



**National Laboratory
of the Rockies**



**Sandia
National
Laboratories**

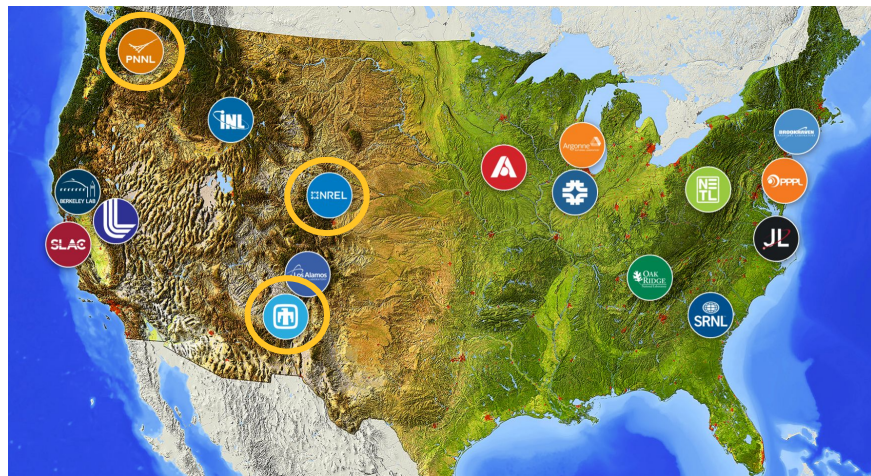
Marine Energy Career Panel

April 23, 2026

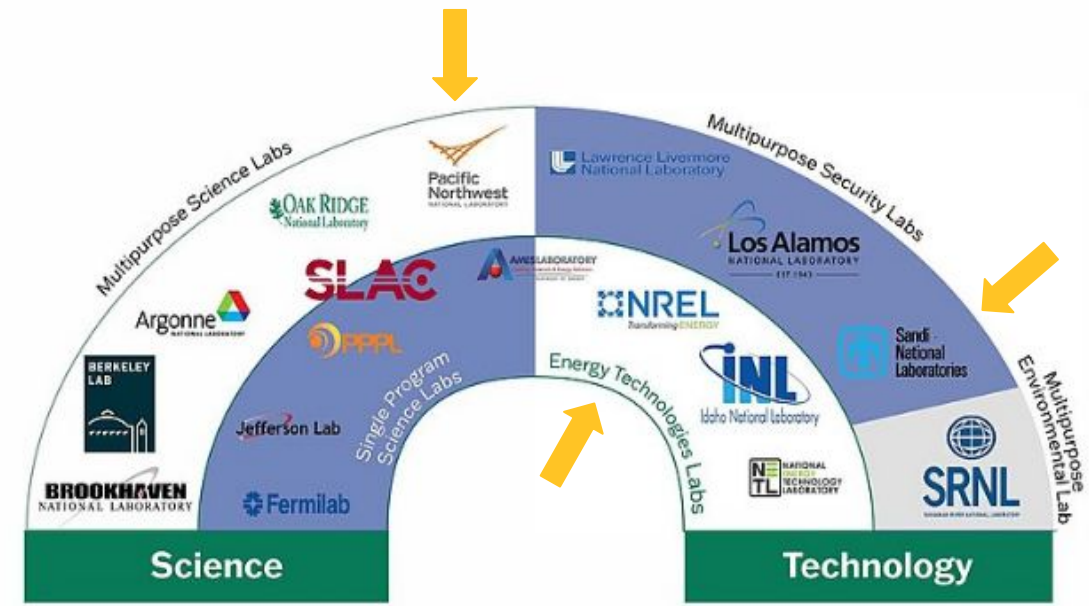


Overview of National Laboratories

- The US Department of Energy's (DOE) 17 national laboratories tackle critical scientific challenges
- **Goal:** conduct R&D addressing national priorities such as energy and climate, the environment, etc.



