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# GUAM **CLEAN ENERGY** TRANSITION

APRIL 10 & 11, 2023  
HYATT REGENCY GUAM

**2023**

UNIVERSITY OF GUAM  
CONFERENCE ON  
ISLAND SUSTAINABILITY

APRIL 11-15 | HYATT REGENCY GUAM  
REDISCOVER THE DEPTHS OF OUR ISLAND ABUNDANCE



**A NEW GENERATION HAS ARRIVED**  
**WE CARE. WE LISTEN. WE HELP.**

# DAY 1 SCHEDULE - MONDAY, APRIL 10

## GRAND BALLROOM

### LAYING OUT THE ISSUES FOR A CLEAN ENERGY TRANSITION

8:00 AM - 8:20 AM	Event Opens	
8:20 AM - 8:35 AM	Opening Remarks	Governor Lourdes A. Leon Guerrero
8:40 AM - 8:55 AM	Welcoming Remarks	Joey Duenas
8:55 AM - 9:40 AM	Our Clean Energy Journey and Roadmap	John M. Benavente, P.E.
9:40 AM - 10:25 AM	Getting to 100% - Lessons Learned from Across the World	Scott G. Haase

### 10 MINUTE BREAK

10:35 AM - 11:20 AM	Energy Storage: Challenges and Policy Solutions	Jeremy Twitchell
11:20 AM - 12:05 PM	Breaking the Grid and Building It Back Better: A Quick Overview	John J. Cruz Jr., P.E.
12:05 PM - 1:35 PM	LUNCH	

### LUNCH TIME PRESENTATIONS

12:15 PM - 12:55 PM	GPA Energy Sense and Demand-Side Management - BESS Schools - UOG Energy Efficient House - GPA Community Power (k-12 - energy eff & conserv presentation)	Victor A. Torres & Francis Iriarte
12:55 PM - 1:35 PM	GPA's K-12 Outreach at BMS.	Alicia Whitaker
1:35 PM - 1:45 PM	SPECIAL PRESENTATION TO BMS	John Cruz & Joyce Sayama, Victor Torres

### GPA'S BALANCED APPROACH TO GUAM'S GREEN ENERGY TRANSITION: ENERGY EFFICIENCY, RENEWABLE ENERGY, DEMAND RESPONSE, AND RENEWABLE SYSTEMS INTEGRATION

1:45 PM - 1:55 PM	Session Introduction	Session Panel Moderator
1:55 PM - 2:25 PM	WE Care Program/Weatherization	Rebecca J. Respicio
2:25 PM - 2:55 PM	GPA Renewable Energy Acquisition Trajectory	Jennifer G. Sablan, P.E.

### 10 MINUTE BREAK

2:55 PM - 3:25 PM	GPA Demand Response Programs: TESS, BESS, TOU, and EV Charging	Mark Beauchamp
3:25 PM - 3:55 PM	GPA: At the Forefront of BESS Grid Services	Lorraine Shinohara, P.E.
3:55 PM - 4:25 PM	GPA's Renewable Energy Integration Plan	Dave Burlingame, P.E.
4:30 PM	MEDIA MOMENT	

## MEZZANINE

### TRANSPORTATION ELECTRIFICATION

2:00 PM - 2:15 PM	Session Introduction	Session Panel Moderator
2:15 PM - 3:00 PM	Clean Energy Master Plan: Electric Vehicle Road Map, Walking the Talk	Juliana Maria F. Baza
3:00 PM - 3:45 PM	GPA's EV Charging Managed Services Program	Dan Rueckert, P.E., CISM
3:45 PM - 4:30 PM	Growing the Guam Market for EVs and Public EV Charging	James Rosenberg II
4:30 PM	MEDIA MOMENT	



# DAY 2 SCHEDULE - TUESDAY, APRIL 11

## MEZZANINE - SANTA ROSA

### DIGITAL TRANSFORMATION

9:00 AM - 9:10 AM	Event Opens	Session Panel Moderator
9:10 AM - 9:55 AM	What Does Digital Transformation Mean for Guam Power Authority?	John J. Cruz Jr., P.E.
9:55 AM - 10:40 AM	AGC+N FLISR	Timothy Allen

