


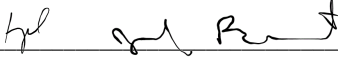




SHIP TO: RECEIVING SECTION: GUAM POWER AUTHORITY P.O. BOX 2977 HAGATNA, GUAM 96932 TELEPHONE: (671) 648-3054/55 Strategic Planning and Operati		PURCHASE ORDER  GUAM POWER AUTHORITY ATURIDÅT ILEKTRESEDÅT GUÅHAN P.O. Box 2977 Hagatna, Guam 96932 TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165		THIS PURCHASE ORDER NUMBER 34411 MUST APPEAR ON ALL INVOICES. PACKING SLIPS, PACKAGES, B/L, CORRESPONDENCE, ETC.																																																																																																	
DDREYES				PO DATE 11/19/2025	JOB ORDER NO./OBJ 100510.107200.102																																																																																																
<div>V E N D O R</div> <div>Vendor Number: 5935876</div> <div>ALLIANCE FOR SUSTAINABLE ENERGY, LLC NATIONAL RENEWABLE ENERGY LABORATORY (NREL) 15013 DENVER WEST PARKWAY GOLDEN, CO 80401</div> <div>TEL:</div> <div>FAX:</div> <div>EMAIL: trey.christner@nrel.gov</div> <div>AUTHORITY: 3112</div> <div>INVITATION NO.:</div> <div>CONTRACT NO.:</div> <div>TIME FOR DELIVERY:</div> <div>COMPLETION:</div> <div>EXPIRATION: 09/30/2026</div> <div>DISCOUNT TERMS:</div> <div>REQUISITION NO: 40270 OR</div>																																																																																																					
<table><tr><th>NO.</th><th>DESCRIPTION / SUPPLIER ITEM</th><th>QUANTITY</th><th>UNIT</th><th>UNIT PRICE</th><th>AMOUNT</th></tr><tr><td>1.0</td><td></td><td></td><td>L</td><td></td><td>\$384,885.00</td></tr><tr><td colspan="6">Modular Microgrid Control System for Distribution Networks in Rural and Island Communities</td></tr><tr><td colspan="6">Ref.: Award No.: DE-OR0000973 Assistance Agreement Funds-In Agreement No.: FIA-25-32623-0 DE-FOA-0002934 U.S. Department of Energy Letter dated September 25, 2023 Assistant General Manager, Engineering and Technical Services Memo dated October 03, 2025</td></tr><tr><td colspan="6">NREL Scope and Federal Cost Share</td></tr><tr><td colspan="6">- Federal Cost Share: \$384,885.00</td></tr><tr><td colspan="6">- GPA Cost Share: \$215,115.00</td></tr><tr><td colspan="6">Total Amount: \$600,000.00</td></tr><tr><td colspan="6">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.</td></tr><tr><td colspan="6">Technical Expertise Requirements:</td></tr><tr><td colspan="6">- 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,</td></tr><tr><td colspan="6">- Modular microgrid controller development and deployment</td></tr><tr><td colspan="6">- Hierarchical control system design for microgrids</td></tr><tr><td colspan="6">- Integration of inverter-based resources (IBRs) and diesel gensets</td></tr><tr><td colspan="6">- Compliance with IEEE 1547, IEEE 2030.7/8, and IEC 61850 standards</td></tr><tr><td colspan="6">- Hardware-in-the-loop (HIL) testing using real-time grid simulators (e.g., OPAL-RT)</td></tr></table>						NO.	DESCRIPTION / SUPPLIER ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT	1.0			L		\$384,885.00	Modular Microgrid Control System for Distribution Networks in Rural and Island Communities						Ref.: Award No.: DE-OR0000973 Assistance Agreement Funds-In Agreement No.: FIA-25-32623-0 DE-FOA-0002934 U.S. Department of Energy Letter dated September 25, 2023 Assistant General Manager, Engineering and Technical Services Memo dated October 03, 2025						NREL Scope and Federal Cost Share						- Federal Cost Share: \$384,885.00						- GPA Cost Share: \$215,115.00						Total Amount: \$600,000.00						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						- Hardware-in-the-loop (HIL) testing using real-time grid simulators (e.g., OPAL-RT)					
NO.	DESCRIPTION / SUPPLIER ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT																																																																																																
1.0			L		\$384,885.00																																																																																																
Modular Microgrid Control System for Distribution Networks in Rural and Island Communities																																																																																																					
Ref.: Award No.: DE-OR0000973 Assistance Agreement Funds-In Agreement No.: FIA-25-32623-0 DE-FOA-0002934 U.S. Department of Energy Letter dated September 25, 2023 Assistant General Manager, Engineering and Technical Services Memo dated October 03, 2025																																																																																																					
NREL Scope and Federal Cost Share																																																																																																					
- Federal Cost Share: \$384,885.00																																																																																																					
- GPA Cost Share: \$215,115.00																																																																																																					
Total Amount: \$600,000.00																																																																																																					
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																																																																																																					
- Hardware-in-the-loop (HIL) testing using real-time grid simulators (e.g., OPAL-RT)																																																																																																					
INSTRUCTIONS TO VENDOR: SEND CERTIFIED ORIGINAL AND THREE (3) COPIES OF INVOICE TO GUAM POWER AUTHORITY, PO BOX 2977 HAGATNA, GUAM 96932 PAYMENT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION				<div>TOTAL</div> <div><< DO NOT FILL THIS ORDER IF YOUR TOTAL COST EXCEEDS THIS TOTAL</div>																																																																																																	
ACKNOWLEDGED BY:  DATE: 11/25/2025 SIGNATURE OF VENDOR RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165		SIGNATURE:  11/20/2025 JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority																																																																																																			