DOE EXECUTES ITS MISSIONS THROUGH DIVERSE NATIONAL LABS





NLR Water Power

Driving innovation in the design and use of next-generation **marine energy** and **hydropower/pumped storage** systems through foundational research, tool development, and laboratory and in-water optimization.

NLR's Marine Energy Capabilities

- Commercialization
- Data access and analysis tools
- Desalination
- Design, simulation, and control
- Economic analysis
- Grid research
- Market acceleration and workforce
- Resource characterization
- Technology innovation and assessment
- Testing and validation
- Waterborne plastics

NLR at a Glance:

- ~3,000 workforce, including
- World-class research expertise in:
 - Energy Systems Integration
 - Transportation & Fuels
 - Buildings and Industry
- Partnerships with:
 - Industry
 - Academia
 - Government
- 4 Campuses operate as living laboratories

Pacific Northwest National Laboratory (PNNL)

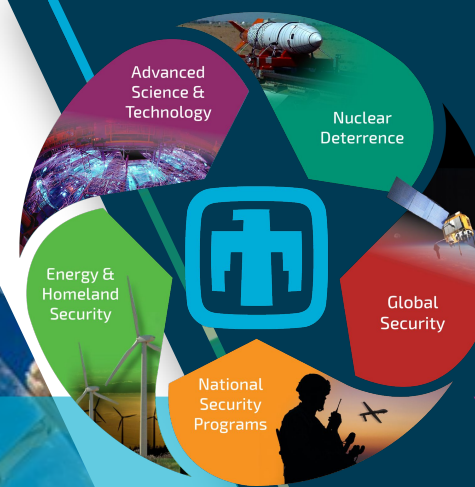
PNNL - ~6,000 researchers and support staff, based in Washington

Coastal Sciences Division - conducts research related to coastal science, including marine energy

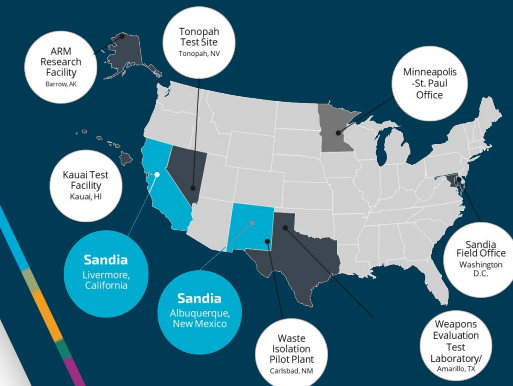
- PNNL-Sequim - DOE's only marine research laboratory
 - PNNL-Sequim is uniquely positioned to help achieve energy innovation and maintain robust, secure coasts
- OES-Environmental and Triton projects focus on environmental effects of marine energy



Sandia National Laboratories



Exceptional service in the national interest

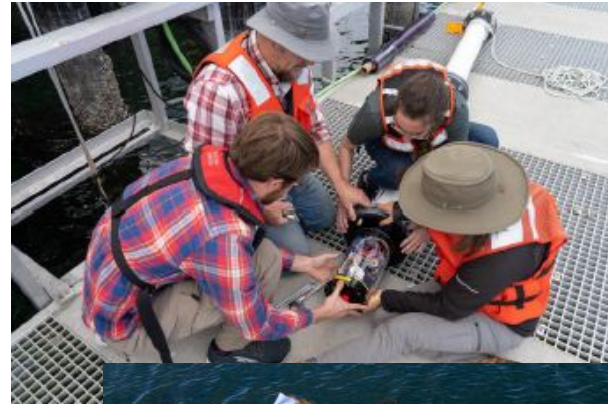


Panel Introductions



Images courtesy of Orbital, CalWave, NLR & PNNL

Linnea Weicht- Mechanical Engineer, PNNL



Education

- 2019:
General/Mechanical
Engineering B.S. –
Seattle Pacific University

Career

- Joined PNNL in 2020 as
Post-Bachelors RA
- Coastal Sciences Division

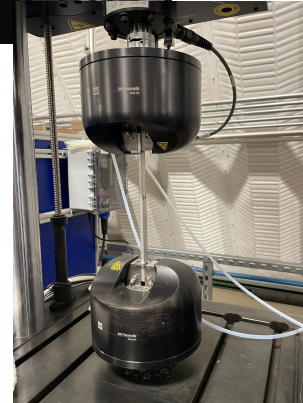
Focus

- TEAMER support: 3newable llc, Triton
Systems Inc., Anchorbot Marine
- Mechanical design support for marine
deployments
- Tidal turbine simulations