### 10 MINUTE BREAK

10:40 AM - 11:25 AM	Energy Sense Program Digital Transformation and Porter's Fit	Francis Iriarte, P.E.
11:25 AM - 12:00 PM	GPA IT/OT Consolidation	George Gamble/Brian Miner

### LUNCHTIME

### DIGITAL TRANSFORMATION CONTINUED

1:30 PM - 1:45 PM	Session Introduction	Session Panel Moderator
1:45 PM - 2:30 PM	Advanced Grid Analytics: Enabling Big Data for better Operational and Strategic Decisions at GPA	Chris Patton & Angie Thoma
2:30 PM - 3:15 PM	Medium Range Distribution Plan & Results	Louis C. Camacho, P.E.
3:15 PM - 4:00 PM	Mobile Workforce Management: Meter Provisioning and Replacement & Acknowledge Therese Tudela	Roel A. Cahinhinan, P.E.
4:00 PM - 4:45 PM	MEDIA MOMENT	

## MEZZANINE - MAGELLAN

### ENERGY SECURITY

9:00 AM - 9:10 AM	Event Opens	Session Panel Moderator
9:10 AM - 9:55 AM	Reducing Transmission System Fault Critical Clearing Times to Avoid Voltage Collapse	Irwin B. Loyola, P.E.
9:55 AM - 10:40 AM	Energy Security: Argonne Projects on Guam	Ashton Raffety

### 10 MINUTE BREAK

10:40 AM - 11:25 AM	Cyber and Physical Security Challenge	Dan Rueckert, P.E., CISM
11:25 AM - 12:00 PM	Infrastructure and Assets	Melvyn K. Kwek, CISA, GICSP

### LUNCHTIME

### DEEP DIVE SESSIONS (GROUP DISCUSSIONS) - AUDIENCE: GOVERNMENT OFFICIALS (GOV OFFICE, LEGISLATURE & OVERSIGHT CHAIR, PUC, CCU, MILITARY & GOV'T AGENCY HEADS)

1:30 PM - 1:45 PM	Session Introduction	Session Panel Moderator
1:45 PM - 2:30 PM	ESS Batteries/Policy	Jeremy Twitchell
2:30 PM - 3:15 PM	Getting to 100% Renewable - Lessons Learned	Scott Haase
3:15 PM - 4:00 PM	Environmental Strategic Plan Update & Consent Decree Compliance Update	Roger Pabunan
4:00 PM - 4:45 PM	Introduction to <i>Assessment of Capabilities in Energy Security (ACES) Tool</i> - Guam Energy Security Plan	Ashton Raffety (ANL) & Panel Members-PAG, GWA, GPA, ETC
4:45 PM	MEDIA MOMENT	



# SPEAKERS



**John M. Benavente, P.E.**  
General Manager  
Guam Power Authority



**John J. Cruz Jr., P.E.**  
Assistant General Manager,  
Engineering & Technical Services  
Guam Power Authority  
Clean Energy Transition Architect



**Scott G. Haase**  
Director of Strategic Partnership  
Projects  
Energy Systems Integration  
Directorate  
National Renewable Energy  
Laboratory (NREL)



