



PRESS RELEASE

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UOG collaborates with Pacific Northwest National Laboratory for renewable energy research

In a breakthrough collaboration for the University of Guam, a team from Pacific Northwest National Laboratory (PNNL) visited UOG on March 14. PNNL scientists are providing the local University with expertise in fundamental research towards using seawater as a potential source of energy.

The lab, based in Washington state, lays a foundation for innovations that advance sustainable energy through decarbonization and energy storage. PNNL collaborates with academia in fundamental research and with industry to transition technologies to market.

UOG's collaborations with PNNL are funded through the U.S. Department of Energy (DOE), Office of Science, Basic Energy Sciences-Reaching a New Energy Sciences Workforce (BES-RENEW) Program, and DOE's Water Power Technologies Office (WPTO).

Fleur de Peralta, a senior advisor with the Risk & Environmental Assessment Group in PNNL's Energy & Environment Directorate, is one of the representatives who visited UOG. De Peralta grew up in Guam.

Dr. Karl Mueller, a physical chemist, joined de Peralta during the visit. He is a Lab Fellow and Program Development Office Director for the Physical & Computational Sciences Directorate at PNNL.

The visitors toured multiple laboratories at UOG and expressed interest in knowing how PNNL can further collaborate with UOG.

The UOG team expressed willingness in hosting PNNL researchers who might want to conduct fieldwork in the Western Pacific.

UOG officials also were appreciative of the experience UOG researchers will get through this new relationship with a DOE national lab. Dr. Pamela Peralta Taitano, with the Office of Research and Sponsored Programs; and Dr. Rachael Leon Guerrero, Vice Provost of Research and Sponsored Programs, are taking the administrative lead on these programs at UOG.

The DOE's Office of Science is providing \$1.695 million in BES-RENEW research funding to UOG. PNNL will receive \$555,000 for the three-year project through 2025. Dr. John Limtiaco, an assistant professor of chemistry, takes the lead on the UOG side of the research. In addition to adding new equipment to his lab and performing collaborative research at UOG, Limtiaco and two students will participate in a research experience at PNNL this summer. Read the previous story on this link <https://www.uog.edu/news-announcements/2022-2023/uog-joins-research-efforts-toward-harnessing-energy-from-the-sea.php>

Five UOG students will also experience PNNL research with Dr. Limtiaco during the summers of 2024 and 2025.

"Research teams from PNNL and UOG will investigate the fundamental science behind seawater electrolysis to generate hydrogen," according to Dr. Mueller. PNNL and UOG teams also discussed a second project funded with \$400,000 from DOE's WPTO.

Dr. Bastian Bentlage, Associate Professor of Bioinformatics at the UOG Marine Lab, and David Patrick Crisostomo, an Aquaculture Specialist with the Sea Grant Program, take the lead on research at UOG for the WPTO project. UOG will collaborate with PNNL and Sandia National Laboratories to assess the infrastructure, environmental and economic impacts of using ocean thermal energy conversion and wave energy conversion technologies to power a proposed Guam Aquaculture Innovation Center.

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Photo caption:

Karl Mueller, a physical chemist and a Program Development Office Director at Pacific Northwest National Laboratory in Washington State, seated, second from left, is joined by Fleurdeliza de Peralta, seated, third from left, a senior advisor with the lab's Risk & Environmental Assessment Group, during a visit to the University of Guam on March 14. Standing from left: Dr. Pamela Peralta, Director, Contracts and Grants at UOG; Dr. Michael Chan, Guam Community College Dean of School of Technology & Student Services; UOG Senior Vice President and Provost Dr. Anita Borja Enriquez; and Dr. Rachael Leon Guerrero, Vice Provost of Research and Sponsored Programs,

UOG. Seated, first from left, Guam Community College President Mary Okada; and UOG President Thomas W. Krise, first from right.