Sara Wallen – Research Technician, NLR



University of Colorado **Boulder**



Education

- 2010: BA Environmental Studies, minor in Economics – University of Colorado at Boulder

Career

- 2012-2013: Water Conservation Associate (CRC)
- Joined NLR (formerly NREL) in 2014 as a Business Support team member
- Transitioned to Research Technician with ESSI in 2014 (formerly MTES)

Focus

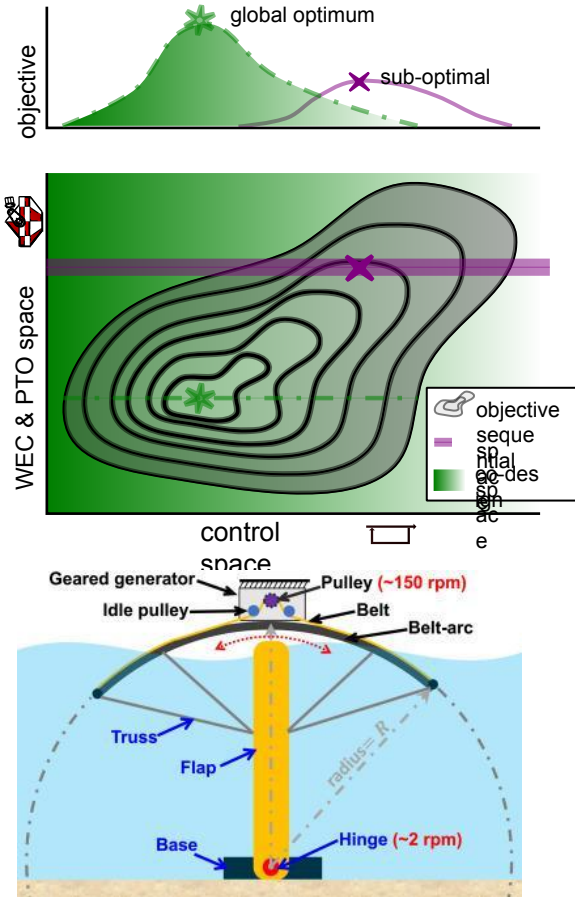
- Structural and Components Testing
- Dynamometer and Grid Testing
- Subject Matter Expert in Hydraulic Systems Set-up and Data Acquisition Systems

Jeff Grasberger – R&D Mechanical Engineer, Sandia



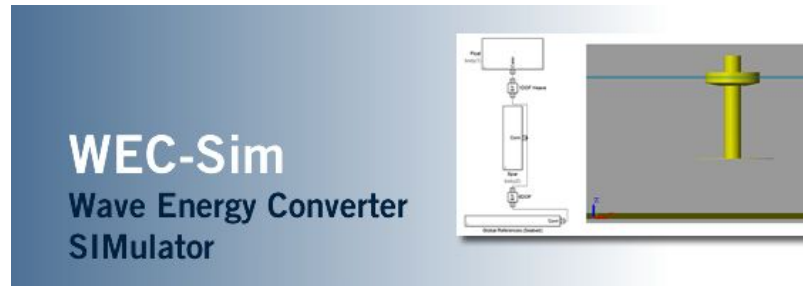
Education

- 2021: BS Mechanical Engineering – Virginia Tech
- 2022: MS Mechanical Engineering – Virginia Tech



