.
	7.4 Action Plan of Environmental Consideration, Health, and Safety	(1) The action plans for environmental consideration, health, and safety shall be submitted for approval. (2) The records of environmental consideration, health, and safety shall be submitted with the monthly status report.

8.	**Preparation for Shipping and Storage**	The Designer-Builder shall ensure that the Facility components are protected from any damage during shipment and subsequent storage. The outside of all containers, cases, etc. shall be clearly marked with the total weight, point of maximum weight, and correct position for the attachment of lifting hooks and cables and shall bear identification marks relating to the appropriate dispatch documents. Where appropriate, the cases or boxes shall bear special instruction such as "top", “handle with care", and "keep dry". The storage will be in an environment similar to the installed location, i.e., indoor equipment will be stored indoors (without heating and ventilation), and outdoor equipment will be stored outdoors. Where required to protect against condensation and humidity, a desiccant shall be provided and its presence, with the need of periodic removal and dry out, shall be so marked. When electric space heaters are provided for that purpose, these should be wired to the outside of the equipment so that energizing immediately upon receipt is possible without disassembly of crates, etc. This also requires that no combustible materials be left in the inside of the equipment. Any Facility components and materials, which may be openly stored for several weeks at the beneficiaries building, shall be adequately packed and protected from the elements and weather. The Designer-Builder shall provide storage and handling instructions, including descriptions for periodic inspection and/or storage maintenance, to ascertain that no deterioration will occur during storage. One set of these instructions shall be fastened securely to the outside of the shipping container. All the Facility components shall be shipped from the factory completely assembled as far as practicable, subject to the limitations of length, height, depth, and weight, among others.
9.	**Transportation**	The responsibility shall lie on the Designer-Builder whether the dimensions of its supplied equipment and materials in crate or in the box will be appropriate for loading, unloading, and transporting to the Facility site. The Designer-Builder shall at its own expense, conduct an ocular route survey of all roads, bridges, and overpasses, from the port of entry to the Facility site and examine for itself the conditions of all roads and bridges. The Designer-Builder shall check the capacity and availability of loading and unloading facilities, which will be utilized in connection with its transport operation, as well as its characteristics, taking appropriate measures to avoid damaging the same. All costs related to the reinforcement of roads, bridges, and the like, if any, shall be borne by the Designer-Builder. The Designer-Builder shall coordinate its own transport plan and shall advise proper authorities for the transit of the heaviest equipment to be transported and shall comply with the instructions given by the authorities. All damages caused to public roads, streets, or public structures shall be compensated by the Designer-Builder at its own expense.

10.	**Coordination**	
	10.1 Coordination of the Works	The Designer-Builder shall be responsible for the prompt and punctual delivery and smooth installation of the project components to ensure satisfactory completion of the Facility within the scheduled time. The Designer-Builder shall also coordinate closely with concerned work groups in relation to the work schedules and safety precautions for efficient and safe execution of the installation of the Facility.
11.	**Work Plan and Progress**	
	11.1 Work Plan	The Designer-Builder shall submit for approval, the work plan within five (5) days after the issuance of the Notice of Award (NOA). Among others, it shall include overall and site organizations, work criteria, temporary facilities, installation methods, list of equipment to be used, and outline of temporary office. Three (3) copies and electronic file (PDF format) of the work plan shall be submitted to the DOE.
	11.2 Detailed Time Schedule	The form of the detailed time schedule to be prepared by the Designer-Builder shall be in the form of CPM, PERT network, S- Curve, or other internationally used process. The detailed time schedule shall be submitted for the approval within five (5) days after the issuance of the NOA. Three (3) copies and electronic file (PDF Format) of the detailed time schedule shall be submitted to the DOE. (1) Supporting documents, such as general descriptions of the methods of working, which the Designer-Builder intends to adopt during the execution and details showing the Designer- Builder's reasonable estimate of the number of each class of personnel and of each type of equipment shall be incorporated with the detailed time schedule. (2) The detailed time schedule shall show the commencement and completion dates for at least the following activities and "milestones". • Placement of orders for materials and major equipment items; • Delivery of materials; • Civil Work; • Electrical Work; • Site training; • Inspections; • Pre-commissioning tests; • Commissioning tests; and • Start of operation. (3) The detailed time schedule shall meet the completion dates of the various phases of the Facility works and shall clearly demonstrate the manner in which the various phases of the same are completed. (4) All activities required for execution of the Facility works shall be carried out in accordance with the sequences and timelines and completion dates shown on the detailed time schedule. (5) As the need arises, the Designer-Builder shall update and revise the detailed time schedule, subject to the approval.

	11.3 Monthly Report	A monthly report shall be submitted by the Designer-Builder not later than the seventh day of the following month. The monthly reports shall include but not limited to the following: (1) Comparative accomplishment rate for each activity of previous and current month; (2) Issues and concerns and identified options, if any; (3) Photographs (date and title of the photo taken) and detailed descriptions of progress, including each stage of design, procurement, manufacture, delivery to the Facility site, construction, installation, testing, pre-commissioning and commissioning, and interim inspection; (4) A tabulation of manufacturers, vendors, or subcontractor used by the Designer-Builder for each major equipment and works; (5) A tabulation of site supervisory staffs and other personnel, the Designer-Builder's equipment in the Facility site; (6) Weather and climatologic data (for installation work); and (7) Records of near misses, incident, accident, and related safety and health issues. Three (3) copies and electronic file (PDF Format) of the monthly report shall be submitted to the DOE.
12.	**Technical Documents to be Prepared by the Designer-Builder**	

	12.1 General	The winning Designer-Builder shall understand that the issuance of NOA does not mean the approval of drawings and documents. (1) Designer-Builder's Responsibility 1) The Designer-Builder shall prepare necessary technical documents for the Facility and the installation work including drawings, diagrams, design calculations, specifications, and instruction manuals, which show full details of the Facility to be used as well as all arrangement and civil and building works/drawings related to the Facility works. 2) Undertake DEDs using the given data such as beneficiaries Roofing Detail and initial schematic design or design concept provided, which conforms with the Minimum Performance Specifications and Standards (MPSS). 3) If the Designer-Builder fails to submit such documents in time, the resulting additional costs and/or delays shall be the Designer-Builder's responsibility. 4) The DOE- beneficiaries reserves the right to request the Designer-Builder additional documents as may be required for proper understanding. 5) Approval of the documents shall in no way relieve the Designer-Builder from any obligation to satisfy the requirements of the Technical Specifications or any responsibility of making modifications in its documents. 6) All costs and expenses for preparation and submission of the documents shall be borne by the Designer-Builder including revision and resubmission of the same (2) Right to Copy and Reproduce Documents During and after the cooperation period, the DOE and beneficiaries shall have the right without further authorization from the Designer-Builder to use, copy, reproduce, and forward to a third party the Designer-Builder's documents if in case it is reasonably required for completing, operating, maintaining, adjusting, and repairing the Facility. Neither statements nor stamps shall appear in the documents that may bind or seem to limit the right of the DOE with respect to this sub-clause. The Designer-Builder shall delete or add a note waiving the restriction imposed by all such marking appearing on drawings and other documents, and witness such deletions or waivers with its signature.

