

SHIP TO: RECEIVING SECTION: GUAM POWER AUTHORITY P.O. BOX 2977 HAGATNA, GUAM 96932 TELEPHONE: (671) 648-3054/55	PURCHASE ORDER  GUAM POWER AUTHORITY ATURIDÅT ILEKTRESEDÅT GUÅHAN P.O. Box 2977 Hagatna, Guam 96932 Strategic Planning and Operati DDREYES <i>DR</i>		THIS PURCHASE ORDER NUMBER <u>34412</u>
	TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165		MUST APPEAR ON ALL INVOICES. PACKING SLIPS, PACKAGES, B/L, CORRESPONDENCE, ETC.
			PO DATE 11/6/2025
			JOB ORDER NO./OBJ 100510.107200.102

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Vendor Number: **5935884**

BATTELLE MEMORIAL INSTITUTE
PACIFIC NORTHWEST NATIONAL LABORATORY
P.O. BOX 999
ATTN: MARY FORAKER
SR. CONTRACTS SPECIALIST

TEL:
FAX:
EMAIL: mary.foraker@pnnl.gov

AUTHORITY: 3112
INVITATION NO.:
CONTRACT NO.:
TIME FOR DELIVERY:
COMPLETION:
EXPIRATION: 09/30/2026
DISCOUNT TERMS:
REQUISITION NO: 40270 OR

NO.	DESCRIPTION / SUPPLIER ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2.0		L			\$400,000.00

Modular Microgrid Control System for Distribution Networks in Rural and Island Communities

Ref.: Award No.: DE-OR0000973 Assistance Agreement
(Period of Performance: October 01, 2024 through September 30, 2026)
Strategic Partnership Agreement No.: 82787
U.S. Department of Energy Letter dated September 07, 2023
Assistant General Manager, Engineering and Technical Services Memo dated October 03, 2025

PNNL Scope and Cost Share

- Federal Cost Share: \$400,000.00
- GPA Cost Share: None

Total: \$400,000.00

This project will develop and demonstrate scalable, plug-and-play modular microgrids capable of operating both grid-connected and islanded.

The MMC will be integrated through a Universal Enterprise Service Bus (UESB) based on the GOSS middleware platform and compliant with IEEE 2030.7/8, IEC 61850, and CIM standards.

Technical Expertise Requirements:

- Testing facility similar and equivalent to NREL's Energy Systems Integration Facility (ESIF) with petascale compute capacity dedicated to advancing energy efficiency and renewable energy technologies.
- Modular microgrid controller development and deployment
- Hierarchical control system design for microgrids
- Integration of inverter-based resources (IBRs) and diesel gensets
- Compliance with IEEE 1547, IEEE 2030.7/8, and IEC 61850 standards

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PAYMENT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION		<i>JM</i> TOTAL	
ACKNOWLEDGED BY: _____ SIGNATURE OF VENDOR RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165	SIGNATURE: <i>John M. Benavente</i> <i>1/10/2025</i> JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority		

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-Hardware-in-the-loop (HIL) testing using real-time grid simulators (e.g., OPAL-RT)
-Development of GridOPTICS Software System (GOSS) and GridAPPS-D compatible platforms
-Experience implementing secure, interoperable DER communications via CIM and STTP protocols
-Ability to support microgrid control use cases including seamless islanding, reconnection, and voltage/frequency regulation

GPA POINT OF CONTACT:
Maria Aiza Galang, Engineer I, SPORD
Victor Torres, Engineer III, SPORD
Telephone No.: 671-648-3209

RESTRICTION AGAINST SEX OFFENDERS:
5 GCA Section 5253, enacted by P.L 28-24 and amended
by P.L. 28-98:

The service provider warrants that no person in its employment who has been convicted of a sex offense under the provisions of Chapter 25 of Title 9 of the Guam Code Annotated, or of an offense defined in Article 2 of Chapter 28 of Title 9 of the Guam Code Annotated, or who has been convicted of an offense with the same elements as heretofore defined in any other jurisdiction, or who is listed on the Sex Offender Registry shall provide services on behalf of the service provider while on government of Guam property, with the exception of public highways. If any employee of the service provider is providing services on government property and is convicted subsequent to an award of a contract, then the service provider warrants that it will

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PAYOUT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION		SIGNATURE: JM John M. Benavente, P.E., General Manager Date Delegated Authority	
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notify the Government of the conviction within twenty-four (24) hours of the conviction, and will remove immediately such convicted person from providing services on government property. If the service provider is found to be in violation of any of the provisions of this paragraph, then the Government will give notice to the service provider to take corrective action. The service provider shall take corrective action within twenty-four (24) hours of notice from the Government, and the service provider shall notify the Government when action has been taken. If the service provider fails to take corrective steps within twenty-four (24) hours of notice from the Government, then the Government in its sole discretion may suspend temporarily any contract for services until corrective action has been taken.

NOTE TO VENDOR:

1. Delivery is no later than the date indicate above.
2. All late deliveries and acceptance are subject to the Liquidated Damages Clause in Section 6-101.09.01 of the Guam Procurement Regulations.
3. All Requests for Delivery Extensions will be closely scrutinized as all items/services are crucial to new customer installation, maintenance, and on-going projects.
4. NOTE: Notwithstanding the fact that this contract was written by one (1) party, it will be construed that it was written by two (2) parties.

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PAYMENT TERMS:
NET THIRTY (30) DAYS after receipt of ORIGINAL invoice
for goods received and/or services rendered.

REVIEWED BY: Jamie Lynn C. Pangelinan 11/6/2025
JAMIE LYNN C. PANGELINAN Date
Jm Supply Management Administrator

Page 4 of 4

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