

REPUBLIC OF THE PHILIPPINES DEPARTMENT OF AGRICULTURE PHILIPPINE COCONUT AUTHORITY REGION III and IVB

2/F Guest House Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City 1101 Tel. Nos.: (02) 8927-5227 (02) 8924-4761 pcaregion1.4b@gmail.com / regioniv@pca.gov.ph

REQUEST FOR QUOTATION (RFQ) NEGOTIATED PROCUREMENT (TWO-FAILED BIDDINGS) RFQ No. 2024-08

Project: DESIGN, SUPPLY, DELIVERY, CONSTRUCTION AND INSTALLATION OF SOLAR-POWERED IRRIGATION SYSTEM (SPIS) IN AURORA PROVINCE COCONUT DEVELOPMENT CENTER (APCDC), DIBARAYBAY, DINALUNGAN, AURORA UNDER CFIDP - HSP CY 2024 FUNDS

- In view of the two (2) failed biddings, the Philippine Coconut Authority Regions III and IVB, through its Regional Bids and Awards Committee (RBAC) invites PhilGEPS registered suppliers to participate in the negotiation for the Design, Supply, Delivery, Construction and Installation of Solar-Powered Irrigation System (SPIS) in Aurora Province Coconut Development Center (APCDC), Dibaraybay, Dinalungan, Aurora in accordance with Section 53.1 of the Revised Implementing Rules and Regulations of the Republic Act No. 9184.
- 2. The Approved Budget for the Contract (ABC), through CFIDP HSP Project CY 2024 Funds has a sum of **FIVE MILLION PESOS (PhP 5,000,000.00).**
- 3. Prospective bidders may obtain further information from the RBAC Secretariat through the contact details given below during office hours.

September 9 to 17, 2024
Beginning September 9, 2024 (Monday)
September 13, 2024 (Friday) at 10:00 AM via video conferencing (Zoom Meeting) and physical at PCA Regions III and IVB Conference Room, 2nd Floor, Guest House Building, PCA Compound, Elliptical Road, Diliman, Quezon City which are open to all bidders. Meeting ID: 849 5369 5994 Passcode: 950096 <u>https://us06web.zoom.us/j/84953695994</u>

4. The schedule of bidding activities is as follows:

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Deadline and Venue for the Submission and Receipt of Quotation (in Sealed Envelope)	September 17, 2024 (Tuesday) at 8:30 AM at PCA Regions III and IVB Office, 2nd Floor, Guest House Building, PCA Compound, Elliptical Road, Diliman, Quezon City
Schedule and Venue for the Opening and Preliminary Examination of Quotation/Proposal	September 17, 2024 (Tuesday) at 9:00 AM via video conferencing (Zoom Meeting) and physical at PCA Regions III and IVB, Conference Room, 2nd Floor, Guest House Building, PCA Compound, Elliptical Road, Diliman, Quezon City Meeting ID: 823 1729 5009 Passcode: 993844 https://us06web.zoom.us/j/82317295009

- Interested Bidders shall submit the following documents in sealed envelopes, labeled as "Negotiated Procurement (Two-Failed Biddings) – Design, Supply, Delivery, Construction and Installation of Solar-Powered Irrigation System (SPIS) in Aurora Province Coconut Development Center (APCDC), Dibaraybay, Dinalungan, Aurora - RFQ No. 2024-08"
- 6. The envelope labels should contain the name of the bidder, address and contact details of the bidder.
- 7. Contracts similar to the Project refer to contracts which have the same major categories of work, which shall be:

Supply, Delivery, Construction and Installation of Solar Powered Irrigation System Or Establishment /Installation of Solar Powered Irrigation System

completed within 5 years prior to the deadline for the submission and receipt of bids.

Submit certificate of at least satisfactory performance on the SLCC issued and signed by the Head of the Procuring Entity for government projects and owner for private projects for contractors without previous awarded project from government.

8. The key personnel must meet the required minimum years of experience set below:

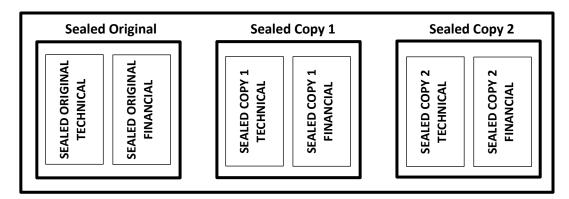
Key Personnel	General Experience (years)	Relevant Experience (years)
1 Project Engineer for Infrastructure Activities Licensed (Civil Engineer or Agricultural and Biosystems Engineer (ABE))	at least 5	at least 3
1 Electrical Engineer	at least 5	at least 3
1 Foreman	at least 5	at least 3
1 Safety and Health Officer		
1 First Aider		

9. The minimum major equipment requirements are the following:

Equipment	Owned or Leased or Under Purchase Agreement
Mini Backhoe	1
Mini Dump Truck	1
Bagger Concrete Mixer	1
Welding Machine	1
Generator Set	1
HDPE Fusion Machine	1

- 10. The bid security shall be in the form of a Bid Securing Declaration or any of the following forms and amounts:
 - The amount of not less than PhP 100,000.00, if bid security is in cash, cashier's/manager's check, bank draft/guarantee or irrevocable letter of credit;
 - The amount of not less than PhP 250,000.00, if bid security is in Surety Bond.
- 11. Partial bids are not allowed.
- 12. Bidder **shall submit one (1) original** and **two (2) duly certified photocopies** of the first and second components of its bid in sealed envelopes. **All documents shall be current and updated** and any missing document in the checklist is a ground for outright rejection of the bid.

Sealed Original, Copy 1 & 2 in one (1) Single Envelope



13. The Checklist of Documents is as follows:

I. TECHNICAL COMPONENT ENVELOPE

Class "A" Documents

Legal Documents

1. Valid PhilGEPS Registration Certificate (Platinum Membership) (all pages) in accordance with Section 8.5.2 of the IRR;

Technical Documents

2. 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. The statement shall include, for each contract, the following:

- 3. Statement of the bidder's Single Largest Completed Contract (SLCC) 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;
- 4. Special PCAB License in case of Joint Ventures and registration for the type and cost of the contract to be bid;
- 5. Original copy of Bid Security. If in the form of a Surety Bond, submit also a certification issued by the Insurance Commission <u>or</u> Original copy of Notarized Bid Securing Declaration;
- 6. Project requirements, which shall include the following:
 - a. Organizational chart for the contract to be bid;
 - b. List of contractor's key personnel (*e.g.*, Project Manager, Project Engineers, Materials Engineers, and Foremen), to be assigned to the contract to be bid, with their complete qualification and experience data;
 - ☐ c. List of contractor's major equipment units, which are owned, leased, and/or under purchase agreements, supported by proof of ownership or certification of availability of equipment from the equipment lessor/vendor for the duration of the project, as the case may be;
- 7. Detailed Engineering Design (DED) of the Solar-Powered Irrigation System (SPIS) including the electrical layout and materials to be used taking considerations the PE's requirements;
- 8. Certification from the manufacturer/s or local distributor/s that the bidder is authorized distributor/dealer/installer of the offered solar-power modules and accessories, inverter and pump;
- 9. Certification from the manufacturer/s or local distributor/s that brand being offered has been in the Philippine market for the last five (5) years;
- 10. Certification from the manufacturer/s or local distributor/s that parts and services for the offered SPIS are available for the next five (5) years within the region of delivery;
- 11. Proof or Certification that the bidder has at least one (1) year minimum experience in the solar power business;
 - 12. List of authorized service center/s for the offered SPIS;
- 13. Brochures of offered brand and units for SPIS (solar panel, inverter, battery, and pump);
- 14. AMTEC test report for offered pump;

*AMTEC test report for offered pump is not necessarily comes from the bidder itself but from the manufacturer or local distributors/dealers who are selling the pumps in the market.