		3) Sizes and Identification of Documents 1) The size of drawings shall be as follows: A1 - 594 mm x 841 mm A2 - 420 mm x 594 mm A3 - 297 mm x 420 mm A4 - 210 mm x 297 mm Design calculations, specifications, lists, manuals, and other documents shall preferably be prepared in A4 size. 2) All drawings shall have a uniform title block as agreed by the beneficiaries at the bottom right-hand corner, irrespective of the origin of the drawings. The title block shall show the drawing title, drawing number, revision (number, description, and date of revision), date prepared, name of the Designer-Builder and/or manufacturer, and the signature of the Designer-Builder's representative. Sufficient blank space above the title block of each drawing shall be provided for the beneficiaries' comments
	12.2 Master List of Drawings, Documents, and Energy Yield Estimate	Within five (5) days upon the issuance of NOA, the Designer-Builder shall submit a master list of drawings, documents, and energy yield estimate using industry accepted solar PV assessment software (i.e., PVsyst) for approval of the DOE and beneficiaries, clearly indicating title (to always contain the Project name), numbering method, size and quantity of drawings, dimensions and form of title block, among others.
	12.3 Specifications	The Designer-Builder shall prepare the specifications and drawings for the Facility. The specifications and drawings shall describe the type, ratings, design, construction, materials, dimensions, corrosion protection and other related information of the Facility.

	12.4 Drawings and Documents	(1) Arrangement and Layout Drawings The arrangement drawings of the Project, which clearly indicate the location of the Facility and auxiliaries including principal dimensions, clearance, heights and other details (power cabling, etc.), shall be provided. The drawings for the Project shall show full details of the foundation, architectural, structural, building, mechanical and electrical works. (2) Foundation Drawings The foundation drawings shall show the arrangement of openings, box-outs, embedded parts, anchor bolts for the foundation, if necessary. If conduits or pipes are to be installed in the foundations, the relevant information such as diameter, length, and purpose shall be indicated in the drawings as well. (3) Drawings of Civil and Electrical Works The drawings of the civil and electrical works shall show all detailed information related to installation of the Facility. (4) Electrical Diagrams For electrical diagrams, symbols shall comply with IEC 60617. The electrical diagrams shall be simplified to include but not limited to the PV Modules, junction boxes, connection boxes, power conditioners (controller, insulation transformer and inverter, etc.), low voltage distribution board, switchgear, protective relay devices and their interconnections. A single line diagram shall represent all circuits. It shall contain all required technical information of the represented Facility components such as type, major ratings, quantity, among others.
	12.5 Calculation Sheets	The Designer-Builder shall submit the design calculation sheets with all formulas, standards, test results, basic assumptions and design criteria used for the calculations, including technical simulation test results.
	12.6 Manuals	The manuals shall be concise and complete with infographics and/or graphically prepared and shall be written in the English language. The Designer-Builder shall submit to the DOE and beneficiaries' approval the manuals concerning the operation, maintenance and troubleshooting of the facility with special references to any recently developed features. Operation, Maintenance and Troubleshooting Manual (5) The manual shall describe in details the recommended periodical inspections and maintenance of the Facility. It shall also include easily readable block diagrams of the Facility. The manual shall also include a complete set of all related drawings, which have been approved by the DOE and beneficiaries, and parts list for each component of the Facility, among others. The drawings shall be reduced in size to A3. The parts list shall include manufacturer's code, serial numbers and ordering instructions and shall be as detailed as possible.

	12.7 Approval of Documents	Prior to the commencement of the fabrication and/or the installation works at the Facility site, the Designer-Builder shall submit the required technical documents for the DOE's approval.
	12.8 Approved Documents	All approved documents shall be stamped "APPROVED", and a copy shall be returned to the Designer-Builder's perusal. Only approved drawings can be used for installation purposes. It shall be understood that approval by the DOE and beneficiaries of the documents will not relieve the Designer-Builder from any responsibility in connection with the Facility works. If an error is found in the Designer-Builder's drawing during the fabrication/manufacturing process, civil work and/or installation of the Facility, the drawing shall be revised accordingly and re- submitted for the DOE's approval.
	12.9 Reference Drawings and Documents	If additional drawings or documents or information are required for proper understanding, operation, coordination, or other matters, in the opinion of the DOE, the Designer-Builder shall submit such reference documents to the DOE without extra charge. Should any modification be required on such reference documents, the DOE may instruct the Designer-Builder to do so, and the revised documents shall be submitted for the DOE's approval.
	12.10 As-Built Drawings	After all components of the Facility have been completed, the Designer-Builder shall prepare as-built drawings based on the approved drawings for the Facility. The as-built drawings shall show all changes and modifications, which have been made during the fabrication/manufacture and installations of the Facility component. All the as-built drawings shall be reduced and bound properly into books of A3 size and format. Such bound books of the as-built drawings shall be submitted to the DOE within thirty (30) days after completion of the Facility. The Designer-Builder shall submit the abovementioned documents to the DOE. Additional copies of particular drawings are to be submitted at the Designer-Builder's expense, if necessary.
	12.11 Photographs	The Designer-Builder shall keep records of digital photographs of the chronological progress of the installation of the Facility. Upon completion, the Designer-Builder shall submit three (3) copies of the same to the DOE.

	12.12 Required Number of Documents	In summary, the documents to be submitted to the DOE and beneficiaries shall be as follows: (1) Design and Installation Works Complete sets of the documents 1) Drawings and Documents for approval as stipulated in Sub- Clauses 12.2 to 12.6: - three (3) sets hard copy and one (1) set of electronic files (PDF and auto-cad). 2) Approved Drawings and Documents as stipulated in Sub-Clause 12.8 "Approved Documents for the Works": - three (3) sets hard copy and one (1) set of electronic files (PDF and auto-cad)). 3) Reference Drawings and Documents as stipulated in Sub-Clause 12.9 "Reference Drawings and Documents": - three (3) sets hard copy and one (1) set of electronic files (PDF and auto-cad). (2) After Completion of the Works 1) Complete sets of bound print of the as-built drawings as stipulated in Sub-Clause 12.10 "As-Built Drawings": - three (3) sets hard copy and one (1) set of electronic files (PDF and auto-cad). 2) Photographs as stipulated in Sub-Clause 12.11 "Photographs": - three (3) sets hard copy and one (1) set of electronic files (PDF and auto-cad).
13.	**Tests and Inspections**	

	13.1 Tests of the Facility	(1) General Tests of the Facility shall be carried out by the Designer-Builder in the presence of the DOE and beneficiaries. (2) Commissioning Tests After the Facility has been fully assembled and installed, the Designer-Builder shall carry out the commissioning tests in the presence of the DOE and beneficiaries to ascertain its compliance with the TOR. (3) Test Personnel and Equipment The Designer-Builder shall provide all manpower, tools and equipment and materials required to perform the abovementioned tests. Prior to the commencement of the tests, the Designer-Builder shall ensure that each tool and equipment are properly calibrated and shall submit a certificate that calibration check has already been made by an authorized laboratory or inspector and such calibration will not be affected by transportation or weather condition. The expenses associated with the test shall be borne by the Designer-Builder. (4) Test Reports All test and inspection records shall be countersigned by representatives of the DOE and beneficiaries. Two (2) hard copies of all the test records shall be submitted to the DOE and beneficiaries within seven (7) days after completion of each test. (5) Rectification of Deficiencies All deficiencies found during the tests shall be rectified by the Designer-Builder at its own expense. Rectified components shall be subject to re-testing. All costs and expenses for the re-testing shall be borne by the Designer-Builder.
	13.2 Acceptance Inspection	After the successful completion of the abovementioned tests, the Designer-Builder shall immediately start the operation of the Facility.
	13.3 Performance Inspection	The Designer-Builder shall carry out the performance inspection at the end of the two-year post construction Warranty Period.
	13.4 Monitoring	The Designer-Builder shall install the closed-loop, offline, and real- time monitoring equipment for the solar PV facilities to be integrated in the existing BMS of the beneficiaries. At the minimum, the data to be monitored shall include current Power Generation, meter readings at the beginning and end of the month, total electricity generated for the month, amount equivalent to electricity generated for the month multiplied with the agreed fixed rate per kWh and cumulative electricity generated since the beginning of the operation, and other power management parameters.