**Jeremy B. Twitchell**  
Senior Energy Analyst  
Pacific Northwest National  
Laboratory (PNNL)



**Victor A. Torres**  
Engineer III  
E&TS/SPORD/Demand-Side  
Management & Green Programs  
Guam Power Authority



**Alicia Whitaker**  
Librarian  
Benavente Middle School



**Rebecca J. Respicio**  
Director  
Guam Energy Office



**Jennifer G. Sablan, P.E.**  
SPORD Manager  
E&TS/SPORD Division  
Guam Power Authority



**Mark Beauchamp, CPA, CMA, MBA**  
President and Founder of Utility  
Financial Solutions (UFS), LLC



**Juliana Maria F. Baza**  
Engineer III  
E&TS/SPORD/Demand-Side  
Management & Green  
Programs  
Guam Power Authority



**James Rosenberg II**  
Director of Business Development  
Asia Pacific Bank



**Dan Rueckert, P.E., CISM**  
Vice President - Strategy  
Sheffield Scientific, LLC



**Timothy Allen**  
CEO & President  
PXiSE Energy Solutions



**Francis Iriarte, P.E.**  
E&TS/SPORD/Demand-side  
Management & Green Programs  
Supervisor  
Guam Power Authority



**Brian Miner, PSP**  
Sr. Physical Security Specialist  
Sheffield Scientific, LLC



**Chris Patton**  
Power Systems Engineer  
Landis + Gyr



**Louis C. Camacho, P.E.**  
Engineer III  
E&TS/ Engineering Division/  
Distribution Section  
Guam Power Authority



**Irwin B. Loyola, P.E.**  
Engineer Supervisor  
E&TS/Engineering Division/  
Substation & Transmission Section  
Guam Power Authority



**Ashton Raffety**  
Energy Policy and Strategy  
Analyst  
Decision and Infrastructure  
Sciences Division  
Argonne National Laboratory



**Melvyn Kwek, CISA, GICSP**  
Chief Information Technology  
Officer (CITO)  
Information Technology  
(IT) Division  
Guam Power Authority



**Roger Pabunan GPA**  
E&TS/P&R Engineering Supervisor  
Guam Power Authority



**Lorraine Shinohara, P.E.**  
Engineer Supervisor  
E&TS/SPORD Division  
Guam Power Authority



**Roel A. Cahinhinan, P.E.**  
Engineer Supervisor  
E&TS/SPORD Division  
Guam Power Authority

**Dave Burlingame, P.E.**  
Principal  
Electric Power Systems, Inc.

**Angie Thoma**  
Landis + Gyr

**George Gamble**  
Director/Cyber Security  
Sheffield Scientific, LLC

# SPEAKERS BIOS

**John M. Benavente, P.E.**, is the General Manager of the Guam Power Authority (GPA). His expertise spans over four decades of technical, engineering, operations and executive leadership in the power and water utility-related fields; across both the government and private sectors. He has held the position of General Manager serving Guam's utilities for over 27 years during this period.

John's current efforts include addressing GPA's core value strategies of providing a sustainable, affordable energy supply for Guam, hardening the utility's electric grid infrastructure, workforce development and management, commissioning GPA's new, combined cycle 198 megawatt Ukudu power plant under an IPP contract with KEPCO/EWP, and achieving aggressive renewable energy goals.

Through his leadership efforts, the Guam Power Authority has improved its resiliency and recovery against catastrophic natural disasters; built a smart-energy grid, including a state-of-the-art SCADA system; adding over 140 megawatts of renewable energy and energy storage; and maintained favorable investment-grade bond status.

John is a licensed Professional Engineer. He holds a Master of Science in Engineering Management from the University of Missouri (Rolla) and a Bachelor of Science Mechanical Engineering degree from the University of Dayton. He is immediate past Director of the American Public Power Association, representing Guam, CNMI, American Samoa, Virgin Islands, Puerto Rico, and Canada.

**John J. Cruz Jr., P.E. C.E.M, C.E.A.** is the Assistant General Manager of Engineering & Technical Services (AGMETS) at the Guam Power Authority. Engineering, IT/OT, Planning & Regulatory Divisions report to him. He is GPA's Smart Grid Architect, Clean Energy Transition Architect, and Communications Network Architect. He rose through the ranks as a Communications Engineer, System Planning Supervisor, SPORD manager, and AGMETS. As SPORD Manager, his and his staff's work set GPA on the path towards renewable energy transition for GPA in 2008. GPA is now 12-13% renewable energy. GPA has committed to 50% and 100% renewable energy by 2030 and 240, respectively. He and Roel A. Cahinhinan, P.E. were the Project Leads and Technical architects for GPA's Smart Grid Initiative Grant. Under his direction, GPA

started its progression to using Battery Energy Storage Systems (BESS) for fast frequency regulation and rapid reserve. NREL lists fast frequency regulation and rapid reserve as emerging technologies for grid services provided by BESS. GPA is at the forefront of BESS Technology for Grid Services. John wrote a significant portion of GPA's Clean Energy Master Plan. All four Engineering & Technical Services (E&TS) Divisions participated in the development of the Clean Energy Master Plan.