- 15. Duly notarized certification of availability of stocks from the manufacturer or distributor (solar panel, inverter, battery, and pump);
- 16. Original duly signed Omnibus Sworn Statement (OSS) 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

17. The prospective bidder's computation of Net Financial Contracting Capacity (NFCC)

Class "B" Documents

18. If applicable, a duly signed joint venture agreement (JVA) in accordance with RA No. 4566 and its IRR in case the joint venture is already in existence <u>or</u> 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

- 19. Original of duly signed and accomplished Financial Bid Form;
- 20. Original of duly signed Bid Prices in the Bill of Quantities;
- 21. Duly accomplished Detailed Estimates Form, including a summary sheet indicating the unit prices of construction materials, labor rates, and equipment rentals used in coming up with the Bid

14. SCHEDULE OF REQUIREMENTS

Completion of the works is required within ninety (90) calendar days upon receipt of Notice to Proceed.

15. SPECIAL CONDITIONS OF CONTRACT

- The Contractor shall employ the following Key Personnel for the project:
 - Project Manager for Infrastructure Activities Licensed (Civil Engineer or Agricultural and Biosystems Engineer (ABE)
 - Electrical Engineer
 - 1 Foreman
 - 1 Safety and Health Officer

The Key personnel shall be supported by Bio-data or CV which includes personal circumstances and experience.

- The Contractor shall submit the Program of Work to the Procuring Entity's Representative within fifteen (15) calendar days of delivery of the Notice of Award.
- The amount to be withheld for late submission of an updated Program of Work is 1% of the progress billing.
- The date by which operating and maintenance manuals are required is 15 30 days from Completion Date.
- The date by which "as built" drawings are required is 15 30 days from Completion Date.
- For this contract, advance payment and progress payments are not allowed.

16. DETAILED ENGINEERING DESIGN (DED) OF SPIS

The prospective bidders/suppliers are required to conduct site visit in the location where the SPIS project will be established for site evaluation and determination of proper design. Prior to the site visit, the supplier shall first secure the approval of the PE and that visit is solely for the purpose of site evaluation. A written request sent via email or any other fastest means shall be furnished prior to the site visit.

17. TECHNICAL SPECIFICATIONS

Below are minimum technical specifications of SPIS components. Specifications may vary, but not below the minimum technical requirements.

Item	Design/Installation consideration	Technical Specifications
DV ADD AV (Solor		20.025
PV ARRAY (Solar	Installed with a rigid alloy rail made of non-corrosive	20 pcs550W or its equivalent
panels)		- monocrystalline
	material	- Modules shall adhere to the
	Mounting frame structure	applicable IEC standards
	should be made from	including IEC-612215, IEC
	galvanized iron (GI) pipes or	61730 and IEC 60364
	angular bars either primed, hot	- Efficiency shall be no less than
	dipped galvanized with	22%
	minimum of 5mm or double	
	coated with non-corrosive	
	paint.	-
	All structures materials shall	
	be made of high-tensile steel	
	(420 mpa and higher), pre-	
	coated with anti-corrosion	
	coating. All bolts that are used	
	to fix mechanical components	
	shall be made from steel 8.8 or	
	10.4 and shall be coated with	
	iron zinc coating.	
	PV modules shall withstand	
	minimum gustiness and uplift	
	of 180kph	
	Special distance between each	
	PV modules should be at least	
	20mm	
	Placement of the PV array	
	shall be away from any source	
	of shades any time of the year.	
	PV array should be facing the	
	south.	
	Surge Protection Devices	
	(SPD) shall be installed along	
	with the PV module.	
PUMP SET (surface)	A trash rack, made of non-	- Minimum power of 6.6 KW or
	corrosive material or painted	9hp
	with protective coating, shall	

INVERTER AND	be installed along with the pump intake. For protection: Dry running, overheating, overloading, voltage transient, and low/high voltage input protection shall be provided for the pump set For Protection: The pump set	 A discharge measuring device, such as flow meter or water meter, should be included with the pump set. Pipes and fittings for the pump and accessories will be based on the design subject to verification by the PE. 125% of pump power (minimum
ACCESSORIES (SOLAR PANEL OR PV ARRAY CONTROLLER)	controller and the PV array controller shall be insect- proofed and weather-proofed by using double-proof box and sealants. The solar panel controller should be encased with a combiner box.	 8.25KW or 11.25hp or its equivalent) A minimum of IP58 (splash proof) rating shall be used as per IEC60529:1989+A1:1999+A2:2 013
BATTERY	Shall be compatible to solar panel and inverter. Warranty of at least 10 years.	 AC or DC coupled Made of lithium <i>e.g. lithium-ion</i>, <i>lithium iron phosphate (LFP)</i>, <i>lithium manganese oxide, etc.</i> Minimum of 48V Back-up battery type.
CABLES AND WIRES FOR ELECTRICAL SYSTEM	Cables and wirings used for the SPIS shall be in accordance with the Philippine Electrical Code (PEC), using PV cables specific for PV modules. Wiring installations shall be properly protected for weather conditions and other external factors.	 Use applicable PVC / HDPE pipes for conduits
SOLAR STREET LIGHT WITH ACCESSORIES	Made of aluminum alloy housing. Placed at corners of perimeter fence. Height of post from NGL – at least 2.5 m	 4 pcs solar street light Minimum of 105W Solar module With 10W LED light Battery type: 12 V Lithium type 2" diameter GI pipe
OVERHEAD WATER TANK	Made of CHB and Class "A" concrete mixture Painted with applicable paint for concrete Shall have provision of stairs made of durable steel/iron bars.	Capacity: at least 5,000 L Height from NGL: at least 4.0 m
PUMP AND CONTROL PANEL HOUSE	Made of CHB and Class "A" concrete mixture Painted with applicable paint for concrete With door and lock. With LED light.	- Minimum dimension: 2.0 m x 2.0 m x 2.5 m

PERIMETER FENCE	With steel gate and lock. Welded parts between pipe and chain link fence	 Dimension: depends on the design but not lower that 80m² Fence Height: 1.5 m (from the concrete post) made of Diamond-shape chain link or cyclone wire made of G.I pipe: 2" diameter, S40 with 4" thick CHB wall on smooth plastered paint finish on both sides (i.e. seagreen) 20 x 20 cm Class "A" concrete post on smooth plastered-paint finish (i.e. seagreen)
LIGHTNING ARRESTERS (LA) AND ITS COMPONENTS	Lightning arrester shall be installed in accordance with Article 2.80 (Surge Arresters) of the National Electrical Code (NEC)	1 pc LA Height: at least 6.0 m
DISTRIBUTION LINES/PIPES AND FITTINGS	For Block 1: Estimated Length = 299 m, width = 257 m. No. of coconut palms = 1,025 planted at 2-3 palms/hill = 342 - 513 hills Planting distance = 6-8m For Block 3: Estimated Length = 333 m, Width = 310 m, No. of coconut palms = 1,524 planted at 2 and 3 palms/hill = 508 to 762 hills Planting distance = 6-8m	 Water distribution lines shall be made from High Density Polyethylene pipes with sizes as follows: HDPE Pipe 3" Ø SDR 11 HDPE Pipe 2 1/2"Ø SDR 11 HDPE Pipe 2"Ø SDR 11 HDPE Pipe 1/2"Ø SDR 11 For fittings and connections (minimum): PE Saddle Clamp 2 1/2" x 1/2" PE End Cap 2" PE End Cap 1/2" PE Male Connector 2 1/2" and 1/2" Gate Valve 2 1/2" Gate Valve 2 1/2" x 2" PE Tee 2 1/2" x 2" PE Elbow Reducer 2 1/2" x2" Teflon Tape
PROJECT BILLBOARD	Should be sturdy made of Good lumber and Marine Plywood	 Project Signboard (PCA) Tarpaulin 4' x 8' Project Signboard (COA) Tarpaulin 8' x 8'
CONSTRUCTION SAFETY AND HEALTH	Warning signs shall be installed for electrical components on-site.	Provision of PPEs (safety shoes, helmet, vest, gloves) for workers and visitors and safety signages located at necessary location. PPE shall be provided