14.	**Spare Parts and Consumables**	The Designer-Builder shall ensure the regular supply of spare parts and consumables and shall cover the cost of the same for the sustainable operation of the Facility as part of its operation and maintenance responsibility during the two-year cooperation and post-construction warranty period.
15.	**Trainings**	(1) The Designer-Builder shall conduct operation, maintenance, troubleshooting and management trainings during and/or after the commissioning stage of the Facility. (2) The Designer-Builder shall give notice to the DOE and beneficiaries at least ten (10) working days prior to the commencement date of the trainings. (3) The Trainings shall include, but not limited to lectures and hands-on on-site strategy covering the methods of operation, maintenance, basic trouble shooting and management of the Facility (4) The operation and maintenance manuals shall be prepared as stipulated in Sub-Clause 12.6. (5) All costs and expenses for the Trainings, except those incurred by the DOE and beneficiaries' personnel, which include, but not limited to their own transportation and accommodation expenses, shall be borne by the Designer-Builder. (6) The Trainings shall be conducted in bi-lingual (i.e., Filipino and English languages). (7) Completion Certificate A corresponding Certificate of Completion shall be issued to the Participants of the Trainings.
16.	**Temporary Facilities**	
	16.1 General	On completion of the Facility, all temporary facilities constructed by the Designer-Builder, unless otherwise specified or directed by the DOE or beneficiaries, shall be removed from the Facility site. The Designer-Builder shall restore the site of the temporary facilities to its original state.
17.	**Site Supervision**	The Designer-Builder shall employ minimum of two (2) competent representatives to supervise the Facility works throughout the installation, pre-commissioning, and commissioning.

II. TECHNICAL SPECIFICATIONS

1.	PROCUREMENT OF PRODUCTS	
	1.1 PV Modules	
	1.1.1 PV Modules	The PV Modules shall be of the monocrystalline high transmission tempered anti-reflective material with at least 22.6% panel efficiency. The criteria of selection will be based on the highest DC output for PV modules, which are available in the local and international market. A copy of the type of qualification certificate of the PV Module issued by the internationally authorized organization in accordance with the abovementioned standard shall be submitted to the DOE. The *PV Module output power and product warranty* shall be included in the proposal. It shall be warranted that the output power of the PV Module shall not be less than ninety percent (90%) of the minimum output power of the module during the first ten (10) years of operation and eighty percent (80%) during the following ten (10) years and the manufacturer's warranty shall not be less than twenty (25) years. Each string of the PV Modules shall be connected to a junction box with a dedicated cable. The Designer-Builder shall prepare the detailed plans and methods of connection of cables. The requirements of the cabling work shall be referred to Sub-Clause 3.1.3. "Cabling Work" in this document. The output voltage of each string shall be consistent with the input of the power conditioner. The layout of the PV Modules shall be designed as follows: • The tilting angle of the solar panel should be 11° to 17° and should be facing south for optimal performance. • Shade of the front side sub-arrays/string shall not interfere with the rear side sub-arrays/string between 9:00 am and 3:00 pm. • The layout of the sub-arrays/string shall be determined in consideration of the space for any maintenance and replacement works. The maximum power of the PV Modules for the Facility site shall be as follows: • The installed DC capacity should not be less than 84kWp and not be more than 100kWp. • All the PV modules shall be installed within the allocated area in the beneficiaries building (Rooftop).

	1.1.2 Junction Box	Each sub-arrays/string shall be wired to both positive and negative terminals in a junction box. One junction box shall be provided for one sub-arrays/string. Each junction box shall be furnished with a circuit breaker, an anti-reverse flow diode and surge protective devices for each input. Output terminal of the junction box shall be fitted with a circuit breaker and surge protective devices. The ports for cabling shall be placed in the underside. The surge protective devices shall have the minimum specifications below; Type: Surge arrester Class: Class II Rated voltage: 500VDC or higher Nominal Discharge Current Imax (8/20 micro sec.): 20kA or higher Voltage protection level: 2.5kV or lower The junction box shall be designed as of outside type with the protection level of IP65.
	1.1.3 Connection Box	Each connection box shall be furnished with a circuit breaker for each input. Output terminal of the connection box shall be fitted with a circuit breaker and surge protective devices. The ports for cabling shall be placed in the underside. The surge protective devices shall conform with the specifications below: Type: Surge arrester Class: Class II Rated voltage: 500VDC or higher Nominal Discharge Current Imax (8/20 micro sec.): 20kA or higher Voltage protection level: 2.5kV or lower The connection box shall be designed as of outside type with the protection level of IP65.

	1.1.4 Inverter	The inverter shall have a minimum of 98% efficiency, with at least ten (10) years product warranty, and must comply with the AS4777/ AS3100 / IEC 62109 - 1/2, CE compliance / EN 61000-6-2 / PEC / PDC, and other technical requirements required by the Distribution Utility. A copy of the type qualification certificate of the Inverter issued by the internationally-authorized organization in accordance with the abovementioned standard shall be submitted to the DOE. The inverter shall function as on-grid and off-grid solar inverter. In case of power cut or the grid becomes unstable the inverter shall automatically switch to battery supply and continues to operate independently from the electricity grid. The inverter shall have a DC Switch with a communication port of RS458/Dry Contact. It shall be designed with the protection level of IP65.
	1.1.5 Energy Storage System	The energy storage system shall have a minimum of 98% depth of discharge, with at least ten (10) years warranty, which must be of Li-Ion and Prismatic Cells. The energy storage system should be capable of supplying the reserve energy requirements of the DOE building's 7th and 12th floor and Roof deck for at least one (1) day and shall comply with UL1741, UL 1741 SA, IEEE1547, Rule 21, FCC part 15 class A and other applicable standards. The energy storage system should be fully charged upon delivery. A copy of the type of qualification certificate of the energy storage system issued by the internationally authorized organization in accordance with the abovementioned standard shall be submitted to the DOE.