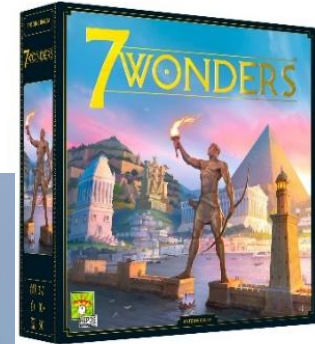
Career

- Joined Sandia National Laboratories in 2021 as a Marine Energy Graduate Intern
- Present: R&D Mechanical Engineer in the Earth, Water, and Energy Systems Dept

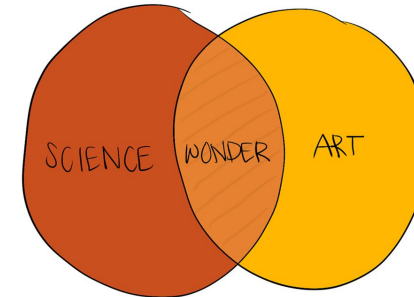


Focus

- WEC-Sim
- Control Co-design of Wave Energy Converters
- WEC optimization toolbox: WecOptTool
- Wave energy co-location (aquaculture, desalination, etc.)



Cailene Gunn – Earth Scientist, PNNL



Education

- 2016: BS Geology, Bates College

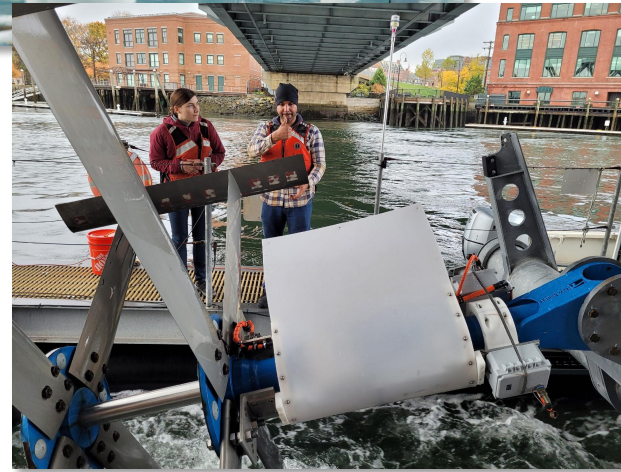
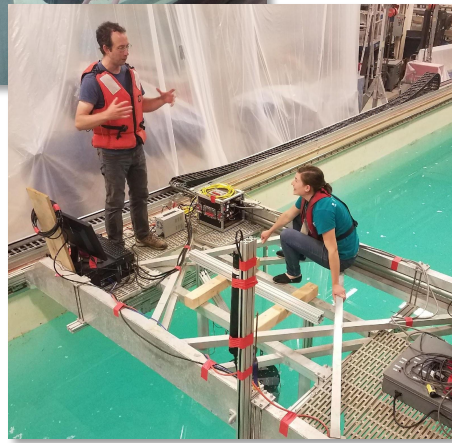
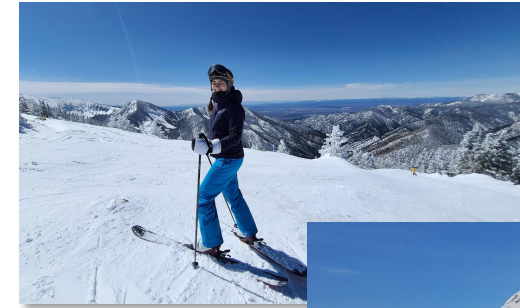
Career

- REU at Hubbard Brook; undergrad thesis on wetland restoration connected me to PNNL
- Joined PNNL-Sequim in 2016 as a Post-Bach Research Associate
- Coastal Sciences Division, Energy and Environment Directorate

Focus

- Science communication (research & practice)
- Environmental effects of marine energy
- Social ecological systems research
- STEM education and outreach