Read the attached terms of reference (TOR) to learn more about the project to bid especially the design considerations. Bidder shall conform with the TOR and conformance shall be included in the technical component-envelope during the submission of quotation.

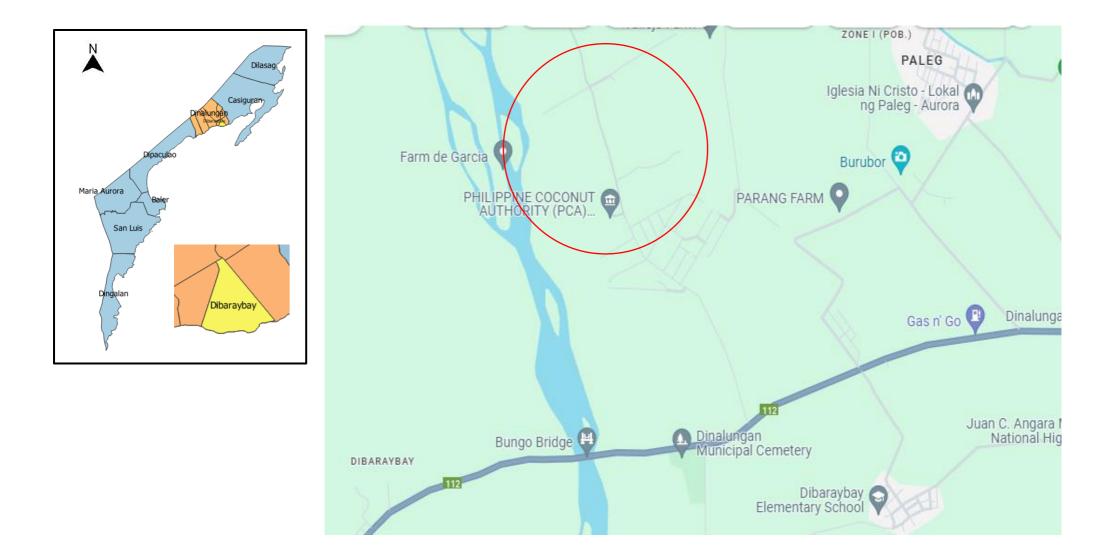
18. DRAWINGS

The design of SPIS components may be referred to the attached model design. The source of water shall be from Talaytay CIS main canal (Please see the location map).

Water distribution lines from the water tank to the coconut palms (service area) should be given proper attention during the designing of SPIS taking consideration the distance of water source to the distribution area. The priority area to irrigate are Block 1 planted with 1,025 coconut palms and Block 3 with 1,524 coconut palms with planting distance of 6-8 meters (Please see attached location map). It is also considered that future expansion of the irrigation service area will arise. The supplier will be allowed to visit and inspect the location of the proposed SPIS for evaluation and determination of proper design. Prior to the site visit, the supplier shall first secure the approval of the PE and that visit is solely for the purpose of site evaluation.

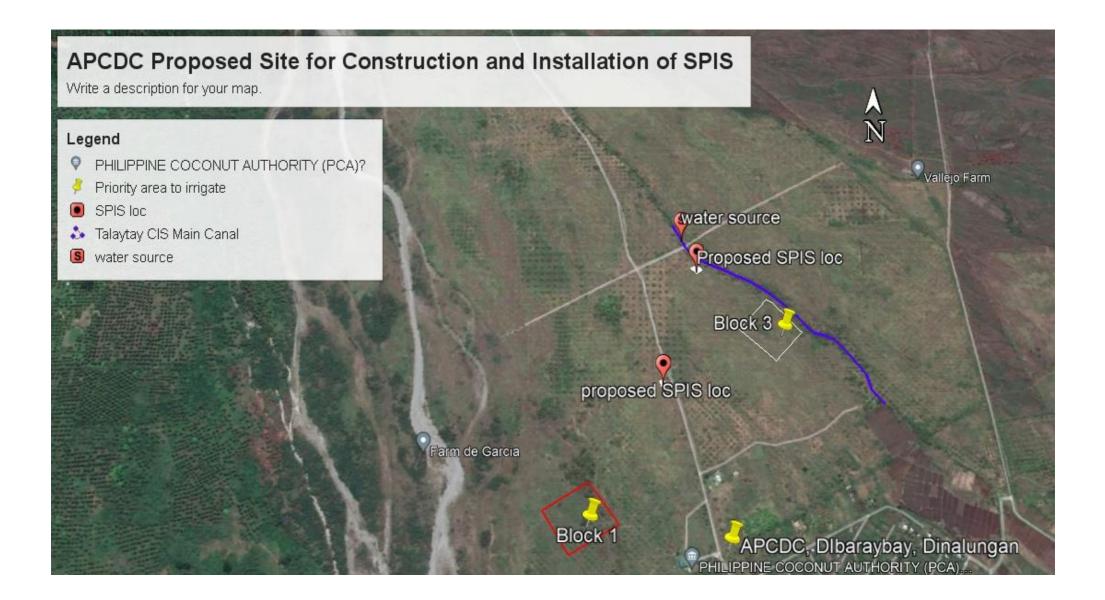
Location of SPIS components may vary depending on the design but shall be approved by the PE prior to construction and installation.