	1.2 Support Structures for PV Modules	The support structures for the PV Modules shall set up the sub-arrays/strings of the PV Modules arranged in series and in parallel to attain the required input voltage at the junction box. The support structures shall be furnished with fittings for the insolation and the air temperature observation devices, and the junction and the connection boxes to be attached to the support structures. The minimum thickness of main structure members of the support structures shall be six (6) mm. For the fastenings used in the structures, a countermeasure against larceny shall be considered. The support structures shall be designed and constructed in accordance with the National Building Code, the National Structural Code, and the regulations in the Philippines as well as the environment conditions specified in Sub-clause 4.1 “Climate and Environmental Conditions” of the GENERAL SPECIFICATIONS and the Designer-Builder shall submit the results of the design with related drawings and calculations to the DOE for approval.
	1.3 Power Conditioner	
	1.3.1 General	The power conditioner shall be capable to efficiently convert DC power generated by the Facility into AC power and to interconnect it to the grid. It shall have a built-in isolation transformer which electrically isolates the Facility from the grid, with no risk of leakage current, among others, due to switching operations. Its surge protective devices shall be installed at DC and AC circuits. The power conditioner shall have adequate interfaces with the Control System as specified in Sub-clause 3.3 “Control System” under the Document I - GENERAL SPECIFICATIONS.

	1.3.2 Functions	The power conditioner shall have the following functions. (1) Manual Switch-On/Off Individual power conditioner shall be able to be manually switch-on/off to increase or reduce total output power of the Facility. 2) Automatic Switch-On/Off The output voltage (open-circuit voltage) of PV Arrays/Strings shall be monitored and the power conditioner shall be automatically switch-on when the voltage reaches the setting value or higher. The output power of the PV Arrays/Strings during operation shall also be monitored and the power conditioner shall be automatically switch-off when the voltage is less than the setting value for a certain period of time. (3) Synchronization The power conditioner shall synchronize the output voltage and frequency of the inverter with the grid for interconnection when the inverter is switch-on. (4) Maximum Power Point Tracking (MPPT) Control The power conditioner shall be equipped with the maximum power point tracking (MPPT) control function. (5) Voltage Fault Ride-through Capability The power conditioner shall have voltage fault ride- through capability. (6) Automatic Voltage Rise Suppression The power conditioner shall have reactive power control and output power limit function as grid voltage rise suppression measures. (7) Grid Interconnection Protection The following protective relays and functions shall be provided for grid interconnection protection functions. • Over voltage relay (59) • Under voltage relay (27) • Over frequency relay (81H) • Under frequency relay (81L) • 34.5kV side over voltage ground relay (59G) input • Islanding operation detections (Passive and Active types) • Voltage rise suppression function The islanding operation detection (active type) of each power conditioner shall be synchronized in order to keep detection sensitivity of each islanding operation detection (active type).	

8) System Status Indication

The following system statuses shall be indicated.

1) Operation, standby and stop

2) Alarm status (heavy fault and light fault) Heavy fault

- Inverter error
- Temperature rise in panel
- DC overvoltage
- Inverter trip
- DC ground fault (high-resistance grounding)
- Synchronous communication error

Light fault

- AC over voltage
- AC under voltage
- Over frequency
- Under frequency
- Islanding operation active type
- Islanding operation passive type
- Instantaneous AC over voltage
- Instantaneous AC under voltage
- DC under voltage

(9) Measurement System

The following values shall be measured and recorded.

- DC input voltage
- DC input current
- AC output voltage
- Output power

(10) Monitoring and Display

- Local Monitoring

  Local monitoring of at least the following parameters (i.e., Daily Energy Generation, Lifetime Energy Generation and Real-time System AC Power, Irradiance, Temperature) shall be made available at an integrated LCD / LED of the inverter and shall be recorded on an integrated data logging unit and can be downloaded via Ethernet (RS232) connection.

- Remote Monitoring

  For remote monitoring, at least the following parameters (i.e., Daily Energy Generation, Lifetime Energy Generation and Real-time System AC Power, Irradiance, Temperature) shall be securely accessed.

		(11) Surge Protective Device The surge protective devices shall be installed at DC and AC circuits. The Designer-Builder shall propose the best type and rating of the surge protective devices.
	1.4 Switchgear Room	Metal-enclosed switchgear and power transformer shall be installed in one room of the switchgear room, if possible. Therefore, if necessary, the size of the switchgear room for them may be increased by the Designer-Builder based on his design. The switchgear room shall be equipped with appropriate lighting system and outlets for 240Vac power supply and with appropriate ventilations. The switchgear room shall be secured against theft and un-authorized access. The layout of the equipment installed in the switchgear room shall be designed in consideration of its dimensions as well as appropriate space for operation and maintenance. The Designer-Builder shall design the switchgear room and its foundation taking account of 34.5kV power cable connections and the Facility site conditions. Necessary accessories, cables and wiring and installation materials shall be provided.
	1.5 34.5kV Metal-enclosed Switchgear and Power Cable (Optional/ If necessary)	

	1.5.1 34.5kV Metal enclosed Switchgear	(1) Each unit shall be of indoor, air-insulated, single-bus and metal-enclosed type, having front and rear hinged doors. (2) The degree of protection of enclosures shall be IP43. (3) The 34.5kV metal-enclosed switchgear shall be complete with all necessary equipment, devices, apparatus, protection systems including the 34.5kV power transformer protection system, wiring and all other equipment required to produce a complete working installation. The protection system for 34.5kV side shall be coordinated with the grid interconnection protection to be installed in the power conditioner as specified in (7) "Grid Interconnection Protection" of Sub-clause 1.3.2 "Function" of this document. (4) The circuit breaker shall be of vacuum, draw out, electrically and mechanically trip-free type, motor charged spring closing by 240Vac with draw out wheels, primary and secondary disconnecting devices, auxiliary switches and provision for manual operating devices. The circuit breaker (CB) shall not be closed unless the disconnector (DS) is fully closed. The circuit breaker shall be remotely switched on and off. (5) The protective relays shall be of electronic, semi-flush, back connected, panel-board mounting and rectangular draw out case type. The relay shall be provided with a built-in electrically operated indicator that can be manually reset from the outside without removing the cover. (6) The terminal blocks for control and metering wirings shall be of molded type, rated at 600V and shall be provided with white marking strip for circuit designation. (7) Power and Energy Meters The accuracy of the power and energy meters shall be Class 0.2S in accordance with IEC 62053-22 or in compliance with the requirement of MERALCO or concerned Distribution Utilities/Rural Electric Cooperatives. (8) The accuracy of the instrument transformers shall comply with the requirements of the power and energy meters. (9) "Grid Interconnection Protection" of Sub-Clause 1.3.2 "Function" of this document.	
	1.5.2 34.5kV Power Cable (Optional)	34.5kV, 3-phase and 3-core power cables shall be provided and installed by the Designer-Builder for interconnection between Distribution Utility switchgear and the Facility switchgear and the power transformer.	

	1.6 Low Voltage Distribution Board	The 234-400V low voltage distribution board shall be provided. The 240-400V low voltage distribution board shall be complete with all necessary voltmeter, over current protective relay (51), voltage and current transformers, surge protective devices, wiring and all other equipment to produce a complete working Facility. The protection system for 400V side shall be coordinated with the grid interconnection protection to be installed in the power conditioner as specified in (7) “Grid Interconnection Protection” of Sub-Clause 1.3.2 “Function” of this document. More than three (3) sets of each rating of MCCBs shall be provided as spares for the low voltage distribution board.
	1.7 34.5kV Power Transformer (Optional)	
	1.7.1 General	The power transformer shall be designed to deliver its rated power in the ambient conditions specified and shall have the capability to withstand full through-fault conditions without damage. The power transformer shall be dry type, self-cooled and of indoor use type with no-load tap changing device.
	1.7.2 No-Load Tap Changer	The tap changer shall be mechanically and electrically rugged, arranged to provide for convenient inspection and maintenance without necessity for untanking and provided with an external mechanism for manual operation. The tap changer, as well as the arrangement of lead and connection thereto, shall be designed for transient voltage conditions. The external mechanism shall be protected against unauthorized operation and provided with positive indication on the tap in use and so located that it may be observed without need for unlocking the mechanism. The operating handle, indicating pointer and dial and means for locking the tap changer in any desired position shall be integrated with the transformer.

