

REQUEST FOR BID

To: Interested Bidders	DATE:	5/22/2023
	REFERENCE NUMBER:	RFQ 23-01

Dir Sir/Madam,

Subject: Supply, Deliver and install Solar Inverters

The Pohnpei Utilities Corporation (PUC) has received funds through the U.S. Office of Insular Affairs (OIA) Maintenance Assistance Program (MAP) for the *Solar Farm located at Pohnlangas Madolehnihmw* to purchase **24 Solar Inverters and installation**.

You are invited to submit firm bid price for **Twenty Four (24) solar Inverters and installation** as detailed in Annex 1 "Terms of Reference" of this BID. When preparing your quotation, please be guided by the "Quotation Requirement & Conditions" in Annex 2.

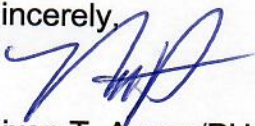
Quotations must be received by PUC on or before 6/22/2023 Pohnpei Time (GMT+11) and via email or courier mail to the address below:

Pohnpei Utilities Corporation
P.O. Box C, Kolonia, Pohnpei, FSM 96941
nanson@mypuc.fm
copy to: sidneyk@mypuc.fm

Quotation submitted by email must be limited to a maximum of 15MB, virus-free and no more than 1 email transmission. They must be free from any form of virus or corrupted contents, or the quotation shall be rejected.

PUC reserves the right to reject any or all proposals for any reason and to waive any defects in said proposal, if in its sole opinion, to do so would be in the best interest of PUC. All proposals shall become the property of PUC.

Sincerely,



Nixon T. Anson/PUC CEO

TERMS OF REFERENCE

Scope of Work

Supply, deliver and install 24 Solar Inverters that will meet the minimum requirement set forth in the Standards and Specification.

Delivery will be CIF, Pohnpei, Federated States of Micronesia.

Standard and Specifications

Goods offered shall be reviewed based on the completeness and compliance of the quotation with the minimum specifications described below and any other details of PUC requirements.

Project background



The Pohnpei Utilities Corporation was established by law in Pohnpei State to manage the state's power, water and sewer systems. PUC strives to achieve the *Pohnpei State Energy Master Plan* by seriously pursuing renewable energy projects. PUC will be able to achieve such mandate for the people of the State of Pohnpei once the energy master plan is put into place to achieve the renewable energy target of 50% renewable energy integration by year 2030.

PUC has deployed renewable energy projects into the grid. In PUC owned Pohnlangas site, there are three solar farms, namely, 600 kWp UAE solar farm, 274 kWp MFAT solar farm, and 2.0 MWp and 2.0 MWH BESS solar farm, an IPP project owned by KSEL. Furthermore, PUC has owned solar rooftop installations, namely, 200 kWp Nett School Solar Rooftop, 160 kWp COM Solar Rooftop and 20kWp Capitol Solar Rooftop. PUC owned a 725 kW hydro power station.

The UAE solar deployment since it was commissioned helped a lot to the energy mix of PUC notwithstanding the contribution to the RE target of Pohnpei State as defined in the Pohnpei State Energy Master Plan. Thus, sustainability of the aforementioned asset is of great importance to PUC. Due to aging infrastructure and some technical issues that arise in the course of its operation, some of the UAE inverters were defective and obsolete in the market for replacement and technical support.

PUC envisage to replace this defective and obsolete inverters for better service and ease of technical support for new generation of solar inverters

The awarded contractor will replace and configure if needed 24 Solar PV inverters on this solar system according to the specifications and scope of work provided:

	<p>SMA Solar Inverters –</p> <ul style="list-style-type: none"> • PUC have identified 24 Solar PV inverters on the UAE solar farm which need to be replaced. The inverters models are SMA STP 24000–US, 480V, 60 Hz, which have been discontinued and obsolete. • Replacement units are no longer available on the market thus a different inverter is required. SMA inverters are preferred. <p>The replacement of defective inverters was selected based on the follow considerations.</p> <ul style="list-style-type: none"> • Conformity – A system-wide level of conformity, including electrically and physically through to monitoring. • Costs – Ensuring the lowest cost to PUC. • Simplicity – Ease of installation.
 <p>SMA Inverter Solar Part</p>	<p>SMA Data Manager M is the ideal professional system interface for electric utility companies, service technicians and PV system operators. The Data Manager M optimizes communication, monitoring and control of PV systems with up to 50 SMA devices. This not only makes it easier to monitor, analyze, parameterize and manage PV systems, but also helps save time and money.</p> <p>Features</p> <ul style="list-style-type: none"> • Fast and Simple - Quick and intuitive commissioning including Sunny Portal registration. Simple integration of I/O systems and energy meters. • Future-Proof and Flexible - Can be flexibly expanded to satisfy new requirements and changing customer needs via software expansion packs. Provides a gateway to the rapidly changing energy market of the future. <p>Reliable and Convenient - Complies with international grid integration requirements. Detailed analytics, alert system and reporting. Secure remote monitoring and control of all connected components. SMA recently named the #1 global provider of monitoring and energy management solutions by Navigant and GTM Research.</p>

Inverters:

- The most appropriate replacement is the SMA Inverters or its equivalent, which maintains a plant-wide consistency including monitoring.
- No changes need to be made to the existing string architecture, but cables on 3 of the inverters need to be lengthened.

- The existing inverters will not reach full power output due to PV module age and existing string configuration.
- The hardware should provide a future proof solution and it should come with a 5-year warranty.
- The existing inverter has more than 2 MPPTs and the DC isolator is rated higher.
- This makes the DC combiner box redundant thus it is proposed that the DC combiner box is decommissioned to reduce the number of components and to improve the reliability of the system.

Electrical system

Site information:

- Strings are connected to inverters via a DC combiner box.
- Each inverter is connected to an AC combiner box in the field.
- Each of the AC combiner boards is connected to the main switchboard in the concrete building.

Parameter	Specifications
<i>Voltage</i>	<i>480 Volts</i>
<i>Frequency</i>	<i>60 Hz</i>
<i>DC Cables(Inverter to DC Combiner box)</i>	<i>1 Core 4mm² Copper solar cable</i>
<i>AC Cables(Inverter to DC Combiner box)</i>	<i>4 Core 16mm² Copper solar cable</i>
<i>AC Cables(AC Combiner box to switchboard)</i>	<i>4 Core 50mm² Copper solar cable</i>
<i>MCBs for inverter feeder</i>	<i>50A</i>
<i>MCBs for AC combiner feeder</i>	<i>160A</i>

The components above are all rated for the 24kW inverters and no component needs to be replaced (as long as the system remains at 480V). The electrical system integration information can be provided by PUC.

Communication System:

- The existing SMA Cluster Controller is now obsolete and its compatibility with the new inverters is uncertain. Therefore, PUC are switching communications to the SMA Data Manager system or its equivalent.
- The new inverters should communicate to the Data Manager via speed wire modules. These modules are built in as standard for the SMA inverters or its equivalent.
- The existing 24kW STP inverters also communicate to the Data Manager via speed wire modules. This is a daisy chain ethernet network.

Earthing system

- Each new inverter is connected to the earth grid.
- The earthing should be compliant to existing PUC regulations.

Scope of Work:

It is the responsibility of PUC to provide full work scope of removal of defective inverters, replacement, and balance of system, integration and commissioning. However, the proponent to guide PUC in the engineering, procurement, and the commissioning tests of the replacement and should provide a technical expert support present in Pohnpei.

Statement of Need:

The PUC Management sees the need to ensure that the Pohnpei Utilities Corporation can restart the use of the UAE Solar System to help meet the renewable energy targets for Pohnpei State and to use the existing infrastructure that needs some technical work to once again make it useful. This project ensures that PUC is working toward our goals in the PUC Strategic Development Plan to produce more renewable energy for sustainable use. As the world is currently seeing increases in the cost of oil and fuel, PUC must work to utilize any and all existing renewable energy infrastructure that we have on island to produce up to its capacity and help lower the cost of power for the residents of Pohnpei State.