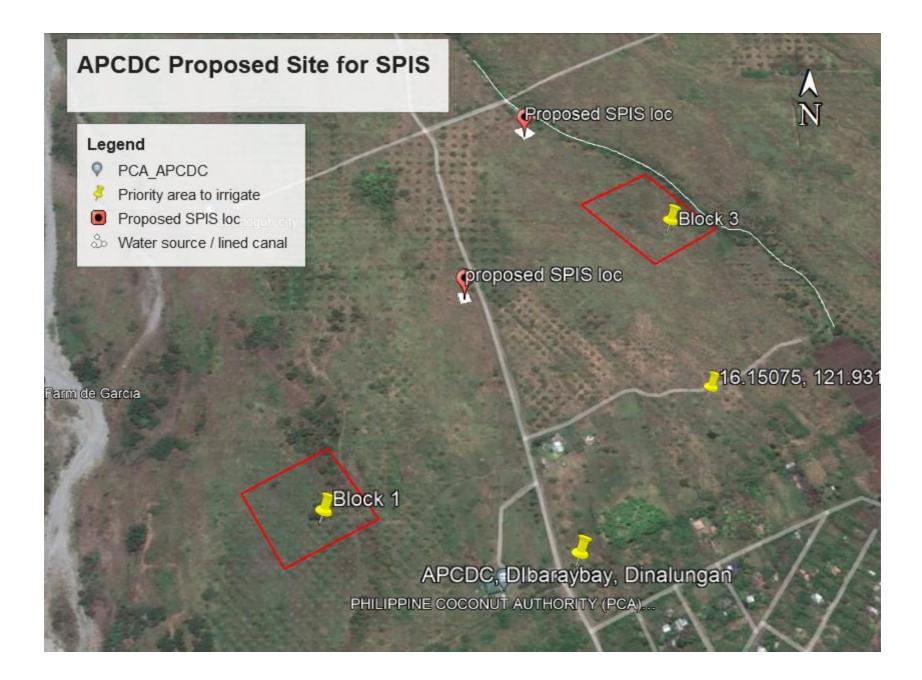


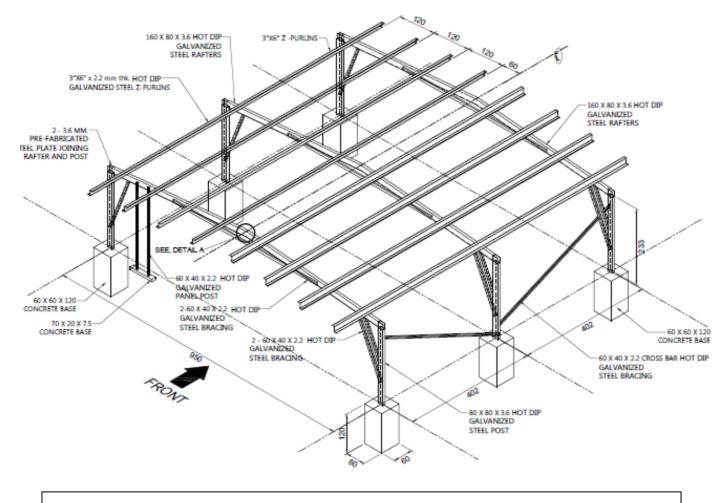


LOCATION MAP

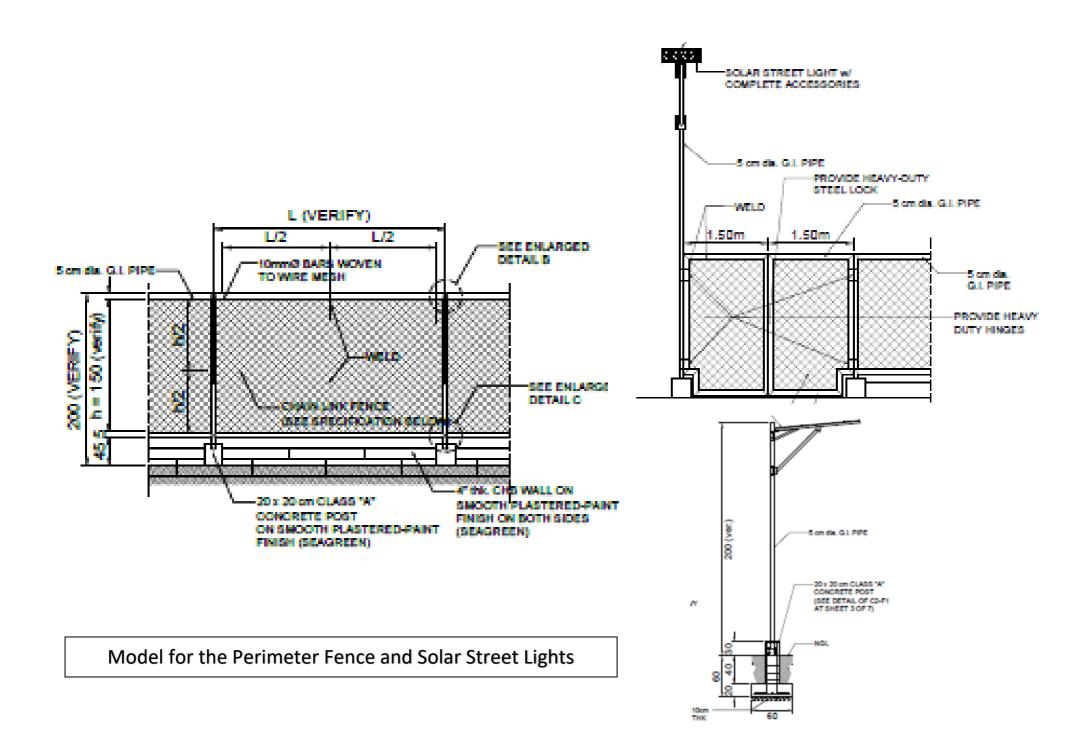
Aurora Province Coconut Development Center (APCDC) Brgy. Dibaraybay, Dinalungan, Aurora