	1.8 Control and Low Voltage Cables	The control and low voltage cables shall comply with the regulations in the Philippines such as the Philippine Electrical Code, Philippine Building Code, and fire protection law, among others. The cables which have two (2) cores, one core for positive circuit and other core for negative circuit, shall be used for DC circuits to avoid electromagnetic field and induction. Control and low voltage cables and underground grounding conductors based on requirements of the PV Modules, power conditioners, switchgear, distribution board, local control system, etc. shall be included in the proposal of the Designer-Builder. The voltage drop of the cables from the junction box to the power conditioner shall not be greater than two (2) percent. The cable selection study shall be submitted for the DOE's perusal and approval. Sub-clause 3.1 "Climate and Environmental Conditions" under the Document I - GENERAL SPECIFICATIONS and Sub-clause 2.1.4 "Grounding System" of this document shall be considered for the types and designs of the control and power cables.
	1.9 Pad Locks	Non-ferrous pad locks with different key changes and two keys for each lock and a master key for each site shall be provided for the doors of the related equipment and houses such as the junction boxes, the connection boxes, the control house, the switchgear house, etc. Cabinets for the accommodation of padlocks and keys, while not in use, shall be provided and suitably labelled so that keys will be readily identifiable.
	1.10 Anti-condensation Heaters (Optional)	Any major items of equipment which are susceptible to suffer from internal condensation due to atmospheric or load variations shall be fitted with heating devices suitable for electrical operation at 230Vac 60 Hz single phase of sufficient capacity to raise the internal ambient temperature by approximately 5°C. A suitable thermostat shall be included in the heater circuit. The electrical equipment protected shall be designed so that the maximum permitted rise in temperature is not exceeded if the heaters are energized while the apparatus is in operation.

	1.11 Identification System	All equipment and component documents including cables, control wires and terminals shall be designated with an alphanumeric code allowing clear identification of the equipment and components during design, installation and operation of the Facility. Equipment, cables, control wires and terminals shall be systematically marked, both on the drawings and documents and on the equipment, cables, wires and terminals. Equipment designation codes shall be indicated on all planning documents including bills of materials. The codes will later be used for easy identification of stored equipment documents and materials and shall be suitable for use with a computer supported registration system. Identification labels shall be provided for equipment and devices mounted on control boards, relay cabinets, desks and other places as required for proper identification, as well as for operational, function and safety reasons. Wherever necessary, cautionary and warning plates and signs shall be provided in English. Nameplates and identification labels shall be in English.	
	1.12 Spare Documents	The Designer-Builder shall provide with appropriate spare documents for the Inverter, tools and test instruments to be required for the operation and maintenance of the Facility, the quantities of which shall be sufficient for the period up to the first full-scale overhaul of the PV System. They shall be delivered to the Facility site before the Tests on Completion of the Facility works.	
2.	**FACILITY WORK**		
	2.1.1 Installation of Support Structures, If Any	Assembling work of the support structures shall be carried out under the supervision of the Designer-Builder's supervisor. Utmost care shall be exercised for the precision of the alignment of finished structures. The tightening of all bolts shall be done with torque wrench and its results shall be recorded. The recorded list of tightening torque for all bolts shall be submitted to the DOE within two weeks after the completion of the electrical work. The existing sign boards shall be reinstalled on the support structures at the same locations. New sign boards as same types as the existing sign boards shall be provided and installed by the Designer-Builder, if necessary.	
	2.1.2 Installation of PV Modules	Each PV Module shall be measured for its open generation voltage. Measured voltage and any anomalies shall be recorded and submitted to the DOE within two weeks after the completion of the measurement. The gaps between neighboring PV Modules shall be controlled to be uniform. The PV Modules shall be connected to junction boxes by the cables with steel conduit pipes.	

	2.1.3 Cabling Work	The Designer-Builder shall prepare the detailed plans and methods of wiring of cables and shall submit them for the DOE's approval. All steel conduit pipes and steel cable racks with covers shall be grounded. (1) Installation of Cables All DC and AC power cables to be installed in the outdoor locations shall be laid in a steel conduit pipes which shall be covered and coated by the Exterior Insulation and Finish System (Class PB). The Exterior Insulation and Finish System (Class PB) is a "none load bearing, exterior wall cladding system that consists of an insulation board attached either adhesively, mechanically, or both to the substrate; an integrally reinforced base coat; and a textured protective finish coat," as defined by ASTM C 1397 "Standard Practice for Application of Class PB Exterior Insulation and Finish Systems (EIFS) and EIFS with Drainage". The covering materials and the coating color shall be subject to the DOE's approval. All DC and AC power cables to be installed in the indoor locations shall be laid in steel cable trays except inside pits. The measurement cables of the insolation and air temperature observation devices in the outdoor and the indoor locations shall be laid in steel conduit pipe. The power cables and control/measurement cables shall be laid in different conduit pipes or cable tray. The cable boxes and holes and cable connection points shall be covered with pastes and protected against the environment conditions. The power, control/measuring cables to be installed in underground shall be laid in PVC conduit pipes except inside pits. When the PVC conduit pipes shall be laid under asphalt or concrete pavement, the asphalt or concrete pavement is restored to the original state after the work.

The cable boxes shall be of outdoor use. The handholds or cable boxes for the piping shall be constructed or installed in the places such as below;

- Both ends of the segment crossing under paved roads,
- Where cable joints are buried,
- Appropriate places for cable installation, and
- Other places for the Designer-Builder's convenience.

When two cables are joined, joint kit with resin injection shall be used.

When cables are drawn into the existing buildings, wall piercing method shall be used only if there is no existing piping or cable duct. The number of walls piercing and its cross section shall be minimized. The segment of cables at the wall piercing shall be protected with pipes. The gap between cables, pipes and wall shall be filled with caulking materials. The details of the wall piercing shall be subject to the DOE's approval.

(2) Safety Measures

During the Facility works, the exterior and interior cables shall be surrounded with pegs, ropes or other warning signs.

(3) Cable Tags

All the cables shall be marked with cable tags. Each tag shall show information such as,

- Cable ID
- Type of cable
- Size of cable
- Origin and destination

(4) Confirmation of Cable Connection

All the connections of cables shall be confirmed twice during the course of the works.

1st round:

- Continuity test for all connections,
- Tightening of connections at terminals (with check list),
- Confirmation of conformity of cable connections to the cable list (visual checking)

2nd round: during the pre-commissioning test

(5) Cable Holes

The cable holes shall be covered with an acid resistant paste.