Project timeline is six months completion with the following phases:

- Phase 1 (3 months) – - Procurement and shipping of the equipment to Pohnpei
- Phase 2 (3 months) – - Receipt and inspection of the equipment.
 - Training of our staff on installation of the new equipment
 - Commissioning of the system

Quotation Requirements & Conditions

Your offer must include:

1. Equipment, specifications and installation to complete the scope of work above. Bid shall remain valid for a period of 1 Month days after the closing date.
2. Expected Deliverables
 - Quotation Bid Form Annex 3
 - Specification of proposed goods and services to be supplied.
 - Certificate of Conformity certifying that the goods or services supplied meet the required standard and specification.
3. Quotations submission must be received by PUC on or before 4/21/2023 by 5:00 PM Pohnpei Time (GMT+11) and via email or courier mail to the address below:

Nixon T. Anson, CEO
Pohnpei Utilities Corporation
P.O. Box C, Kolonia, Pohnpei, FSM 96941

Email:

nanson@mypuc.fm

copy to: sidneyk@mypuc.fm

4. Quotation submission shall be review based on completeness and compliance of the quotation with the minimum specifications described in the Terms of Reference "Annex 1".
5. The Quotation submission that complies with all of the specification, requirements and offers the lowest price, as well as all other evaluation criteria indicated, shall be selected.
6. The Successful bidder shall be award through the issuance of written confirmation of acceptance of the bid. The bidder shall be required to countersign the agreement to purchase, such written acceptance to constitute acceptance of the entire order and its conditions.
7. Warranty. 12-month Warranty on inverters module against defects in material and workmanship.
8. Payment Terms. PUC agrees to pay the supplier in the following manner:
 - Payment terms are 20% payable within 30 days upon signing of purchase contract
 - Payment of 70 % within 30 days upon submittal of Bill of Lading
 - Payment of 10 % up arrival and acceptance.

9. Warranty of Parts. Supplier warrants to PUC that all of the parts specified in ANNEX 3 that are being delivered to PUC hereunder are free of defects in material and workmanship. This warranty shall continue for a period of one (1) year from the date of receipt of the parts by PUC. In the event of the defect in material and workmanship of any of the parts, Supplier shall promptly replace the defective parts.
10. Inspection of Parts. The parts shall be inspected and tested by PUC on their arrival in Kolonia, Pohnpei State to ensure that the parts supplied are new and fit for their intended purposes.
11. Notification of Shipment. Upon shipment of the parts, the Supplier shall notify PUC, the full details of the shipment, description of the parts, name of vessel, bill of lading number and date, port of loading, date of shipment, and of course the invoice of the supplied parts. The Supplier shall make available these documents to PUC.
12. Breach of Terms. Either Party hereto shall have the right to recover any and all damages resulting from or attributable to a breach hereof by the other Party. In any action brought to enforce the provisions of this Contract, the prevailing Party shall be entitled to recover all costs and expenses related to such action, including reasonable attorney fees and court fees. This Contract shall be deemed made in Pohnpei State.
13. Governing Law and Venue. This Contract shall be governed by and construed in accordance with the laws of Pohnpei State. The exclusive forum and venue for all actions arising out of this Contract shall at the FSM Supreme Court, Trial Division, in Pohnpei State.
14. Limitation of Liability. In no event will either Party be liable to the other for any special, indirect, incidental, or consequential damages, punitive damages, cost of cover, business interruption, loss of data, or lost profits, however caused, under any theory of liability, even if advised of the possibility of such damages or loss. Supplier's liability for all claims arising from this Contract or use of Supplier's good or services shall be limited to the revenue received under this Contract.

PUC RFQ 23-01 –Solar Inverters Bid Form

Date: _____

Company Name:	Contact Person:
Address:	Contact Info: Phone: Email:

Lump Sum Bid- Description			Price (USD)
Item	Description	Qty	Project Cost
1	SMA Sunny Tripower, 24 kW or its equivalent	24	
2	SMA EDMM-10 Power Supply or its equivalent	1	
3	Balance of System	1 set	
4	Shipping, transport to Pohnpei Port, CIF, incoterm	1	
5	Expert Technical Support	1	

Price must include all applicable fees, levies and charges except taxes which are to be shown separately

The undersigned has carefully examined the documents for the PUC RFQ 23-01, including addendums Nos. ____ (if any) and is authorized to submit this bid on behalf of the company.

Company Representative

Name: _____

Title: _____