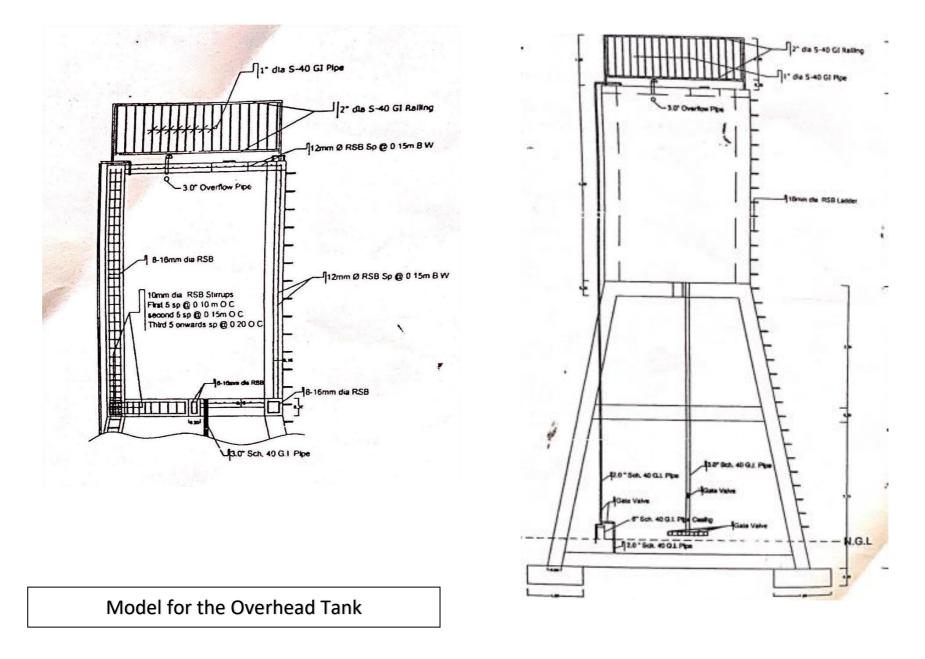


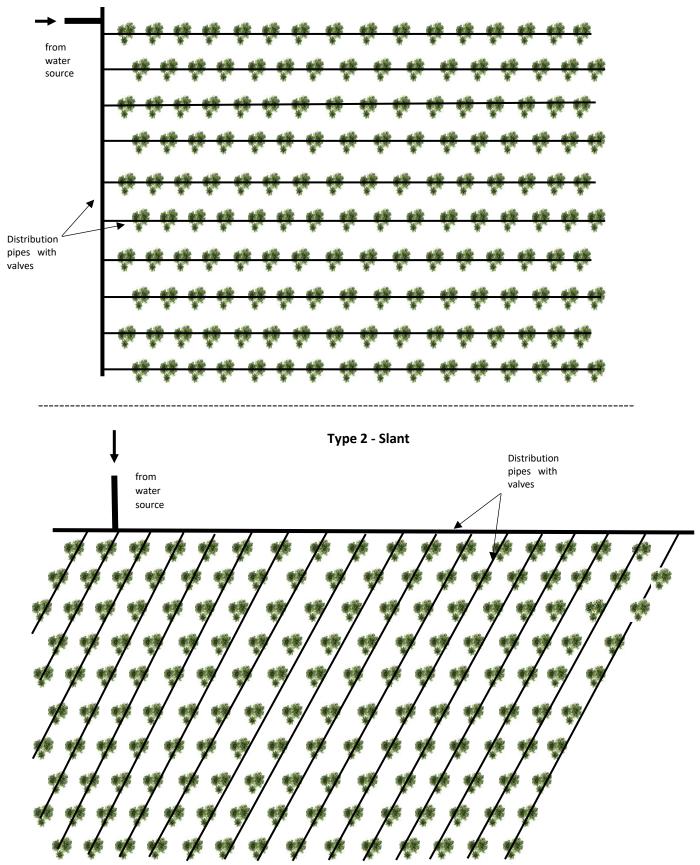




Model of the Solar Panel Frame







Model for the installation of distribution pipe lines

19. TEMPLATE OF THE REQUIRED FORMS TO BE SUBMITTED BY THE BIDDER

- Bid Form Annex "1"
- Bid Securing Declaration Annex "2"
- Omnibus Sworn Statement Annex "3"
- Statement of SLCC Annex "4"
- Statement of All On-Going and Private Contracts Annex "5"
- Net Financial Contracting Capacity Annex "6"
- List of Construction Key Personnel Annex "7"
- Certificate of Employment for Key Personnel Annex "8"
- Key Personnel (Bio-data) Annex "9"
- Bill of Quantities Annex "10"
- 20. The RBAC 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 2016 revised IRR of RA No. 9184, without thereby incurring any liability to the affected bidder or bidders.
- 21. For further information, please refer to:

MS. MICHELLE O. VILLA

RBAC Secretariat PCA - Regions I, II, III & CAR 2/F Guest House Bldg., PCA Compound, Elliptical Road, Diliman, Quezon City Email Address: <u>4b.regionalbac@gmail.com</u> Telephone: 8924-4761

06 September 2024

(SGD.) JUDT dP. PINGCO Chairperson, RBAC



DESIGN, SUPPLY, DELIVERY, CONSTRUCTION AND INSTALLATION OF SOLAR-POWERED IRRIGATION SYSTEM (SPIS) IN APCDC, DIBARAYBAY, DINALUNGAN, AURORA

TERMS OF REFERENCE

I. BRIEF DESCRIPTION

The PCA Region III and IVB, known here as the Procuring Entity (PE), needs the services of a contractor/supplier that will conduct the design, supply and delivery of materials, and construction and installation of solar-powered irrigation system (SPIS) for coconut hybrid seednuts production at Aurora Province Coconut Development Center (APCDC) in Dibaraybay, Dinalungan, Aurora known here as the "Project". The source of fund for this project is the CFIDP CY 2024.

The services required for the project under this Terms of Reference (TOR) are the design and layout of SPIS including the supply and delivery of equipment and materials, provision of labor services for the construction and installation of SPIS component, testing of SPIS components and training of operators.

II. SCOPE OF WORKS / DELIVERABLES

The Supplier/Contractor shall provide the design and layout of SPIS including the supply and deliver the equipment and materials, construct, install and test the SPIS components, and conduct of training of operators at APCDC in Dibaraybay, Dinalungan, Aurora. The scope of works is detailed as follows:

a) DESIGN AND LAYOUT OF SOLAR-POWERED IRRIGATION SYSTEM (SPIS)

This includes preparation of the detailed engineering design (DED) of the solar-powered irrigation system (SPIS) components approved and signed by the licensed and experienced civil and/or agricultural and biosystems engineer/s. The design shall be based on the PE's technical requirement and the design considerations as stated in the PNS/BAFS 324:2022 (Solar Powered Irrigation System – Specifications). The design and layout include the PV array/solar modules and frames, pump set-up, pump and control panel house, perimeter fence, solar street lights, overhead water tank, lightning arrester, and water distribution pipe lines. In addition, electrical design and layout shall also be provided by the supplier.

b) SUPPLY AND DELIVERY OF MATERIALS

- This pertains to the supply and delivery of all materials and equipment needed in the construction and installation of SPIS including testing and training.
- c) PREPARATORY WORKS
 - Initial site survey, clearing, excavation and backfilling



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d) FINISHING AND CIVIL WORKS

- Composed of carpentry and joinery works, finishing works, masonry and painting works for the construction of PV array/solar module frames, elevated water tank, pump and control panel house, perimeter fence and solar street lights.
- e) INSTALLATION OF SOLAR MODULES, INVERTER, BATTERY, SOLAR STREET LIGHTS, LIGHTNING ARRESTER, AND ELECTRICAL POWER LINES
 - Installation of solar panel, inverter, battery, cables/wires and wiring devices/accessories, solar street lights, and lightning arresters.

f) INSTALLATION OF PIPES, VALVES AND FITTINGS

- Involves installation pipes, valves and fittings from water source to the service area (coconut palms)
- g) INCIDENTAL SERVICES
 - Provision of a project signboard and the occupational safety and health of the workforce.
- h) SYSTEM TESTING AND PROVISION OF TRAINING
 - This includes conduct of testing of SPIS components and proper operation and maintenance procedure prior to turn-over and acceptance by the PE.

The Contractor/Supplier shall provide the necessary machines and equipment, tools and required materials for the completion of the said project.

III. APPROVED BUDGET FOR THE CONTRACT

The Approved Budget for the Contract (ABC) is Five Million pesos (Php5,000,000.00) under the CFIDP CY 2024.

IV. ELIGIBILITY REQUIREMENTS AND EVALUATION OF BID

Aside from the legal, technical and financial requirements, the prospective bidder/supplier shall also submit the following requirements along with its financial bid on or before the scheduled submission of bid, to wit:

- a) Detailed Engineering Design (DED) of the Solar-Powered Irrigation System (SPIS) including the electrical layout and materials to be used taking considerations the PE's requirements;
- b) Certification from the manufacturer/s or local distributor/s that the bidder is authorized distributor/dealer/ of the offered solar-power modules and accessories, inverter and pump.
- c) Certification from the manufacturer/s or local distributor/s that brand being offered has been in the Philippine market for the last five (5) years.
- d) Certification from the manufacturer/s or local distributor/s that parts and services for the offered SPIS are available for the next five (5) years within the region of delivery.
- e) Proof or Certification that the bidder has five (5) years minimum experience in the solar power business.
- f) List of authorized service center/s for the offered SPIS

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- g) Brochures of offered brand and units for SPIS (solar panel, inverter, battery, and pump)
- h) AMTEC test report for offered pump
- i) Duly notarized certification of availability of stocks from the manufacturer or Distributor (solar panel, inverter, battery, and pump)

V. WARRANTIES FOR CONSTRUCTION AND INSTALLATION OF SPIS

The supplier shall provide the Certificate of Warranty for parts and services except for normal wear and tear of the following components:

- a) ¹Solar module: at least 10 years material warranty and 25 years performance warranty
- b) ¹ Inverter with Maximum Power Point Tracking (MPPT): at least one (1) year
- c) ¹ Pump: at least a one (1) year
- d) ¹ Workmanship: at least one (1) year
- e) ¹ After-sales service: at least one (1) year

The Certificate of Warranty shall be issued to the PE during the inspection and acceptance of the installed SPIS.