John holds a B.S.E.E, B.A. in Mathematics, and a minor in business (Gonzaga University) and a M.B.A. (UOP). John Holds a registered professional engineer on Guam. He holds the Certified Energy Manager and Certified Energy Auditor certification from the Association of Energy Engineers. He is a SEI Solar Professionals Certificate Program (SPCP) Graduate in Residential and Commercial Photovoltaics Systems (Online). <https://www.solarenergy.org/solar-professionals-certificate-program-graduate-list/> John has unique skills and experience in radar systems engineering, power systems engineering, systems engineering, operations research, statistics and probability, software programming, software development, renewable energy, utility systems planning, computer and communications networks, cybersecurity, strategic planning, and Information Technology and Operations Technology.

He worked at Hughes Aircraft Company for 7 years in the Mode Development Department in El Segundo California where he worked on the Magellan Radar Project, Special Access Projects, and Low-probability of Intercept Studies. He has three radar modes flying on the B2. He returned to Guam in 1991 on a year leave of absence and met his future wife, Barbara Camacho. He remained on Guam and has worked for Guam Power Authority for over 32 years.

**Scott Haase** leads the development of strategic partnerships for NREL's Energy Systems Integration directorate, focused on electric utilities, private companies, federal agencies, state governments and local communities. From 2011-2016, Scott served as NREL's liaison to the Department of the Interior, Office of the Secretary. During this time, he worked closely with the Office of Insular Affairs to support energy planning and analysis efforts in Guam, CNMI and American Samoa. More recently, Scott was instrumental in developing NREL's

partnership with the Los Angeles Department of Water and Power to fund and implement the LA100 study, a ground-breaking effort to implement advanced power system modeling approaches to exploring 100% renewable energy pathways, costs and scenarios for the the largest public power utility in the U.S. Scott has been working in the renewable energy industry for over 30 years and holds a BS in Mechanical Engineering from the University of Vermont and an MS in Engineering and Policy from Washington University in St. Louis.

**Jeremy Twitchell** is a senior energy analyst at the Pacific Northwest National Laboratory, where he leads PNNL's work on the Equitable Regulatory Environment thrust area of the Department of Energy - Office of Electricity's Energy Storage Program. His research focuses on identifying the regulatory barriers that impede the deployment of energy storage technologies and best practices for reducing or eliminating those barriers, as well as providing technical assistance to states on energy storage-related topics. He also supports other efforts at the lab in areas related to grid planning, utility regulation, rate design, and energy system equity. Prior to joining PNNL, Jeremy spent five years at the Washington Utilities and Transportation Commission.

**Victor Torres** is a skilled utility engineer with 10 years of experience at the Guam Power Authority. He earned his Bachelor's degree in Mechanical Engineering from the University of Portland, Oregon. Victor's expertise includes power generation, project management, and energy efficiency. Throughout his career, he has been involved in prime mover capex projects and demand-side management programs. Victor is committed to promoting sustainable energy practices and has worked to educate communities about the benefits of conservation and renewable energy. Today, he continues to work as a utility engineer, focused on creating innovative solutions to promote sustainability while maintaining reliability and affordability.

**Alicia Whitaker** started her professional life in various industries from airlines, movie post production editing, radio and newspaper advertising, and construction management. On her return to Guam in 2010, she began her path in education. Alicia has been with the Guam Department of Education since 2011 and is currently the School Librarian at Benavente Middle School. She received her Bachelor of Arts in Communication from Chaminade University of



# SPEAKERS BIOS

Honolulu and went on to receive a Master of Arts in Teaching from the University of Guam. She is a certified Master Educator in Secondary Science with a Professional Endorsement as a School Librarian. She is a co-advisor for the BMS Robotics team and is currently working on the BMS entrepreneurial program.

