

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 SSTAINATON 		THIS PURCHASE ORDER NUMBER <u>34401</u>
	TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165		PO DATE 11/6/2025
			JOB ORDER NO./OBJ 100512.107200.102

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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: 01/16/2028
DISCOUNT TERMS:
REQUISITION NO: 40287 OR

NO.	DESCRIPTION / SUPPLIER ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
2.0		L			\$330,500.00

Sensor Data Analytics / Grid Monitoring and Analytics System
(GMAS) Demonstration Project

Ref.: Award No.: DE-OE0000987 Assistant Agreement
(Period of Performance: January 17, 2025 through January 16, 2028)
U.S. Department of Energy Order: DOE O 481.1E
Strategic Partnership Agreement No.: 83844
U.S. Department of Energy Letter dated April 03, 2024
Assistant General Manager, Engineering and Technical Services Memo dated October 03, 2025

PNNL Scope and Cost Share
- Federal Cost Share: \$330,500.00
- GPA Cost Share: None

Total: \$330,500.00

This project focuses on real-time monitoring using PMU data and cloud-based analytics with interoperability between control systems:

- IEEE 2664-based PMU streaming
- Event and oscillation detection tools
- CIM-based data structuring via GOSS middleware
- Secure web dashboards for visualization and situational awareness

Technical Expertise Requirements:

- Cloud-based SCADA and PMU data integration platforms
- Real-time power system analytics using high-resolution synchrophasor data
- Interoperability using IEEE 2664, CIM, and GOSS middleware

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ACKNOWLEDGED BY: _____	SIGNATURE: _____	TOTAL <i>John M. Benavente</i> 11/10/2025 JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority	
SIGNATURE OF VENDOR RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165	SIGNATURE: <i>John M. Benavente</i> 11/10/2025 JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority		

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-	Development and deployment of oscillation detection, impedance monitoring, and digital twin simulation				

- Digital twin development experience for islanded electrical power systems with substantial penetration of inverter based resources up to 100% instantaneous IBR supplied system generation.

- Familiarity with FFT-based signal processing, voltage angle unwrapping, and state estimation

- Secure data transfer protocols and cyber-secure architecture for utility grid systems

- Collaboration with national laboratories and familiarity with DOE grid modernization tools

- Deployment of operator-facing dashboards and PI System interfaces for situational awareness

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,

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PAYOUT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION		SIGNATURE: John M. Benavente, P.E., General Manager Date Delegated Authority	
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<p>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 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.</p>					

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.

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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.				

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

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