¹ Warranty is based on PNS/BAFS 324:2022

VI. DESIGN CONSIDERATIONS AND MINIMUM TECHNICAL SPECIFICATIONS OF SPIS

Below are the design considerations and minimum technical specifications of SPIS components. Specifications may vary, but not below the minimum technical requirements.

Item	Design/Installation consideration	Technical Specifications
PV ARRAY (Solar panels)	Installed with a rigid alloy rail made of non-corrosive material Mounting frame structure should be made from galvanized iron (GI) pipes or angular bars either primed, hot dipped galvanized with minimum of 5mm or double coated with non-corrosive paint. All structures materials shall be made of high- tensile steel (420 mpa and higher), pre- coated with anti-corrosion coating. All bolts that are used to fix mechanical components shall be	 20 pcs 550W or its equivalent monocrystalline Modules shall adhere to the applicable IEC standards including IEC-612215, IEC 61730 and IEC 60364 Efficiency shall be no less than 22%



PUMP SET (surface) INVERTER AND ACCESSORIES (SOLAR PANEL OR PV ARRAY CONTROLLER)	made from steel 8.8 or 10.4 and shall be coated with iron zinc coating. PV modules shall withstand minimum gustiness and uplift of 180kph Special distance between each PV modules should be at least 20mm Placement of the PV array shall be away from any source of shades any time of the year. PV array should be facing the south. Surge Protection Devices (SPD) shall be installed along with the PV module. A trash rack, made of non-corrosive material or painted with protective coating, shall be installed along with the pump intake. For protection: Dry running, overheating, overloading, voltage transient, and low/high voltage input protection shall be provided for the pump set For Protection: The pump set controller and the PV array controller shall be insect-proofed and weather-proofed by using double-proof box and sealants. The solar panel controller should be encased with a combiner box.	 <u>G.6.</u> Minimum power of 5.6 KW or Cl 7.5 hp A discharge measuring device, such as flow meter or water meter, should be included with the pump set. Pipes and fittings for the pump and accessories will be based on the design subject to verification by the PE. 125% of pump power (minimum 7KW or 9.4hp or its equivalent) 9.25 kW or 11.25 kp A minimum of IP58 (splash proof) rating shall be used as per IEC60529:1989+A1:1999+A2: 2013
BATTERY	Shall be compatible to solar panel and inverter. Warranty of at least 10 years.	 AC or DC coupled Made of lithium e.g. lithium- ion, lithium iron phosphate (LFP), lithium manganese oxide, etc. Minimum of 48V Back-up battery type.

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CABLES AND WIRES FOR ELECTRICAL SYSTEM	Cables and wirings used for the SPIS shall be in accordance with the Philippine Electrical Code (PEC), using PV cables specific for PV modules. Wiring installations shall be properly protected for weather conditions and other external factors.	 Use applicable PVC / HDPE pipes for conduits
SOLAR STREET LIGHT WITH ACCESSORIES	Made of aluminum alloy housing. Placed at corners of perimeter fence. Height of post from NGL – at least 2.5 m	 4 pcs solar street light Minimum of 105W Solar module With 10W LED light Battery type: 12 V Lithium type 2" diameter GI pipe
OVERHEAD WATER TANK	Made of CHB and Class "A" concrete mixture Painted with applicable paint for concrete Shall have provision of stairs made of durable steel/iron bars.	Capacity: at least 5,000 L Height from NGL: at least 4.0 m
PUMP AND CONTROL PANEL HOUSE	Made of CHB and Class "A" concrete mixture Painted with applicable paint for concrete With door and lock. With LED light.	 Minimum dimension: 2.0 m x 2.0 m x 2.5 m
PERIMETER FENCE	With steel gate and lock. Welded parts between pipe and chain link fence	 Dimension: depends on the design but not lower that 80m² Fence Height: 1.5 m (from the concrete post) made of Diamond-shape chain link or cyclone wire made of G.I pipe: 2" diameter, S40 with 4" thick CHB wall on smooth plastered paint finish on both sides (i.e. seagreen) 20 x 20 cm Class "A" concrete post on smooth plastered-paint finish (i.e. seagreen)
LIGHTNING ARRESTERS (LA) AND ITS COMPONENTS	Lightning arrester shall be installed in accordance with Article 2.80 (Surge Arresters) of the National Electrical Code (NEC)	1 pc LA Height: at least 6.0 m

7/16

DISTRIBUTION LINES/PIPES AND FITTINGS PROJECT BILLBOARD	For Block 1: Estimated Length = 299 m, width = 257 m. No. of coconut palms = 1,025 planted at 2-3 palms/hill = 342 - 513 hills Planting distance = 6-8m For Block 3: Estimated Length = 333 m, Width = 310 m, No. of coconut palms = 1,524 planted at 2 and 3 palms/hill = 508 to 762 hills Planting distance = 6-8m Should be sturdy made of Good lumber and Marine Plywood	 Water distribution lines shall be made from High Density Polyethylene pipes with sizes as follows: HDPE Pipe 3" Ø SDR 11 HDPE Pipe 2 1/2"Ø SDR 11 HDPE Pipe 2"Ø SDR 11 HDPE Pipe 1/2"Ø SDR 11 HDPE Pipe 1/2"Ø SDR 11 For fittings and connections (minimum): PE Saddle Clamp 2 1/2" x 1/2" PE End Cap 2" PE End Cap 1/2" PE End Cap 1/2" PE Male Connector 2 1/2" and 1/2" Gate Valve 2 1/2" PE reducer 2 1/2" x 2" PE Tee 2 1/2" PE Elbow Reducer 2 1/2" x2" Teflon Tape Project Signboard (PCA) Tarpaulin 4' x 8' Project Signboard (COA)
CONSTRUCTION SAFETY AND HEALTH	Warning signs shall be installed for electrical components on-site.	Tarpaulin 8' x 8' Provision of PPEs (safety shoes, helmet, vest, gloves) for workers and visitors and safety signages located at necessary location. PPE shall be provided

The design of SPIS components may be referred to the attached model design. The source of water shall be from Talaytay CIS main canal (Please see the location map).

Water distribution lines from the water tank to the coconut palms (service area) should be given proper attention during the designing of SPIS taking consideration the distance of water source to the distribution area. The priority area to irrigate are Block 1 planted with 1,025 coconut palms and Block 3 with 1,524 coconut palms with planting distance of 6-8 meters (Please see attached location map). It is also considered that future expansion of the irrigation service area will arise. The supplier will be allowed to visit and inspect the location of the proposed SPIS for evaluation and determination of proper design. Prior to the site visit, the supplier shall first secure the approval of the PE and that visit is solely for the purpose of site evaluation.

Location of SPIS components may vary depending on the design but shall be approved by the PE prior to construction and installation.

7/10

VII. POST-QUALIFICATION

All the documents submitted by the supplier with the Single/Lowest Calculated Bid (S/LCB), shall be subjected to post-qualification. The submitted DED of the SPIS will be evaluated based on the requirements set by the PE and the minimum specification,

construction and performance in PNS/BAFS 324:2021/2022. Also, the capacity of the supplier to undertake the project shall also be evaluated and verified.

VIII. MAINTENANCE TOOLS

During final inspection and acceptance, the supplier shall provide the Operation and Maintenance Manual of the SPIS as well as the following basic hand tools including, but not limited to, **one set of each** of the following:

- a) Multi-testers;
- b) Adjustable wrench;
- c) Pipe wrench;
- d) Box and open wrenches;
- e) Philips;
- f) Flat screw-driver.