When she is not working with her students, she is a glorified chauffeur, cheerleader, and chef for her husband and three boys.

**Rebecca J. Respicio** was appointed to her position as Director of the Guam Energy Office in January of 2019 after serving as the Juvenile Justice Specialist and Prevention Program Coordinator for 22 years at the Department of Youth Affairs. She is the current co-chair for the Guam Green Growth Committee: Sustainable Housing, Utilities & Transportation and works closely with many other agencies and organizations to ensure that we continue to promote energy conservation, energy efficiency and renewable programs and practices throughout our island.

**Jennifer G. Sablan, P.E.** is the Guam Power Authority's Manager of Strategic Planning and Operations Research Division. Sablan has over 28 years of electric utility experience spanning technical, engineering, generation operations and management. She was appointed to her current position in 2017 which oversees fuel contracts, integrated resource planning, renewable projects, battery energy storage projects, smart grid, demand side management and the contract for the new Ukudu Power Plant. Jennifer is a licensed professional mechanical engineer in Guam. She also is a Certified Energy Auditor (CEA) and Certified Energy Manager (CEM) with the Association of Energy Engineers (AEE).

**Juliana Maria F. Baza** was born and raised on Guam. She is a graduate of Academy of Our Lady of Guam and holds a Bachelor of Science in Mechanical Engineering from the University of Portland. While studying engineering, she interned for the Guam Power Authority for two summers. The first summer, she assisted the SPORD division with the research paper on GPA's transition to ULSD. The second summer, she worked for the Transmission and Distribution section of GPA, learning about GPA journeyman safety, outage restoration, and essential grid components and operation. The next two summers were spent interning in aerospace engineering at NASA Ames Research Center and

bioengineering at Legacy Biomechanics Institute. Once she graduated in 2013, she was hired by Nike, Inc. as a manufacturing Engineer in Beaverton, OR.

She moved back to Guam in February 2022 to raise her first child here, at home, with her husband and their families. And is now a proud employee of Guam Power Authority once again.

**James Rosenberg II** has extensive experience in business operations in the Asia Pacific markets for consumer automotive and technology companies. Since joining Blink in 2021, he works as a primary point of contact between the company and large clients. In his role, he works alongside the executive, engineering, procurement, sales, and fleet teams for new market expansion, contracting new clients, and identifying new equipment and software solutions.

James has served in various executive functions across Korea, Japan, Guam, and the United States to identify opportunities for growth and expansion of emerging and rapidly growing companies. His work includes project management, market analysis, research, and due diligence for strategic international expansion.

**Daniel Rueckert, P.E., CISM** has 30+ years of experience in information technology, project management and utilities business consulting. He is responsible for the Security, Risk & Compliance Management business line within Sheffield Scientific along with technology partnerships and the go-to-market strategy. Mr. Rueckert has worked with enterprise security program implementation at TVA, Pacific Gas & Electric, Xcel Energy, Salt River Project (SRP), Guam Power Authority and Iberdrola USA involving NRC/NEI, NERC, EPRI-TAM and NIST. Mr. Rueckert prior to joining Sheffield Scientific held positions at Black & Veatch and Hewlett-Packard where he was Global Practice Director for Service Management (ITIL®) and Security & Risk services within the consulting and integration organization.

He has had "Hands On" leadership and management in the successful deployment of large scale Enterprise Asset Management (EAM) implementations within the utilities sector at Duke Energy, Ontario Hydro Nuclear, Generation Victoria and Exelon. He had 15 years of experience at Pacific Gas & Electric (PG&E) Company at Diablo Canyon Power Plant in

implementation of first generation work management systems and held other engineering and technology management positions.

**Tim Allen** is the President & CEO of PXiSE. Tim joined PXiSE in 2021 and oversees the commercial sales, marketing, and product management teams, ensuring that they are aligned under a unified strategy. Tim has over 20 years of experience in the utility and renewable power industry. Prior to joining PXiSE, Tim was with the Sempra family of companies for 18 years and with Recurrent Energy for two.

