

PhD Researcher - Integrated Energy Lab

Institution: University of Victoria, Mechanical Engineering

Reports To: IESVic Director, Dr. Bryson Robertson

Location: Victoria, British Columbia, Canada

Working Arrangement: On-Site

Appointment Type: Grant Funded – 4 Year Doctoral Appointment

Start Date: 05 January 2027

Position Overview

The University of Victoria is seeking a highly motivated PhD student to join the Integrated Energy Lab (the “Lab”) as part of the BC Marine Energy and Decarbonization Hub (the “Hub”). This doctoral position focuses on applied research into integrated energy systems that support decarbonization of coastal, remote, and marine based infrastructure. The Lab and PhD researcher position are funded by the Accelerating Community Energy Transformation (ACET), a multi-partner initiative accelerating the global push for resilient and equitable clean energy solutions through community-based collaborations. Established in 2023 with support from the Canada First Research Excellence Fund, ACET is a partnership between Royal Roads University, University of British Columbia, Université du Québec à Trois-Rivières and Yukon University, led by the University of Victoria.

The PhD researcher will work within a multidisciplinary environment spanning academic researchers, industry technology developers, public sector partners, and community stakeholders. The role combines rigorous fundamental doctoral research with hands on experimentation, system integration, and collaboration with companies participating in Innovation Challenges and other Hub initiatives.

The Lab provides a controlled, instrumented environment for testing renewable energy generation, energy storage, microgrids, and control systems prior to field deployment. The successful candidate will leverage this facility to advance novel research while supporting real world technology validation and innovation.

Based in beautiful Victoria, Canada, this position offers an excellent opportunity for the candidate to expand their knowledge base, build new skills, publish high-impact work, and collaborate with leading scientists and industry in a supportive and intellectually stimulating environment.

Research Focus and Scope

The PhD researcher will be housed within the Mechanical Engineering department, and the final research direction will be determined through discussion between the candidate and supervisor following selection.

This position is ideal for a candidate who is interested in applied research at the intersection of energy systems engineering, decarbonization, and collaborative innovations. Potential areas of work may include, but are not limited to:

- Integrated renewable energy systems

- Hybrid and resilient microgrids
- Marine renewable energy and coastal energy systems
- Energy storage and system integration
- Energy system modeling, controls, and optimization
- Experimental testing and validation of emerging technologies

The research is expected to contribute both to peer-reviewed academic outputs and to practical insights that support technology development and adoption.

Key Responsibilities

1. Doctoral Research

- Design and execute an original PhD research program aligned with the objectives of the Lab and the Hub
- Conduct experimental, analytical, and/or modeling-based research on integrated multi-source energy systems
- Publish research findings in peer-reviewed journals and present at conferences
- Prepare and defend a doctoral dissertation that meets University of Victoria requirements

2. Experimental and Laboratory Activities

- Plan and conduct experiments within the Lab involving renewable energy technologies (or emulators), storage, microgrids, and control platforms
- Work with lab staff to safely configure test setups, instrumentation, and data acquisition systems
- Collect, analyze, and interpret performance data from Lab experiments
- Contribute to the development of experimental protocols and documentation

3. Collaboration and Engagement

- Work directly with industry technology developers participating in Innovation Challenges and other Hub programs
- Contribute to applied research that connects academic insight with real world challenges
- Where aligned with research objectives, support testing and evaluation of company technologies within the lab environment
- Engage with private, public sector and community partners to understand real world operational and deployment constraints

4. Knowledge Sharing

- Contribute to technical reports, project summaries, and presentations for research partners and funders
- Participate in lab demonstrations, workshops, and partner engagement activities as appropriate

5. Training, Safety, and Professional Conduct



- Complete required lab safety training and adhere to all university safety policies and procedures
- Work safely with electrical systems, energy storage devices, and other complex equipment under supervision and established protocols
- Contribute to a collaborative, respectful, and inclusive research environment

Qualifications

Required

- A completed Bachelor's or Master's degree in a field that is relevant to renewable energy generation and/or management (engineering, physics, etc.)
- Strong academic background suitable for admission to a PhD program at the University of Victoria
- Demonstrated interest in energy systems, renewable energy technology, decarbonization, integrated energy solutions, or related areas
- Ability to work independently while contributing effectively within a multidisciplinary team
- Strong written and verbal communication skills

Preferred

- Experience with laboratory or experimental research involving electrical or energy systems
- Familiarity with microgrids, renewable generation, energy storage, or control systems
- Experience working with industry or applied research projects
- Interest in energy challenges facing coastal, remote, or Indigenous communities
- Programming or data analysis skills relevant to energy systems research

Personal Attributes

- Interested in shaping their own research direction within a supportive environment
- Intellectually curious and motivated by real world impact
- Comfortable working across academic and industry settings
- Organized and able to manage complex research activities over a multi year timeline
- Collaborative and respectful in working with diverse partners
- Committed to advancing clean energy solutions and decarbonization

Compensation and Benefits

The position is considered a fully funded PhD program for four years, subject to satisfactory academic progress. The successful candidate will benefit from:

- Competitive graduate student stipend (\$35,000 per year)
- Comprehensive benefits package (extended health & dental)

- Professional development and training opportunities
- Access to state-of-the-art laboratory facilities and shared testing infrastructure
- Support for conferences travel and publications costs

Application Process

Applicants should submit a single email with subject: “Integrated Energy Lab-PhD Position_[Name]” to:
Ross Flavell
Strategic Research Manager 1, ACET
rossflavell@uvic.ca

Applicants should submit the following materials as a single document:

1. Cover letter outlining research interests and future career ambitions.
2. Curriculum Vitae (CV)
3. Contact information for 2x professional references
4. (Optional) Sample publications or writing samples

Application Deadline: September 20th, 2026.

Equal Opportunity Statement

UVic is committed to upholding the values of equity, diversity, inclusion and [human rights](#) in our living, learning and work environments. In pursuit of our values, we seek members who are eager to actively participate in that shared responsibility. We actively encourage applications from members of [historically and systemically marginalized groups](#). Read our [full equity statement](#).