IX. TESTING AND TRAINING OF OPERATORS

The supplier is required to conduct full testing of the newly installed SPIS. Each component shall be tested based on its standard operation. All SPIS components (solar modules, inverter, battery, pumps and motor, control panel, solar street lights, etc.) are in good working condition and most importantly be able to irrigate the intended coconut areas.

In addition, the supplier must be able to train the designated operators of SPIS on its operation and maintenance procedures. A certification from the PE that the supplier satisfactorily conducted the training must be secured by the supplier along with the training report and photos. These will be one of the bases for the final acceptance and payment to the supplier of the finished project.

X. TIMELINES

The following timelines shall be complied by the contractor/supplier within the stipulated period:

- a) The Contractor/Supplier shall commence the construction and installation immediately upon receipt of the Notice to Proceed from the PE.
- b) The Contractor/Supplier shall finish the construction and installation works within one hundred twenty (120) calendar days upon receipt of the Notice to Proceed from the PE.

XI. INSPECTION AND ACCEPTANCE OF PROJECT

Inspection during and after the construction and installation shall be conducted by the PCA authorized representative/s. The inspection and full acceptance of the project by the PE is done based on the requirements and approved design of SPIS.

7/14

XII. LIQUIDATED DAMAGES AND LIABILITY OF THE SUPPLIER

Where the contractor refuses or fails to satisfactorily complete the work within the specified contract time, plus any time of extension duly granted and is hereby in default under the contract, the contractor shall pay the PE for liquidated damages, and not by way of penalty, an amount equal to at least one tenth (1/10) of one percent (1%) of the

cost of the undelivered/unperformed portion of the items/works for every day of delay. Once the cumulative amount of liquidated damages reaches ten percent (10%) of the amount of the contract, the procuring entity may rescind or terminate the contract,

without prejudice to other courses of action and remedies open to it (Section 68 of the Revised IRR of RA 9184).

If after signing and accepting the Contract of Agreement, the contractor fails to deliver the required services, appropriate sanctions will be imposed as prescribed under Republic Act (RA) 9184 and its Revised Implementing Rules and Regulations (IRR).

XIII. TERMS OF PAYMENT

Payment of the contract price shall be made in Philippine Peso. Full payment of the Contract Price shall be made upon submission of the supplier of the billing statement together with the official sales invoice, training report and photos, and inspection and acceptance report by the PE that the construction, installation and testing of the solar-powered irrigation system including the training of operators are already completed.

Prepared by:

CATHERINE MAY A. MANONGSONG CS-PDOII/RTS

Approved by:

DENNIS D. ANDRES Regional Manager III



CONFORME:

Authorized Bidder's Representative (Printed Name and Signature)

Date

Bid Form for the Procurement of Infrastructure Projects

[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, declare that:

- a. We have no reservation to the PBDs, including the Supplemental or Bid Bulletins, for the Procurement Project: *[insert name of contract]*
- b. We offer to execute the Works for this Contract in accordance with the PBDs;
- c. The total price of our Bid in words and figures, excluding any discounts offered below is: *[insert information]*;
- d. The discounts offered and the methodology for their application are: [insert information];
- e. 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 and reflected in the detailed estimates,
- f. Our Bid shall be valid within the a period stated in the PBDs, and it shall remain binding upon us at any time before the expiration of that period;
- g. If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[insert percentage amount]* percent of the Contract Price for the due performance of the Contract, or a Performance Securing Declaration in lieu of the the allowable forms of Performance Security, subject to the terms and conditions of issued GPPB guidelines¹ for this purpose;
- h. We are not participating, as Bidders, in more than one Bid in this bidding process, other than alternative offers in accordance with the Bidding Documents;
- i. We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed; and
- j. We understand that you are not bound to accept the Lowest Calculated Bid or any other Bid that you may receive.
- k. We likewise certify/confirm that the undersigned, is the duly authorized representative of the bidder, and 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 the [Name of Project] of the [Name of the Procuring Entity].
- 1. We acknowledge that failure to sign each and every page of this Bid Form, including the Bill of Quantities, shall be a ground for the rejection of our bid.

² currently based on GPPB Resolution No. 09-2020

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]

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, <u>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;</u>
- 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, Procurement Agent if engaged, 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, Procurement Agent if engaged, 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, Procurement Agent if engaged, 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. <u>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.</u>

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] Statement Of Single Largest Completed Contract (SLCC)

[Date]

BAC Chairperson

Philippine Coconut Authority Region III and IVB

Dear BAC Chairperson____

In compliance with the eligibility requirements for the bidding of the

this is to certify that [name and complete address of Bidder] has the following completed government and private contracts:

at

							-	_	
Tab No.	Tab No. Name of Contract		Date of Contract Contract Duration	Owner's Name and Address	Nature of Work	Contractor's Role (whether sole contractor, subcontractor or partner in a JV)	Total Contract Value at Award (in PhP)	Date of Completion	Total Contract Value at Completion, if applicable (In PhP)
Note: This	statement is to be su	oported by Cor	ntracts OR purche	sse Order, certificate o	f completion OR owner	Note: This statement is to be supported by Contracts OR purchase Order, certificate of completion OR owner's final acceptance and CPES rating sheets, Official Receipt OR Sales Invoice, Program of Work. if applicable.	veets, Official Receipt OR S	ales Invoice, Progra	m of Work. if applicable.

Yours sincerely,

These supporting documents are to be numbered and tabbed in the same sequence as the list of contracts appears in this statement.

[Signature over printed name of Authorized Representative] [Title] [Name of Firm] Statement of All On-Going Government and Private Contracts, Including Contracts Awarded but Not Yet Started, If Any

[Date]

BAC Chairperson

Philippine Coconut Authority Region III and IVB

Dear BAC Chairperson

In compliance with the eligibility requirements for the bidding of the $_-$

, this is to certify that

at

	Value of Outstanding Works, if applicable (in PhP)		
	Percentages of Planned & Actual Accomplishments, if applicable		
	Total ContractPercentages oValue atPlanned & ActuCompletion, ifAccomplishmenapplicable (In PhP)if applicable		
/et started]:	Estimated Date of Completion		
name and complete address of Bidder] has the following on-going government and private contracts. [Including contracts awarded but not yet started]:	Total Contract Value Estimated Date of at Award (in PhP) Completion		
itracts. [Including con	Contractor's Role (whether sole contractor, subcontractor or partner in a JV)		
ent and private con	Nature of Work		
on-going governme	Contract Owner's Name Duration and Address		
he following	Contract Duration		
ress of Bidder] has t	Date of Contract		
complete addr	Name of Contract		
[name and i	Tab No.		

Note: This statement shall be supported by Notice of Award or Notice to Proceed or Contract. These supporting documents are to be numbered and tabbed in the same sequence as the list of contracts appears in this statement.

Yours sincerely,

[Signature over printed name of Authorized Representative] [Name of Firm [Title]

NET FINANCIAL CONTRACTING CAPACITY (NFCC)

A. Summary of the Applicant Firm's Contractor's assets and liabilities on the basis of attached income tax return and audited financial statement, stamped "RECEIVED" by the Bureau of Internal Revenue or BIR authorized collecting agent, for immediately preceding year and certified copy of the Schedule or Fixed Assets particular the list of construction equipment.