SHIP TO: RECEIVING SECTION: GUAM POWER AUTHORITY P.O. BOX 2977 HAGATNA, GUAM 96932 TELEPHONE: (671) 648-3054/55		PURCHASE ORDER  GUAM POWER AUTHORITY ATURIDÁT ILEKTRESEDÁT GUÅHAN P.O. Box 2977 Hagatna, Guam 96932		THIS PURCHASE ORDER NUMBER 34411 MUST APPEAR ON ALL INVOICES. PACKING SLIPS, PACKAGES, B/L, CORRESPONDENCE, ETC.	
Strategic Planning and Operati		TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165		PO DATE 11/19/2025	JOB ORDER NO./OBJ 100510.107200.102
DDREYES					

V
E
N
D
O
RVendor Number: **5935876**

ALLIANCE FOR SUSTAINABLE ENERGY, LLC
NATIONAL RENEWABLE ENERGY
LABORATORY (NREL)
15013 DENVER WEST PARKWAY
GOLDEN, CO 80401

TEL:
FAX:
EMAIL: trey.christner@nrel.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
-----	-----------------------------	----------	------	------------	--------

-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

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
notify the Government of the conviction within twenty-four

Page 2 of 4

INSTRUCTIONS TO VENDOR:

SEND CERTIFIED ORIGINAL AND THREE (3) COPIES OF INVOICE TO GUAM POWER AUTHORITY,
PO BOX 2977 HAGATNA, GUAM 96932

PAYMENT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION



TOTAL

<< DO NOT FILL THIS ORDER
IF YOUR TOTAL COST
EXCEEDS THIS TOTAL

ACKNOWLEDGED BY: Trey Christner 11/25/2025
DATE:
SIGNATURE OF VENDOR
RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165

SIGNATURE:

John M. Benavente 11/20/2025
JOHN M. BENAVENTE, P.E., General Manager Date
Delegated Authority

SHIP TO: RECEIVING SECTION: GUAM POWER AUTHORITY P.O. BOX 2977 HAGATNA, GUAM 96932 TELEPHONE: (671) 648-3054/55		PURCHASE ORDER  GUAM POWER AUTHORITY ATURIDÁT ILEKTRESEDÁT GUÅHAN P.O. Box 2977 Hagatna, Guam 96932		THIS PURCHASE ORDER NUMBER 34411 MUST APPEAR ON ALL INVOICES. PACKING SLIPS, PACKAGES, B/L, CORRESPONDENCE, ETC.	
Strategic Planning and Operati		TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165		PO DATE 11/19/2025	JOB ORDER NO./OBJ 100510.107200.102
DDREYES					