Hannah Ross – Research Engineer, NLR



Education

- **2014:** *BS, Mechanical Engineering*
Tennessee Technological University
- **2016:** *MS, Mechanical Engineering*
University of Washington
- **2020:** *PhD, Mechanical Engineering*
University of Washington

Career

- Internships at UAF, LANL, and IWES
- Joined NLR in 2020 as a postdoctoral researcher in the Water Power R&D group
- Transitioned to a research engineer position in 2020

Focus

- Reduced order numerical modeling of marine turbines
- Multiple industry support projects
- Model verification and validation

Panel Discussion



Images courtesy of
Andritz, CorPower, and
PNNL

Marine Energy Fellowship

Who:

- Current graduate students (M.S./Ph.D.) and recent graduates (B.S., M.S., Ph.D. within 24 months)
- Fellows may participate up to 2 years (across graduate and/or post-graduate tracks)

What:

- 12-month, funded fellowships at host facilities to research, develop, and test marine energy solutions
- Open to diverse disciplines (STEM and non-STEM: social sciences, communications, business, etc.)

When:

- **Summer 2026 Cohort:** Application period Sept–Dec 2026
- **Fall 2026 Cohort:** Apply Dec 2026–Mar 2027

Where:

- Work with approved host facilities (in person, hybrid, or remote options)

Why:

- Hands-on experience in marine energy research and innovation
- Builds workforce skills employers identify as critical gaps



OAK RIDGE INSTITUTE
FOR SCIENCE AND EDUCATION
Shaping the Future of Science



U.S. DEPARTMENT
of **ENERGY**

Office of Critical Minerals
and Energy Innovation

DOE Office of Science Internship / Exchange Opportunities

Science Undergraduate Laboratory Internships (SULI)

- Encourages undergraduate students and recent graduates (up to 2 years after completing undergraduate)
- Interns can apply to work at one of the 17 participating DOE labs/facilities - suggest reaching out to labs
- Interns perform research, under guidance of laboratory staff on projects supporting DOE missions

Approximate Start Dates

Fall term: Third Monday in August for 16 weeks

Spring term: Third Monday in January, for 16 weeks

Summer term: First Monday in June, for 10 weeks

Informational Links:

- <https://science.osti.gov/wdts/suli>
- <https://www.nlr.gov/careers/suli.html>
- <https://www.pnnl.gov/suli-internships>



DOE Office of Science Visiting Faculty Program (VFP)

- Faculty members collaborate with DOE laboratory research staff on a project of mutual interest
- Solicited annually for a Summer Term (10 weeks)
- For more information: <https://science.osti.gov/wdts/vfp>

Additional Graduate Student Opportunities

The Office of Science Graduate Student Research (SCGSR) Program

<https://science.osti.gov/wdts/scgsr>

NLR Director's Postdoctoral Fellowship

Applications accepted for two rounds per year.
www.nlr.gov/careers/directors-fellowship.html



PNNL's Postdoctoral Fellowship

www.pnnl.gov/projects/linus-pauling-distinguished-postdoctoral-fellowship

Sandia's Postdoctoral Fellowships

www.sandia.gov/working-with-sandia/academic-partnerships/postdoctoral-research-and-fellowship-programs/

Marine Energy Collegiate Competition (MECC)

A U.S. Department of Energy competition, managed by NLR, engaging college teams in hands-on marine energy challenges for the ocean economy.

Leagues:

- Kilowatt: Introductory/flexible participation
- Megawatt: Advanced, full engagement

Core Challenges:

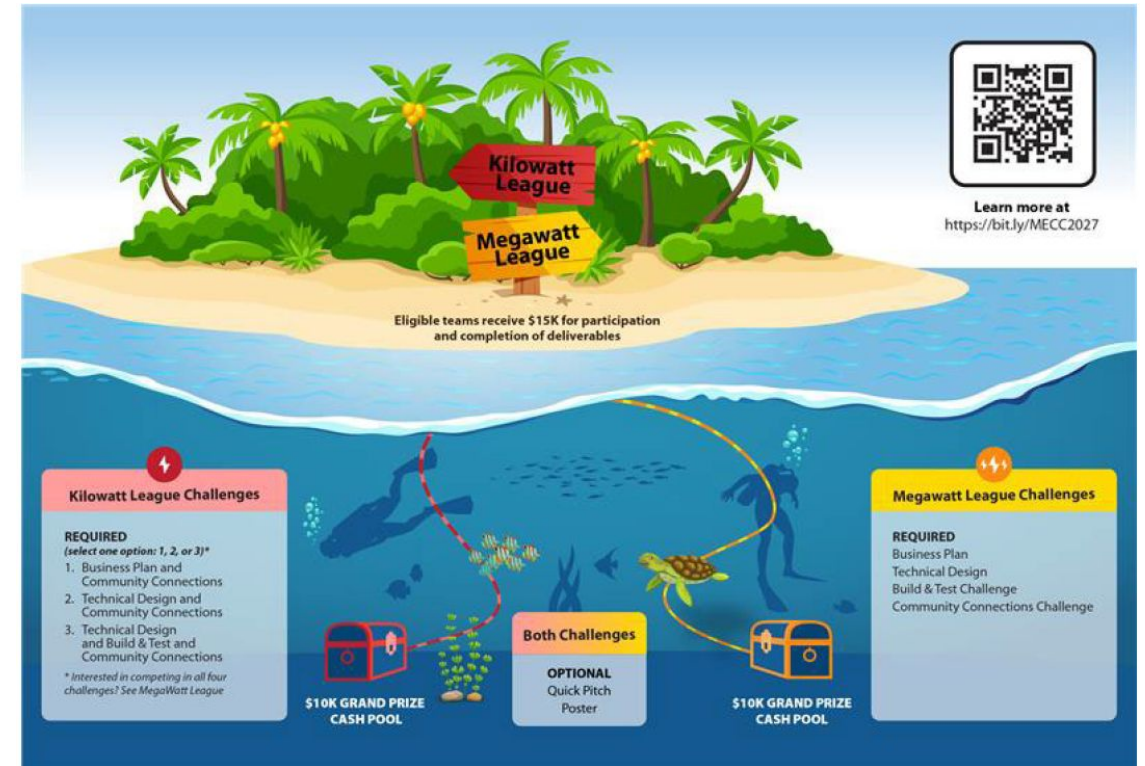
- Business Plan
- Technical Design
- Build & Test (scaled prototype)
- Community Connections

Prizes:

- Up to \$15K per eligible team
- Up to \$20K grand prize cash purse

Impact:

Students gain real-world energy experience, connect with industry, and develop skills for careers in marine energy and the ocean economy.



Applications for this year's competition are due May 1st!

Marine Energy Professional Organizations

Students interested in a career in marine energy: consider joining a young professional societies



**Pan-American
Ocean Energy
Student Network**



FLOW
Future Leaders
of Waterpower



**IEEE Oceanic
Engineering Society**



SNAME
THE INTERNATIONAL COMMUNITY FOR
MARITIME AND OCEAN PROFESSIONALS

Stay Connected

Thank you for joining!

Check out the following links to learn more and stay connected:

- **OES-Environmental:** tethys.pnnl.gov/about-oes-environmental
 - Sign up for Tethys Blasts: tethys.pnnl.gov/tethys-blasts
 - Sign up for PRIMRE Blasts: tethys-engineering.pnnl.gov/primre-blasts
- **PRIMRE STEM Portal:** <https://openei.org/wiki/PRIMRE/STEM>
- **Triton:** pnnl.gov/projects/triton
 - Sign up for the Triton newsletter: bit.ly/Triton-Newsletter
- **Stay up-to-date on marine energy at:**
 - **NLR:** nlr.gov/water/marine-energy
 - **PNNL:** <https://www.pnnl.gov/marine-energy>
 - **Sandia:** <https://energy.sandia.gov/programs/renewable-energy/water-power/>