Year 202 _____

- Total Assets
 Current Assets
- 3 Total Liabilities
- 4 Current Liabilities
- 5 Total Net Worth (1-3)
- 6 Current Net Working Capital (2-4)
- B. The Net Financial Contracting Capacity (NFCC) based on the above data is computed as follows:

NFCC = K (current asset – current liabilities) minus value of all outstanding works under ongoing contracts including awarded contracts yet to be started.

K = 15;

C. Computation:

Net Working Capital	=	P
Multiply by K	=	
	=	P
Minus: Value of Outstanding Works	=	P
Net Financial Contracting Capacity	=	P

Submitted by:

Name of Firm/Contractor

Name and Signature of Authorized Representative

Date

List of Construction Key Personnel Proposed to be Assigned to the Contract

Business Name :

Business Address :					
			Personnel-in-Charge		
	Project Manager	Project Engineer	Electrical Engineer	Health and Safety	Foreman
Name					
Address					
Date of Birth					
Employed Since (Current Co.)					
Previous Employment					
Education					
PRC License/Accreditation from DOLE- OHSC (for the Health and Safety Officer)					
Years of Experience in Proposed Position					

Note: This List must be supported by the following documents:

1. Individual resumes to show proof of the following:

a. That the proposed personnel meet the required relative experience

b. List of projects handled with the corresponding position and its inclusive years of experience (e.g., Building Construction, Project Manager, 2015-2020)

 Photocopy of PRC Licenses/DOLE-OHSC/DPWH Accreditation. Submitted by:

(Printed Name & Signature of Authorized Representative) Designation :

Certificate of Employment for Key Personnel

Issuance Date

Chairperson Regional Bids and Awards Committee Philippine Coconut Authority Regions III and IVB Diliman, Quezon City

Dear Sir / Madame:

I am <u>(Name of Nominee)</u> a Licensed _____ with Professional License No. _____ issued on <u>(date of issuance)</u> at <u>(place of issuance)</u>.

I hereby certify that <u>(Name of Bidder)</u> has engaged my services as <u>(Designation)</u> for <u>(Name of the Contract)</u>, if awarded to it.

As <u>(*Designation*)</u>, my services were engaged for the following completed projects similar to the contract under bidding):

NAME OF PROJECT	<u>OWNER</u>	COST	DATE COMPLETED
At present, I am employed on	the following projects:		
NAME OF PROJECT	<u>OWNER</u>	<u>COST</u>	EXPECTED DATE OF COMPLETION

In case of my separation for any reason whatsoever from the above-mentioned Contractor, I shall notify the <u>(*Name of the Procuring Entity*)</u> at least twenty one (21) days before the effective date of my separation.

As <u>(*Designation*)</u>, I know I will have to stay in the job site <u>(*full time/part time*)</u> to supervise and manage the Contract works to the best of my ability.

I do not allow the use of my name for the purpose of enabling the above-mentioned Contractor to qualify for the Contract without any firm commitment on my part to assume the post of <u>(Designation)</u> therefore, if the contract is awarded to him since I understand that to do so will be a sufficient ground for my disqualification as <u>(Designation)</u> in any future bidding or employment with any Contractor doing business with the <u>(Name of the Procuring Entity)</u>.

(Signature of key personnel)

Republic of the Philippines) _____) S.S.

SUBSCRIBED AND SWORN TO before me this _____ day of _____ 20__affiant exhibiting to me his Residence Certificate No. _____ issued on ______ at _____.

> Notary Public Until December 31, 20____

Doc. No. ____; Page No. ____; Book No. ____; Series of ____;

Key Personnel (Bio-data)

Give the detailed information of the following personnel who are scheduled to be assigned as full-time/part time field staff for the project. <u>Fill up a form for each personnel.</u>

-	Authorized Mana Sustained Techni		esentative	
1. 2. 3. 4. 5.	Name Date of Birth Nationality Education and De Length of Service		Years	
	Inclus	ive Date: from	<u>(month), (year)</u> to	(month), (year)
6.	Skills :			
7.	Work History: If Item 5 is less t three (3)-year per		give name and length of service w	ith previous employers for a
Inc	lusive Date	Position	Name and address of Employer	Nature of Job Performed

(Signature over printed name of employee)

It is hereby certified that the above personnel can be assigned to this project, if the contract is awarded to our company.

(The Authorized Representative)

(Place and Date)

Bill of Quantities

ITEM NO.	DESCRIPTION OF ITEM/S TO BE SUPPLIED (INCLUDE BRAND NAME IF APPLICABLE)	QTY.	UNIT of MEASURE	UNIT PRICE (Php)	TOTAL OFFERED PRICE (Php)
Ι	DESIGN AND LAYOUT OF SOLAR- POWERED IRRIGATION SYSTEM (SPIS)	1	ls		
	PREPARATORY WORKS				
п	Initial site survey, clearing, excavation and backfilling	1	ls		
	Mobilization	1	ls		
	MASONRY, STEEL, FINISHING AND OTHER CIVIL WORKS	1	ls		
	A. Overhead Tank	1	unit		
	Masonry and RSB Works and Materials	1	ls		
	Carpentry and joinery works and Materials	1	ls		
ш	Cement Plaster Finishing and Materials	1	ls		
	Painting works and Materials (Masonry Painting)	1	ls		
	B. Pump and Control Panel House	1	unit		
	Masonry and RSB Works and Materials	1	ls		
	Carpentry and joinery works and Materials	1	ls		
	Cement Plaster Finishing and Materials	1	ls		
	Painting works and Materials	1	ls		
	C. Perimeter Fence	1	ls		
	Masonry and RSB Works and Materials	1	ls		
	Carpentry and joinery works and Materials	1	ls		
	Cement Plaster Finishing and Materials	1	ls		
	Painting works and Materials	1	ls		
	D. Solar Module Frames	1	ls		
	Masonry, RSB Steel framing Works and Materials	1	ls		
IV	ELECTRICAL WORKS (Electrical Power Lines and Devices Installation)	1	ls		
IV	Cables/Wires and Wiring and Protection Devices and Accessories	1	ls		
v	INSTALLATION OF SPIS COMPONENT	1	ls		
	Pump and pump set-up/installation including gauge (flow meter or water meter) and accessories	1	ls		
	PV Array/Solar Panels	20	pcs		
	Inverter and its Accessories and Contral Panel including Protection Devices	1	ls		
	Battery	1	pcs		
	Solar Street Lights and its Components	4	pcs / ls		
	Lightning Arrester and Components	1	pcs / ls		

VI	INSTALLATION OF DISTRIBUTION LINES/PIPES, PIPES, VALVES AND FITTINGS	1	ls	
	HDPE pipes	1	ls	
	Saddle clamps	1	ls	
	Gate valves	1	ls	
	PE Reducers and elbow reducers	1	ls	
	PE Tee	1	ls	
	Teflon tape	1	ls	
	Male and female connectors	1	ls	
	INCIDENTALS			
	A. Project Signboard (for PCA and COA) and Materials	1	set	
	B. Construction Safety and Health			
	First Aide Kits	6	sets	
	Personal Protective Equipment for all workers	1	ls	
	Safety Helmet			
VII	Safety shoes			
	Safety Gloves			
	Vest			
	Signages and Barricades			
	PPE Signage (4' x 8')	1	pcs	
	Safety First Signage (4' x 4')	1	pcs	
	Warning Signs (2' x 3')	2	pcs	
	Caution Tape, 100 ft	2	roll	

OTHER COSTS

Labor Consumables (3-5% of material cost) Equipment Rental Overhead, Contingencies and Miscellaneous Value Added Tax (VAT)

TOTAL QUOTATION/BID PRICE (PhP)