



BID BULLETIN NO.1
09 March 2023

REFERENCE NO : 9543536
TITLE : Proposed Solar Data Center with Operation, Monitoring and Maintenance (OMM) and Electrical Works for the (16) Installed Solar PV at Pasig Sports Center, Caruncho Ave., Brgy. SanNicolas, Pasig City

TO: All Prospective Bidders
Others Concerned

Relative to the above project published on PhilGEPS on 08 March 2023, please be informed of the Terms of Reference:

Project : OPERATION , MONITORING AND MAINTENANCE (OMM) OF (16)
INSTALLED SOLAR PV
Location : Various Location, Pasig City
Subject : TERMS OF REFERENCE

1.0 Project Overview

LGU Pasig has the noble intention of reducing fossil fuel related emissions from our dayà day operations and a long-term commitment to tackle climate change. The main objective of this project is to save on our day time power consumption and reduce the CO₂ emissions using green electricity across a number of our facilities through the use of solar PV systems. The succeeding documents specify the complete technical specification of a full turn key operation, minor maintenance and rehabilitation of 16 various solar rooftop power systems. The works shall include preparation of solar working plans, operation, minor maintenance, testing & commissioning and handling over of the mentioned Solar PV Power Systems in good operating condition compliant to all the required specifications and functions.

ITEM	PROJECT	LOCATION	SYSTEM USED
1	STO TOMAS MULTI PURPOSE / COVERED COURT	STO TOMAS	15.75 KW -HYBRID
2	SAGAD ELEMENTARY SCHOOL	SAGAD	15.75 KW -HYBRID
3	CITY MOTORPOOL	CANIOGAN	15.75 KW -HYBRID
4	KALAWAAN MULTI PURPOSE / COVERED COURT	ISMAR KALAWAAN	15.75 KW -HYBRID
5	NAGPAYONG MULTI PURPOSE / COVERED COURT	NAGPAYONG PINAGBUHATAN	12.285 KW -HYBRID
6	NAGPAYONG HIGH SCHOOL	NAGPAYONG PINAGBUHATAN	119.7 KW -HYBRID
7	E. SANTOS MULTI PURPOSE / COVERED COURT	E. SANTOS PINAGBUHATAN	12.285 KW -HYBRID
8	HRM PLP BUILDING	KAPASIGAN	19.215 KW -HYBRID



9	DAMAYAN MULTI PURPOSE / COVERED COURT	DAMAYAN PINAGBUHTAN	12.285 KW -HYBRID
10	NAPICO MULTI PURPOSE / COVERED COURT	MANGGAHAN	12.285 KW -HYBRID
11	MANGGAHAN MULTI PURPOSE / COVERED COURT	MANGGAHAN	12.285 KW -HYBRID
12	SANTOLAN HIGH SCHOOL	SANTOLAN	15.75 KW -HYBRID
13	SANTOLAN MULTI PURPOSE / COVERED COURT	SANTOLAN	12.285 KW -HYBRID
14	MEGA MARKET	SAN NICOLAS	400 KW ON GRID
15	CENTRAL ELEMENTARY SCHOOL	SAN NICOLAS	180 KW OFF GRID
16	PASIG SPORTS CENTER	SAN NICOLAS	100 KW ON GRID

2.0 Objective

The objective of the project is to identify and select the most qualified turnkey photovoltaic (PV) system Third Party Contractor for the operation, minor maintenance and monitoring of 16 various Solar Rooftop Project.

3.0 Design Concept

The bidder shall present its own technical assessment and should guarantee their claimed yearly energy production in Kw-Hr.

Solar PV Power Plant Capacity:

- a. Capacity of Electricity it can provide per day
- b. Projected First Year Power Generation

4.0 Scope of Works

Scope of work should include securing all permits and approvals from governing agencies, all labor, taxes, insurances, services, and equipment necessary to produce the required fully operational solar PV power plants.