		(6) Power Cable All necessary cable heads, terminals, accessories, conduit pipes, and similar parts shall be included for power cable installation. The installation and connection of power cables shall comply with the existing regulations in the Philippines as well as the regulations of the MERALCO. The Designer-Builder shall coordinate with the MERALCO for the distribution switchgear and the metering cabinet.	
	2.1.4 Grounding System	(1) General The design and installation of the grounding system shall be performed in accordance with the existing Philippines regulations taking into account the safety of the office personnel of DOE and beneficiaries. The Designer-Builder shall study the existing grounding system and if it is not available at required location, new grounding system shall be prepared in accordance with the Philippine Electrical Code. If any, the grounding system for the 34.5kV metal-enclosed switchgear, 34.5kV power transformer as well as the metering cabinet and 34.5kV distribution switchgear to be provided and installed by shall be coordinated with the MERALCO. The requirements of the MERALCO shall be considered in the grounding system. The grounding report showing readings of resistivity of the existing grounding system and the grounding layout plan shall be submitted to the DOE. (2) Design The Designer-Builder shall prepare the drawings and the plan of the grounding system shall be submitted for the DOE and beneficiaries' approval. (3) Installation The Designer-Builder shall prepare the Facility work planwhich includes the scheduling of the works and shall submit it for the DOE and beneficiaries' approval. The grounding of the PV Modules shall be well-balanced w that of the power conditioners. (4) Measurement of Grounding Resistance The Designer-Builder shall measure and record the distribution of grounding resistance witnessed by the DOE and beneficiaries	

	2.1.5 Cleaning	The Designer-Builder shall from time to time remove all dirt, rubbish and related objects caused by the installation of the Facility. Upon completion of the Facility works, the Designer-Builder shall thoroughly clean the surfaces of the PV Modules.
3.	**TESTS AND INSPECTIONS**	
	3.1 Tests of the Products (Factory Tests)	The Designer-Builder shall ensure that conduct of the factory tests of the Facility components are in accordance with the approved test procedure, the manufacturer's standards, and other related standards.
	3.2 Tests of the Facility Work (Tests on Completion)	(1) The Commissioning Test of the Facility work shall include, but not limited to, the following: • Checking voltage and polarity of all circuits in the junction and connection boxes; • Checking voltage at chief points in the switchgear and boards; • Checking phase of AC with the phase rotation meter; • Checking the reading of all monitors in the boards; • Checking insolation and air temperature observation devices; • Evaluation of insolation vs PV Module output relationship; • Checking of records and monitors of trial run in grid-connection for 48hrs or more; • Start-up and shut-down test; • Emergency shut-down test; • Safety shut-down and reset test under simulated malfunction signal issuance; • Test on automatic restart after utility grid blackout/recovery under simulated blackout/recovery; • Test on automatic restart with AC power (from utility grid) after prolonged utility grid blackout; • Test on operability with one power conditioner out of order (simulated break-down); • Test on automatic mode for a consecutive day, in grid-connection; and, • Other tests as the DOE, Beneficiaries and Electric Cooperativedeem necessary.
	3.3 Initial Energization Procedures	The Designer-Builder shall submit its detailed plans and proposed initial energization procedures of the power supply switching works for the Tests on the Facility work, at least six weeks before the scheduled work for approval. The Designer-Builder shall organize and attend coordination meeting/s for the switching work.
	3.4 Interim Inspection	The interim inspection shall include, but not limited to, the following items: • The manufacturer's standard periodical inspection items • Specific inspections directed by the DOE, if any; and • Setting and adjustment of parameters on the basis of the analysis of the records of operation for several months. The Designer-Builder shall submit inspection criteria and check sheets for the DOE's approval.

	3.5 Performance Inspection	The Designer-Builder shall submit inspection criteria and check sheets on how to verify when the Facility has no defect or no deficiency for the DOE's approval.

Section VIII. Checklist of Technical and Financial Documents

Checklist of Technical and Financial Documents
(Requirement during the Opening of Bids) **and**
Documentary Requirements for Post-qualification

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

☐ (a) Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages).
or

☐ (b) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
and

☐ (c) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas;
and

☐ (d) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

(e) Certified/Registered ESCO

Technical Documents

☐ (a) Statement of the prospective bidder of all its ongoing government and private contracts, including contracts awarded but not yet started, if any, whether similar or not similar in nature and complexity to the contract to be bid **(Bidding Form Annex A)**; and

☐ (f) Statement of the bidder's Single Largest Completed Contract (SLCC) **(Bidding Form Annex B)** similar to the contract to be bid, except under conditions provided for in Sections 23.4.1.3 and 23.4.2.4 of the 2016 revised IRR of RA No. 9184, within the relevant period as provided in the Bidding Documents; and

☐ (g) Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission; or original copy of Notarized Bid Securing Declaration **(Bidding Form Annex C)**; and

☐ (h) Conformity with the Technical Specifications under Section VII by signing the bidder's compliance column of the TOR/Technical Specification and submission of the following:

1. production/delivery schedule;
2. manpower requirements/organizational structure; and
3. **After sales warranty**.

☐ (i) Original duly signed Omnibus Sworn Statement (OSS) **(Bidding Form Annex D)**; and if applicable, Original Notarized Secretary's Certificate in case of a corporation, partnership, or cooperative; or Original

Special Power of Attorney of all members of the joint venture giving full power and authority to its officer to sign the OSS and do acts to represent the Bidder.

Financial Documents

☐ (j) The Supplier's audited financial statements, showing, among others, the Supplier's total and current assets and liabilities, stamped "received" by the BIR or its duly accredited and authorized institutions, for the preceding calendar year which should not be earlier than two (2) years from the date of bid submission; and

☐ (k) The prospective bidder's computation of Net Financial Contracting Capacity (NFCC); or a committed Line of Credit from a Universal or Commercial Bank in lieu of its NFCC computation.

Class "B" Documents

☐ (l) If applicable, a duly signed joint venture agreement (JVA) in case the joint venture is already in existence; or **duly** notarized statements from all the potential joint venture partners stating that they will enter into and abide by the provisions of the JVA in the instance that the bid is successful.

II. FINANCIAL COMPONENT ENVELOPE

☐ (m) Original of duly signed and accomplished Financial Bid Form **(Bidding Form Annex E)**; **and**

☐ (n) Original of duly signed and accomplished Price Schedule(s) **(Bidding Form Annex F)**.

Other documentary requirements under RA No. 9184 (as applicable)

☐ (o) *[For foreign bidders claiming by reason of their country's extension of reciprocal rights to Filipinos]* Certification from the relevant government office of their country stating that Filipinos are allowed to participate in government procurement activities for the same item or product.

☐ (p) Certification from the DTI if the Bidder claims preference as a Domestic Bidder or Domestic Entity.

III. Post-Qualification Requirements:

1. In case only the PhilGEPS Registration Certificate (Platinum Membership) was submitted during the bid opening, submit the certified true copies of the following:
   (a) Registration certificate from Securities and Exchange Commission (SEC), Department of Trade and Industry (DTI) for sole proprietorship, or Cooperative Development Authority (CDA) for cooperatives or its equivalent document;
   (b) Mayor's or Business permit issued by the city or municipality where the principal place of business of the prospective bidder is located, or the equivalent document for Exclusive Economic Zones or Areas; and

(c) Tax clearance per E.O. No. 398, s. 2005, as finally reviewed and approved by the Bureau of Internal Revenue (BIR).