**Francis Iriarte, P.E.** is a Professional Mechanical Engineer for the Guam Power Authority. Francis graduated at the University of Hawaii in 1992 with a Mechanical Engineering, B.S. Degree. He has about 30 years with GPA. Francis' major accomplishments are Commission Manenggon Diesel Power Plant (1992); Provide Engineering Support in Construction and Commissioned of Tenjo Diesel Power Plant (1993); Provide Engineering Support in Construction and Commissioned of Cabras 3&4 Slow Speed Diesel Power Plant (1995); Oversee the GPA (SWAC) Seawater Air Conditioning System Technical and Economic Feasibility Assessment (2008); Oversee the Grant Funded LED Conversion of Island Wide Streetlights (2011); Assist in the DSM Rebate Program Development and Implementation (2014); Oversee the Construction and Commissioned of Leased of Aggreko's Diesel Power (2016); Oversee the Construction and Commissioned of Mangilao Solar Plant Under Phase II Renewable Power Purchase Agreement (2022).

**Chris Patton** joined Landis+Gyr in 2022 as a power systems engineer delivering Landis+Gyr's Advanced Grid Analytics for utilities across North America. Chris has a background in developing and deploying smart grid solutions, having worked on demand response and distributed energy resource management systems prior. Chris believes Grid Analytics play a vital role in enabling utilities to meet their renewable and net zero goals while maintaining high power quality levels and safe and reliable operation of their grid.

**Louis C. Camacho, P.E.,** is a Distribution Engineer for Guam Power Authority. Louis joined the Guam Power Authority (GPA) in 2009. He was the first successful GPA Engineering Scholarship recipient. Louis graduated in 2009 from Sacramento State University with a Bachelor of Science degree in Electrical and Electronic



# SPEAKERS BIOS

Engineering with an emphasis in power.

At GPA, Mr. Camacho initiated the LED streetlight project on Guam writing a grant under the DEED program (preceding the ARRA grant), Faulted Circuit Indicators to reduce troubleshooting times, switched capacitor banks, and actively conducts power system analyses for the islands distribution system.

While attending college, Mr. Camacho worked as an electrician apprentice and installed solar panel systems. In 2014, Mr. Camacho became both a Certified Energy Manager (CEM) and Certified Energy Auditor (CEA). One year later, in 2015, Mr. Camacho became a Professional Engineer (PE).

**Irwin Loyola, P.E.** is a GPA Engineer Supervisor in the Substation / Transmission Engineering Division. Irwin graduated from University of Illinois, Urbana-Champaign in 1995 with a BS in Electrical Engineering. He initially worked at Advanced Engineering for several months then began work at Guam Power Authority in September 1996. He started under the Demand Side Management doing the Guam Energy Sense Rebates. He moved to the Substation/Transmission section and became the System Protection Engineer. He received his Professional Engineer License in 2002 and moved to the Supervisor position in 2012. He continues to perform System Protection, manage Capital Improvement Projects, System Upgrades, Power Flows, and outage analysis.

**Ashton Raffety** is an Energy Policy and Strategy Analyst within Argonne National Laboratory's Division of Decision and Infrastructure Sciences. His work focuses on energy security programming efforts for state/territorial governments, risk analysis studies on critical energy infrastructure systems, and the impacts of climate change on utility operations. Prior to Argonne, he worked on critical infrastructure issues with the Washington, DC based National Association of Regulatory Utility Commissioners (NARUC), and prior to that he worked as a consultant supporting the U.S. Department of Energy's (DOE) Office of Cybersecurity, Energy Security, and Emergency Response (CESER).

**Melvin Kwek** is the Chief Information Technology Officer for the Guam Power Authority (GPA) and has overseen the Agency's technology resources for the last 10 years. He has been integral in implementing Smart Grid Technology, Digitalization of Services and IT & Operational Technology (OT) Improvements for the Authority.

