

UNIVERSITY of WASHINGTON

# MECHANICAL ENGINEERING, ENERGY & THE ENVIRONMENT

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## NOTABLE PARTNERS

The Boeing Company General Motors  
National Institutes of Health  
PACCAR  
Pacific Northwest National Laboratory (PNNL)  
U.S. Department of Defense  
U.S. Department of Energy  
UW Applied Physics Lab  
Washington State Department of Transportation

## OVERVIEW

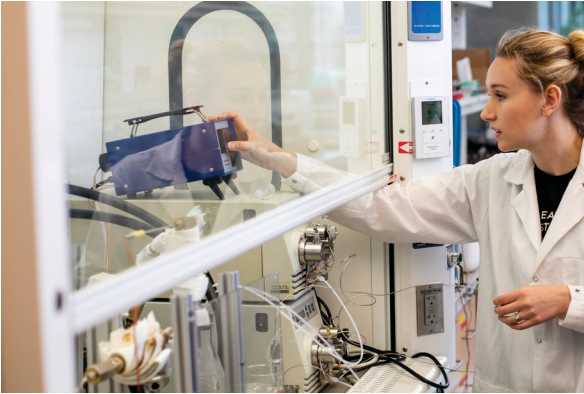
UW Mechanical Engineering is helping to advance the adoption of a clean energy future by developing next generation marine, solar and wind energy and electrical energy storage materials, devices and systems, as well as their integration with the grid. Our students and faculty are working to increase the scope and impact of our research and education in alternative energies and the environment. We are fostering partnerships that grow our visibility and prominence in pollution prevention, clean combustion and energy research and technology translation. The solutions being developed in our labs will help establish the course toward a smarter, more sustainable future.



## KEY RESEARCH AREAS

- Acoustics and noise pollution prevention
- Batteries and energy storage
- Energy conversion
- Energy optimization and conversion
- Hybrid and electric vehicles
- Low-emissions combustion, pollutants and control
- Printed and flexible electronics
- Wind, solar and marine renewable energy and instrumentation

# RESEARCH HIGHLIGHTS



ME researchers are developing novel technologies related to **particulates sampling, environmentally-friendly batteries and combustion pollution control**.



**Clean Cookstoves Lab** focuses on the testing, design and development of low-emissions, high-efficiency wood-burning cookstoves for the developing world.



**Pacific Marine Energy Center** responsibly advances the technical, environmental and societal dimensions of marine energy by expanding scientific understanding, engaging stakeholders and empowering students.



**Clean Energy Institute** is working to accelerate the adoption of a clean energy future by advancing solar energy and electrical energy storage materials, devices and systems, as well as their integration with the grid.

## AWARD-WINNING STUDENT TEAMS

**EcoCAR** is converting a Chevrolet Blazer into an automated, energy efficient vehicle for a student competition sponsored by General Motors and the U.S. Department of Energy.

The **Human Powered Submarine** team designs, manufactures and competes submarines with the goal of developing the most effective submarine system possible, relying solely on human power.

**UW Hyperloop** designs, fabricates and competes small-scale pods that travel by magnetic levitation inside tubes at SpaceX headquarters.

## NOTABLE STARTUPS

In collaboration with Burn Design Labs, ME researchers have designed more efficient and clean wood-burning cookstoves for developing countries, currently being sold as **Kuniokoa Cookstoves** by Burn Manufacturing.

**Marine Construction Technologies** has developed technology to reduce noise from pile driving and protect marine mammals and other sensitive wildlife while improving the efficiency of marine construction projects.

**MarineSitu** makes marine environmental monitoring instruments accessible to turbine developers and other renewable energy companies.