2. Latest Income/Business Tax Returns;
3. Certificate of PhilGEPS Registration;
4. Pictures of its principal place of business;
5. In case of Goods, submit brochures/prototype/actual sample of the products being offered or in case of Services, concept paper/write-up or description of the services being offered; which must be submitted on the date indicated in the post-qualification letter, addressed to the end-user, and certifies that it is the bidder's official and final offer. Non-submission of this requirement may be a ground for disqualification.
6. In case of procurement for manpower services, proof of contribution/remittance for SSS, Philhealth and Pag-ibig for the last six (6) months from the opening of bid; and
7. Other appropriate licenses and permits required by law as stated in the bidding documents/post-qualification letter.

Bidding Forms

Mandatory Submission of Bidding Forms

Annex A

STATEMENT OF ONGOING, COMPLETED AND/OR AWARDED CONTRACTS

The Bids and Awards Committee
Department of Energy
Energy Center, Rizal Drive, Bonifacio Global City
Taguig, Metro Manila

Ongoing, completed or awarded but not yet started projects for the period _____ (last four years), where applicable.

Procuring Entity / Date of Contract	Kinds of Goods Sold and/or Services Offered	Amount of Contract and Value of Outstanding Contracts	Date of Delivery	End-user's Acceptance if Completed (date)	Specify whether a Prospective Bidder is a Manufacturer, Supplier, Distributor or Service Provider	Indicate whether "Similar "or "Not Similar"

Submitted By:

_____

(Signature over Printed Name)

Note:
1. May be reproduced, if necessary
2. Please attach end-user's certificate of acceptance

Annex B

STATEMENT OF SINGLE LARGEST COMPLETED CONTRACT

The Bids and Awards Committee
Department of Energy
Energy Center, Rizal Drive, Bonifacio Global City
Taguig, Metro Manila

Single Largest Completed Contract (SLCC) for the period
_____
(last four years), where applicable.

Procuring Entity / Date of Contract	Kinds of Goods Sold and/or Services Offered	Amount of Contract and Value of Outstanding Contracts	Date of Delivery	End-user's Acceptance if Completed (date)	Specify whether a Prospective Bidder is a Manufacturer, Supplier, Distributor or Service Provider	Indicate whether "Similar "or "Not Similar"

Submitted By:

_____
(Signature over Printed Name)

Note:
1. May be reproduced, if necessary
2. Please attach end-user's certificate of acceptance

Annex C

Bid Securing Declaration Form
[shall be submitted with the Bid if bidder opts to provide this form of bid security]

REPUBLIC OF THE PHILIPPINES)
CITY OF _____) S.S.

BID SECURING DECLARATION
Project Identification No.: *[Insert number]*

To: *[Insert name and address of the Procuring Entity]*

I/We, the undersigned, declare that:

1. I/We understand that, according to your conditions, bids must be supported by a Bid Security, which may be in the form of a Bid Securing Declaration.
2. I/We accept that: (a) I/we will be automatically disqualified from bidding for any procurement contract with any procuring entity for a period of two (2) years upon receipt of your Blacklisting Order; and, (b) I/we will pay the applicable fine provided under Section 6 of the Guidelines on the Use of Bid Securing Declaration, within fifteen (15) days from receipt of the written demand by the procuring entity for the commission of acts resulting to the enforcement of the bid securing declaration under Sections 23.1(b), 34.2, 40.1 and 69.1, except 69.1(f),of the IRR of RA No. 9184; without prejudice to other legal action the government may undertake.
3. I/We understand that this Bid Securing Declaration shall cease to be valid on the following circumstances:
   a. Upon expiration of the bid validity period, or any extension thereof pursuant to your request;
   b. I am/we are declared ineligible or post-disqualified upon receipt of your notice to such effect, and (i) I/we failed to timely file a request for reconsideration or (ii) I/we filed a waiver to avail of said right; and
   c. I am/we are declared the bidder with the Lowest Calculated Responsive Bid, and I/we have furnished the performance security and signed the Contract.

IN WITNESS WHEREOF, I/We have hereunto set my/our hand/s this ____ day of *[month] [year]* at *[place of execution]*.

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]
[Format shall be based on the latest Rules on Notarial Practice]

Annex D

Omnibus Sworn Statement
[shall be submitted with the Bid]

REPUBLIC OF THE PHILIPPINES)
CITY/MUNICIPALITY OF _____) S.S.

AFFIDAVIT

I, [Name of Affiant], of legal age, [Civil Status], [Nationality], and residing at [Address of Affiant], after having been duly sworn in accordance with law, do hereby depose and state that:

1. *[Select one, delete the other:]*
   [If a sole proprietorship:] I am the sole proprietor or authorized representative of [Name of Bidder] with office address at [address of Bidder];
   [If a partnership, corporation, cooperative, or joint venture:] I am the duly authorized and designated representative of [Name of Bidder] with office address at [address of Bidder];
2. *[Select one, delete the other:]*
   [If a sole proprietorship:] As the owner and sole proprietor, or authorized representative of [Name of Bidder], I have full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached duly notarized Special Power of Attorney
   [If a partnership, corporation, cooperative, or joint venture:] I am granted full power and authority to do, execute and perform any and all acts necessary to participate, submit the bid, and to sign and execute the ensuing contract for [Name of the Project] of the [Name of the Procuring Entity], as shown in the attached [state title of attached document showing proof of authorization (e.g., duly notarized Secretary's Certificate, Board/Partnership Resolution, or Special Power of Attorney, whichever is applicable;)];
3. [Name of Bidder] is not "blacklisted" or barred from bidding by the Government of the Philippines or any of its agencies, offices, corporations, or Local Government Units, foreign government/foreign or international financing institution whose blacklisting rules have been recognized by the Government Procurement Policy Board, by itself or by relation, membership, association, affiliation, or controlling interest with another blacklisted person or entity as defined and provided for in the Uniform Guidelines on Blacklisting;
4. Each of the documents submitted in satisfaction of the bidding requirements is an authentic copy of the original, complete, and all statements and information provided therein are true and correct;
5. [Name of Bidder] is authorizing the Head of the Procuring Entity or its duly authorized representative(s) to verify all the documents submitted;
6. *[Select one, delete the rest:]*
   [If a sole proprietorship:] The owner or sole proprietor is not related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

[If a partnership or cooperative:] None of the officers and members of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;
[If a corporation or joint venture:] None of the officers, directors, and controlling stockholders of *[Name of Bidder]* is related to the Head of the Procuring Entity, members of the Bids and Awards Committee (BAC), the Technical Working Group, and the BAC Secretariat, the head of the Project Management Office or the end-user unit, and the project consultants by consanguinity or affinity up to the third civil degree;

7. *[Name of Bidder]* complies with existing labor laws and standards; and
8. *[Name of Bidder]* is aware of and has undertaken the responsibilities as a Bidder in compliance with the Philippine Bidding Documents, which includes:
    a. Carefully examining all of the Bidding Documents;
    b. Acknowledging all conditions, local or otherwise, affecting the implementation of the Contract;
    c. Making an estimate of the facilities available and needed for the contract to be bid, if any; and
    d. Inquiring or securing Supplemental/Bid Bulletin(s) issued for the *[Name of the Project]*.
9. *[Name of Bidder]* did not give or pay directly or indirectly, any commission, amount, fee, or any form of consideration, pecuniary or otherwise, to any person or official, personnel or representative of the government in relation to any procurement project or activity.
10. In case advance payment was made or given, failure to perform or deliver any of the obligations and undertakings in the contract shall be sufficient grounds to constitute criminal liability for Swindling (Estafa) or the commission of fraud with unfaithfulness or abuse of confidence through misappropriating or converting any payment received by a person or entity under an obligation involving the duty to deliver certain goods or services, to the prejudice of the public and the government of the Philippines pursuant to Article 315 of Act No. 3815 s. 1930, as amended, or the Revised Penal Code.