Before that Melvyn has worked for over 12 years with Ernst & Young Guam as a senior manager for their Information Technology Risk & Assurance (ITRA) department performing IT Audits, Security Audits and Advisory work. He graduated from Washington State University with a degree in Management Information Systems (MIS) and is a Certified Information Systems Auditor (CISA) and Global Industrial Cyber Security Professional (GICSP).

**Roger U. Pabunan** is an Engineer Supervisor Planning & Regulatory for the Guam Power Authority. Roger has been with Guam Power Authority (GPA) for 20 years now. He joined GPA in the beginning of 2003 and has handled various duties involving compliance with both Air and Water Regulations. As an Engineer Supervisor his main area of focus is compliance with the Clean Air Act.

**Lorraine Shinohara, P.E.**, is an Engineer Supervisor with the Strategic Planning and Operations Division at the Guam Power Authority with a B.S. in Electrical Engineering from UCLA. Her section handles Strategic Planning and Energy Contracting. She was also the project manager for GPA's Wind Turbine Generator and Battery Energy Storage System Projects. She continues oversight over the BESS operations and is leading GPA's Phase IV Renewable Energy Resource Acquisition.

**Roel A. Cahinhinan P.E.** is an Engineer Supervisor in the Guam Power Authority's Strategic Planning & Operations Research Division (SPORD). He has a Bachelor of Science in Electrical Engineering. He worked on Projects such as the Smart Grid Initiative Grant and GPA's SCADA system.

**Jessica Lazatin** is Guam Power Authority's Engineering III received her Bachelor of Science in Electrical Engineering degree from University of Portland, Portland, OR in 2015. Under Engineering World Health and BETA Aid International, she went to two volunteer trips to repair equipment at a trauma hospital in Haiti in 2014 and 2015. She is a co-creator of a Tinnitus Treatment Apparatus Machine that uses customizable bone conduction combined with audio therapy to alleviate chronic Tinnitus. Her technical interests encompass logic design, circuit design, integrated circuits, renewable energy technologies, and energy diversity. She is currently working at Guam Power Authority under

the Strategic Planning and Operations Research Division and her roles include ESS O&M, PMC contract management and renewable energy acquisition.

**Michael Murphy** is Guam Power Authority's Engineer I. After graduating from the University of San Diego in 2021 with a degree in Electrical Engineering with significant work experience in the fields of electromagnetics, embedded systems, and biomedical engineering, Michael Murphy came home to Guam to work for the Guam Power Authority, dealing primarily in contracts related to renewable energy. Crucial projects include the Hagatna and Talofofo Energy Storage Systems, Phase IV, and Solar Canopy. With passions for Physics, computers, and neuroscience, Michael's career goal is to lead Guam's grid into the future with grid automation and cutting-edge and resilient renewable technology. Being half Palauan, Michael's purpose through designing and building projects, such as embedded systems, robots, and microprocessors, is to foster a sense of curiosity and love for STEM in Micronesia.

**Brian Miner, PSP** has nearly 20 years of experience in the utility and nuclear industry, including nuclear security with the Naval Nuclear Propulsion Program, Department of Defense, and Department of Energy, and supporting Nuclear Regulatory Commission (NRC) physical security inspections of NRC licensees and vendors, as well as cyber security work in the commercial nuclear industry at Duke Energy and OPPD. He has managed physical security projects at the Guam Power Authority. Conducted Strategic Security Reviews at Naval Reactors and US Navy facilities resulting in a facility designation as a Priority Industrial Facility, the first of its kind in the industry, and the creation of a Master Safeguards & Security Plan for the Naval Reactors Facility in Idaho and for the Nuclear Power Training Unit in SC. He is experienced in Vulnerability Assessments, Force-on-Force testing and exercises for Naval Nuclear Fuel Vendors Security Organizations as well as developing functional requirements and conducting tabletop vulnerability exercises for new security facilities at Nuclear Fuel Services (NFS) in Erwin, TN. Brian is a former Law Enforcement officer/Deputy Sheriff and Security Police Officer/Inspector. Also served in the US Air Force as a Cryptologic Linguist Specialist and Direct Support Operator in Intelligence and Special Operations.