General Solar Site Evaluation
A. Preparation of Solar As Built Plan per site with Single Line Diagram
B. Ensure roof penetrations are watertight
C. Ensure roof drainage is adequate, roof drains are not clogged, and confirm that there are no signs of water pooling in the vicinity of the array
D. Check for vegetation growth or other new shade items such as billboards or trees
E. Confirm proper system signage is in place
F. Confirm appropriate expansion joints are used where needed in long conduit runs
G. Confirm electrical enclosures are only accessible to authorized personnel, are secured with padlocks or combination locks, and have restricted access signage
H. Check for corrosion on the outside of enclosures and the racking system
I. Check for cleanliness throughout the site--there should be no debris in the inverter pad area or elsewhere
J. Check for loose hanging wires in the array
K. Check for signs of animal infestation under the array
Detailed Project Audit
A. Inspect the inverter/electrical pad to make sure it does not show excessive cracking or signs of wear. The inverter should be bolted to the pad at all mounting points per the manufacturer installation requirements. Depending on the size, location, and accessibility of the system to unqualified personnel, the inverter, combiner boxes, and disconnect switches should require tools or have locks to prevent unauthorized access to the equipment.
B. Look for warning placards including arc flash or PPE requirements for accessing equipment. Be sure to comply with all warning placards. If no placards are present, or if some placards are missing, make a note of it and install the missing placards during the maintenance visit.



- Insulation and Grounding Tester.
- Megger Tester.
- Service Vehicle.
- e. The Bidder should submit detailed schedule of works with engineering tools attached:
 - PERT-CPM
 - Utilization Schedule of Equipment and Manpower
 - Gantt Chart with S- Curve

6.0 Knowledge and Familiarity of the Protections

- a. Over current Protection
- b. Disconnection (isolation switch)
- c. Transient voltage surge suppressors (TVSS)
- d. Equipment and system grounding (earthing)
- e. Lightning protection
- f. Anti-islanding protection

7.0 Financial Offer

The bidder shall present its firm financial offer inclusive of all the required government permits costs.

8.0 Eligibility Requirement

- a. Participating companies should have a minimum 5 years' solar grid tied / hybrid and off-grid solar system experience in the Philippines from date of the bidding.
- b. Participating companies should have a minimum capacity working system of 100 kWp of solar PV power plant (single project) installed locally with acceptable proven system performance. LGU Pasig Solar Technical Person / Group has the option to do site inspection on any of the participating companies' submitted project list references as part of its pre and post qualification process.
- c. Participating companies should be able to submit all legal documents not limited to the following; SEC registration, Mayor's permit, grid tied PV project references and FS for the past two (2) years.
- d. Participating companies should have a certificate on the "Design, construction and maintenance of solar PV power plant".
- e. Participating companies should have a valid PCAB license, minimum category of Small B.
- f. Will provide Internet connection to all Solar Project for one (1) year.



9.0 Evaluation Criteria

The criteria for evaluating the technical proposals will be the level of understanding of the bidders of the scope of the Tender Document, requirements for technical responsiveness and experience. These includes the adaptation of the site conditions to their own technical design, such as calculation of the solar generator yields according to Normal Operation Cell Temperature (NOCT) and detailed shading analysis, compliance to International Quality Standards (i.e. IEC, UL) applicable to main components of the system, such as solar modules, inverters and Balance of Plant (system).

- a. Plant capacity with the available area provided in the key characteristics of the plant's potential target kWp.
- b. Compliance of the major components to the standards.
- c. System Efficiency, Plant Performance and Ranking
 - Maximum system efficiency and performance
- d. Yield of the System:
 - Projected annual energy production shall be calculated based on local and international data base from irradiation and climatic condition of the site
 - Projected annual energy production shall be calculated with consideration on the actual shading analysis of the site
 - The plant performance shall be computed using a Normal Operating Cell Temperature (NOCT) at least 45 degrees centigrade
 - Material degradation and all losses shall be described
- e. The technical bids shall be evaluated based on a "Pass-Fail" Evaluation Framework

10.0 Terms of Service

This operation, monitoring and maintenance of the 16 installed Solar PV is a one time OMM to be completed in a year.

Prepared By:

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Chief, Special Projects Section



BIDS AND AWARDS COMMITTEE

This notice shall form an Integral Part of the said bidding.

For the information and guidance of all concerned.

F: *Josephine C. Lati-Bagoisan*

ATTY. JOSEPHINE C. LATI-BAGAOISAN
BAC Chairperson