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| 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 TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165 | THIS PURCHASE ORDER NUMBER <u>34412</u> MUST APPEAR ON ALL INVOICES. PACKING SLIPS, PACKAGES, B/L, CORRESPONDENCE, ETC. | |
| Strategic Planning and Operati DDREYES | JMMERFALEN <i>jk</i> | PO DATE 12/22/2025 | 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 |
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| | AMENDMENT NO.: I | | L | | |

Amend to make the following changes to the language:

FROM:

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

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| ACKNOWLEDGED BY: <i>Mary Foraker</i> | TOTAL | SIGNATURE: <i>JM</i> 12/30/2025 | |
| SIGNATURE OF VENDOR RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165 | JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority | | |

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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
-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

TO NOW READ:

PNNL PO 34412

The parties to the Agreement agree to be bound by the terms and conditions of Strategic Partnership Project Agreement (SPP) number 82787 and no terms or conditions of PO 34412 shall transfer to Battelle. The GPA purchase order 34412 is for invoicing purposes and the purchase document is internal to GPA.

Project References

- DOE Award No. DE-OE0000987 Assistance Agreement - Defines the project and period of performance.
- DOE award No. DE-OE0000987 applies to GPA and no terms shall flow to Battelle
- DOE Order 481.1E - Authority for SPP contracting with national laboratories
- SPP Agreement No. 82787 (executed with PNNL) - Governing document for all terms and conditions
- U.S. DOE Letter dated April 3, 2024 - Used by Procurement to proceed with SPP contracting
- AGMETs Memo dated October 3, 2025 - Internal GPA justification for initiating the PO

Terms and Conditions:

All contractual terms, project scope, invoicing procedures,

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| ACKNOWLEDGED BY: <i>Mary Foraker</i> | SIGNATURE OF VENDOR RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165 | DATE: <i>1/6/2026</i> | SIGNATURE: <i>JM</i> 12/30/2025 JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority |

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and intellectual property rights are governed solely by Strategic Partnership Project Agreement No. 82787 executed between GPA and PNNL.

This Purchase Order exists only to link SPP Agreement No. 82787 to GPA's internal audit and accounting system. No additional terms or conditions are created or implied.

Payment Terms:

Invoicing and payment terms shall follow Appendix B of SPP Agreement No. 82787. GPA will process invoices NET 30 after receipt of original invoice, in accordance with SPP 82787.

REVIEWED BY: *Jamie Lynn C. Pangelinan* 12/30/2025
JM JAMIE LYNN C. PANGELINAN Date
 Supply Management Administrator

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| PAYMENT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION | | SIGNATURE: <i>John M. Benavente, P.E., General Manager</i> 12/30/2025 JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority |
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