V
E
N
D
O
RVendor Number: **5935876**

ALLIANCE FOR SUSTAINABLE ENERGY, LLC
NATIONAL RENEWABLE ENERGY
LABORATORY (NREL)
15013 DENVER WEST PARKWAY
GOLDEN, CO 80401

TEL:

FAX:

EMAIL: trey.christner@nrel.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
-----	-----------------------------	----------	------	------------	--------

(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:

- Services is no later than the date indicate above.
- All late deliveries and acceptance are subject to the Liquidated Damages Clause in Section 6-101.09.01 of the Guam Procurement Regulations.
- All Requests for Delivery Extensions will be closely scrutinized as all items/services are crucial to new customer installation, maintenance, and on-going projects.
- NOTE: Not withstanding the fact that this contract was written by one (1) party, it will be construed that it was written by two (2) parties.

Page 3 of 4

INSTRUCTIONS TO VENDOR:

SEND CERTIFIED ORIGINAL AND THREE (3) COPIES OF INVOICE TO GUAM POWER AUTHORITY,
PO BOX 2977 HAGATNA, GUAM 96932

PAYMENT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION

TOTAL

<< DO NOT FILL THIS ORDER
IF YOUR TOTAL COST
EXCEEDS THIS TOTAL

ACKNOWLEDGED BY:



DATE:

11/25/2025

SIGNATURE OF VENDOR


RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165

SIGNATURE:





JOHN M. BENAVENTE, P.E., General Manager Date
Delegated Authority

11/20/2025


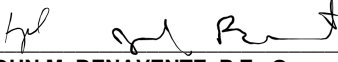
SHIP TO: RECEIVING SECTION: GUAM POWER AUTHORITY P.O. BOX 2977 HAGATNA, GUAM 96932 TELEPHONE: (671) 648-3054/55		PURCHASE ORDER  GUAM POWER AUTHORITY ATURIDÅT ILEKTRESEDÅT GUÅHAN P.O. Box 2977 Hagatna, Guam 96932		THIS PURCHASE ORDER NUMBER 34411 MUST APPEAR ON ALL INVOICES. PACKING SLIPS, PACKAGES, B/L, CORRESPONDENCE, ETC.	
Strategic Planning and Operati		TELEPHONE: (671) 648-3054/5 FAX: (671) 648-3165		PO DATE 11/19/2025	JOB ORDER NO./OBJ 100510.107200.102
DDREYES					

V E N D O R	Vendor Number: 5935876	AUTHORITY:	3112
	ALLIANCE FOR SUSTAINABLE ENERGY, LLC	INVITATION NO.:	
	NATIONAL RENEWABLE ENERGY	CONTRACT NO.:	
	LABORATORY (NREL)	TIME FOR DELIVERY:	
	15013 DENVER WEST PARKWAY	COMPLETION:	
	GOLDEN, CO 80401	EXPIRATION:	09/30/2026
	TEL:	DISCOUNT TERMS:	
	FAX:	REQUISITION NO:	40270 OR
	EMAIL: trey.christner@nrel.gov		

NO.	DESCRIPTION / SUPPLIER ITEM	QUANTITY	UNIT	UNIT PRICE	AMOUNT
PAYMENT TERMS: NET THIRTY (30) DAYS after receipt of ORIGINAL invoice for goods received and/or services rendered.					

REVIEWED BY:  11/20/2025
 JAMIE LYNN C. PANGELINAN Date
Supply Management Administrator

Page 4 of 4

INSTRUCTIONS TO VENDOR:		\$384,885.00	<< DO NOT FILL THIS ORDER IF YOUR TOTAL COST EXCEEDS THIS TOTAL
SEND CERTIFIED ORIGINAL AND THREE (3) COPIES OF INVOICE TO GUAM POWER AUTHORITY, PO BOX 2977 HAGATNA, GUAM 96932		TOTAL	
PAYMENT UPON RECEIPT OF MERCHANDISE IN GUAM IN GOOD CONDITION			
ACKNOWLEDGED BY:  11/25/2025 SIGNATURE OF VENDOR DATE: RETURN TO PROCUREMENT DIVISION VIA FACSIMILE AT (671) 648-3165		SIGNATURE:  11/20/2025 JOHN M. BENAVENTE, P.E., General Manager Date Delegated Authority	