IN WITNESS WHEREOF, I have hereunto set my hand this __ day of ___, 20__ at _____, Philippines.

[Insert NAME OF BIDDER OR ITS AUTHORIZED REPRESENTATIVE]
[Insert signatory's legal capacity]
Affiant

[Jurat]

[Format shall be based on the latest Rules on Notarial Practice]

Annex E

Bid Form for the Procurement of Goods
[shall be submitted with the Bid]

BID FORM

Date : _____

Project Identification No. : _____

To: [name and address of Procuring Entity]

Having examined the Philippine Bidding Documents (PBDs) including the Supplemental or Bid Bulletin Numbers *[insert numbers],* the receipt of which is hereby duly acknowledged, we, the undersigned, offer to *[supply/deliver/perform] [description of the Goods]* in conformity with the said PBDs for the sum of *[total Bid amount in words and figures]* or the total calculated bid price, as evaluated and corrected for computational errors, and other bid modifications in accordance with the Price Schedules attached herewith and made part of this Bid. The total bid price includes the cost of all taxes, such as, but not limited to: *[specify the applicable taxes, e.g. (i) value added tax (VAT), (ii) income tax, (iii) local taxes, and (iv) other fiscal levies and duties],* which are itemized herein or in the Price Schedules,

If our Bid is accepted, we undertake:

a. to deliver the goods in accordance with the delivery schedule specified in the Schedule of Requirements of the Philippine Bidding Documents (PBDs);

b. to provide a performance security in the form, amounts, and within the times prescribed in the PBDs;

c. to abide by the Bid Validity Period specified in the PBDs and it shall remain binding upon us at any time before the expiration of that period.

[Insert this paragraph if Foreign-Assisted Project with the Development Partner:

Commissions or gratuities, if any, paid or to be paid by us to agents relating to this Bid, and to contract execution if we are awarded the contract, are listed below:
Name and address Amount and Purpose of Agent Currency/Commission or gratuity

_____
_____
_____

(if none, state “None”) *]*

Until a formal Contract is prepared and executed, this Bid, together with your written acceptance thereof and your Notice of Award, shall be binding upon us.

We understand that you are not bound to accept the Lowest Calculated Bid or any Bid you may receive.

We certify/confirm that we comply with the eligibility requirements pursuant to the PBDs.

The undersigned is authorized to submit the bid on behalf of *[name of the bidder]* as evidenced by the attached *[state the written authority]*.

We acknowledge that failure to sign each and every page of this Bid Form, including the attached Schedule of Prices, shall be a ground for the rejection of our bid.

Name:_____

Legal capacity: _____

Signature: _____

Duly authorized to sign the Bid for and behalf of: _____

Date: _____

Annex F

Price Schedule for Goods Offered from Abroad
[shall be submitted with the Bid if bidder is offering goods from Abroad]

For Goods Offered from Abroad

Name of Bidder _____ Project ID No._____ Page ___ of ___

1	2	3	4	5	6	7	8	9
Item	Description	Country of origin	Quantity	Unit price CIF port of entry (specify port) or CIP named place (specify border point or place of destination)	Total CIF or CIP price per item (col. 4 x 5)	Unit Price Delivered Duty Unpaid (DDU)	Unit price Delivered Duty Paid (DDP)	Total Price delivered DDP (col 4 x 8)

Name: _____
Legal Capacity: _____
Signature_____
Duly authorized to sign the Bid for and behalf of: _____

Annex F

Price Schedule for Goods Offered from Within the Philippines
[shall be submitted with the Bid if bidder is offering goods from within the Philippines]

For Goods Offered from Within the Philippines

Name of Bidder _____ Project ID No._____ Page ___of___

1	2	3	4	5	6	7	8	9	10
Item	Description	Country of origin	Quantity	Unit price EXW per item	Transportation and all other costs incidental to delivery, per item	Sales and other taxes payable if Contract is awarded, per item	Cost of Incidental Services, if applicable, per item	Total Price, per unit (col 5+6+7+ 8)	Total Price delivered Final Destination (col 9) x (col 4)

Name:_____
Legal Capacity: _____
Signature: _____
Duly authorized to sign the Bid for and behalf _____

Contract Agreement Form for the Procurement of Goods (Revised)
[Not required to be submitted with the Bid, but it shall be submitted within ten (10) days after receiving the Notice of Award]

CONTRACT AGREEMENT

THIS AGREEMENT made the _____ day of _____ 20_____ between [name of PROCURING ENTITY] of the Philippines (hereinafter called "the Entity") of the one part and [name of Supplier] of [city and country of Supplier] (hereinafter called "the Supplier") of the other part;

WHEREAS, the Entity invited Bids for certain goods and ancillary services, particularly [brief description of goods and services] and has accepted a Bid by the Supplier for the supply of those goods and services in the sum of *[contract price in words and figures in specified currency]* (hereinafter called "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.

2. The following documents as required by the 2016 revised Implementing Rules and Regulations of Republic Act No. 9184 shall be deemed to form and be read and construed as integral part of this Agreement, *viz.*:
   i. Philippine Bidding Documents (PBDs);
      i. Schedule of Requirements;
      ii. Technical Specifications;
      iii. General and Special Conditions of Contract; and
      iv. Supplemental or Bid Bulletins, if any

   ii. Winning bidder's bid, including the Eligibility requirements, Technical and Financial Proposals, and all other documents or statements submitted;

      Bid form, including all the documents/statements contained in the Bidder's bidding envelopes, as annexes, and all other documents submitted (*e.g.*, Bidder's response to request for clarifications on the bid), including corrections to the bid, if any, resulting from the Procuring Entity's bid evaluation;

   iii. Performance Security;

   iv. Notice of Award of Contract; and the Bidder's conforme thereto; and

   v. Other contract documents that may be required by existing laws and/or the Procuring Entity concerned in the PBDs. Winning bidder agrees that additional contract documents or information prescribed by the GPPB that are subsequently required for submission after the

contract execution, such as the Notice to Proceed, Variation Orders, and Warranty Security, shall likewise form part of the Contract.

3. In consideration for the sum of *[total contract price in words and figures]* or such other sums as may be ascertained, *[Named of the bidder]* agrees to *[state the object of the contract]* in accordance with his/her/its Bid.

4. The *[Name of the procuring entity]* agrees to pay the above-mentioned sum in accordance with the terms of the Bidding.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of the Republic of the Philippines on the day and year first above written.

[Insert Name and Signature] *[Insert Signatory's Legal Capacity]*	*[Insert Name and Signature]* *[Insert Signatory's Legal Capacity]*
for: **Department of Energy**	for: **[Insert Name of Supplier]**
Witness for DOE *[Position Title]*	*Witness for Supplier* *[Position Title]*

Helen C. Roldan
DOE Chief Accountant
Witness

<u>Acknowledgment</u>
[Format shall be based on the latest Rules on Notarial Practice]