Institute for Integrated Energy Systems
Maclaurin Building, Rm D202, PO Box 1700 STN CSC Victoria BC V8W 2Y2 Canada
T 250-721-8931 | www.uvic.ca/iesvic

Postdoctoral Researcher in Marine Energy and Community Microgrids

Institution: University of Victoria, Institute for Integrated Energy Systems (IESVic)
Reports To: IESVic Director, Dr. Bryson Robertson
Location: Victoria, British Columbia, Canada
Working Arrangement: On-Site
Appointment Type: Full-Time, 1-yr with potential for renewal
Proposed Start Date: January 11th, 2027

Position Overview

The University of Victoria is seeking a highly motivated Postdoctoral Researcher to join the Institute for Integrated Energy Systems (IESVic). This position focuses on applied research at the intersection of marine renewable energy, community microgrids, and regional energy planning. The successful candidate will contribute to research that advances understanding of wave energy opportunities, renewable energy integration, and the development of resilient, secure, and sustainable energy systems in coastal, remote, and Indigenous communities.

IESVic charts feasible pathways to sustainable energy systems through the development of new knowledge, technologies, processes, and policies. Established as a UVic Institute in 1994, IESVic provides leadership at the University of Victoria in the study of critical energy related issues, human dimensions of energy, policy development, and energy technology. IESVic is a multidisciplinary research institute with faculty from Engineering, Public Administration, Business, Economics, Psychology, Environmental Studies, Earth and Ocean Science, Chemistry and Biology. The Postdoctoral Researcher position is 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.

Reporting to the Director of IESVic, the PDF will use their knowledge and skills to enhance the IESVic mission. The PDF will support initiatives of strategic importance through development, facilitation and execution of research activities, as well as, working within a multidisciplinary environment spanning academic researchers, industry technology developers, public sector partners, First Nations communities, and municipal communities. The role combines advanced technical research, system modelling, and applied analysis. Working alongside project partners, the successful candidate will help evaluate renewable energy opportunities, future energy needs, infrastructure constraints, and pathways that support community priorities and long-term development objectives.

The successful candidate will provide technical leadership across a suite of interconnected research activities spanning renewable energy resource assessment, wave energy systems analysis, energy demand characterization, and microgrid modelling. Research activities may include assessment of renewable energy resources and technology maturity, evaluation of wave energy converter performance and array configurations, hydrodynamic modelling of offshore renewable energy systems, electrical modelling of grid-connected and islanded microgrids, analyses of existing and emerging energy demands, and techno-economic assessment of future energy pathways. The technical analysis work will

directly support ongoing community engagement, feedback, and co-design activities, helping translate complex technical information into practical decision-making tools and actionable insights. The PDF will also provide mentorship and technical support to graduate students and contribute to a broader portfolio of marine renewable energy and decarbonization research undertaken by IESVic and ACET.

This position offers an excellent opportunity for early-career researchers to expand their expertise, build new capacity, publish high-impact work, and collaborate with leading scientists in a supportive and intellectually stimulating environment.

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, communities, governments, and industry in a supportive and intellectually stimulating environment.

Research Focus and Scope

The Postdoctoral Researcher will be housed within the Mechanical Engineering department and will work closely with IESVic researchers, community partners, industry collaborators, and graduate students. The final research direction will be determined through discussion with the supervisor and project partners.

This position is ideal for a candidate interested in applied research at the intersection of marine renewable energy, community microgrids, energy systems modelling, and community-led energy transitions. Potential areas of work may include, but are not limited to:

- Renewable energy resource assessment and characterization
- Wave energy systems modelling and performance analysis
- Hydrodynamic modelling of wave energy converters and associated infrastructure
- Energy demand characterization across existing industries and emerging blue economy sectors
- Islanded, end-of-line, and community microgrid modelling
- Renewable energy integration and energy storage assessment
- Techno-economic analysis of future energy development pathways
- Community-informed energy planning and decision support tools

The research is expected to contribute both to peer-reviewed academic outputs and practical insights that support renewable energy development, community energy planning, infrastructure investment decisions, and resilient energy transitions in coastal and remote communities.

Key Responsibilities

1. Research Leadership and Project Execution

- Conduct independent and collaborative research aligned with IESVic's focus on sustainable energy systems that are reliable, cost-effective and socially acceptable
- Coordinate technical activities across project workstreams and research partners.
- Publish research findings in peer-reviewed journals and present at academic conferences.
- Support proposal development, grant writing, and future research opportunities.

2. Marine Energy and Microgrid Systems Analysis

- Lead interdisciplinary research on marine energy, microgrids, and community energy transitions.

- Assess renewable energy resources, technology maturity, deployment opportunities, and associated costs.
- Characterize electricity demand across communities, industry, and emerging blue economy applications.
- Develop hydrodynamic models of wave energy converters, arrays, and supporting infrastructure.
- Model grid-connected, islanded, end-of-line, and microgrid energy systems.

3. Collaboration and Community Engagement

- Collaborate with researchers, First Nations, municipalities, utilities, industry, and community organizations.
- Support co-led research integrating community priorities with technical energy system analyses.
- Participate in workshops, meetings, and engagement activities with project partners.
- Develop technical insights that support local energy planning and infrastructure decisions.

4. Knowledge Sharing and Mentorship

- Prepare technical reports, presentations, publications, and partner deliverables.
- Translate complex analyses into accessible information for diverse audiences.
- Mentor graduate and undergraduate students involved in project activities.
- Support IESVic Director to increase research activities and associated impact.

5. Training, Safety, and Professional Conduct

- Adhere to university policies, procedures, and required training requirements.
- Maintain responsible research practices and appropriate data management procedures.
- Foster a collaborative, respectful, and inclusive research environment.
- Represent the University professionally when engaging with external partners.

Qualifications

Required

- Ph.D. in relevant engineering, or related field to renewable energy generation, distribution, and utilization, energy systems and sustainability needs to be completed to be eligible.
- Strong record of scholarly publications or demonstrated research potential.
- Experience conducting transdisciplinary, analytical, modelling, or applied research related to energy systems, marine renewable energy, power systems, decarbonization, or community energy transitions.
- Ability to work independently while contributing effectively within a multidisciplinary team.
- Excellent written, verbal and technical communication skills.
- Demonstrated ability to collaborate with diverse partners, stakeholders, and community organizations.

Preferred

- Interest in energy challenges facing coastal, remote, or Indigenous communities.
- Experience with marine renewable energy systems, wave energy technologies, or offshore renewable energy development.
- Experience with microgrids, renewable energy integration, energy storage, control systems or power system analysis.
- Experience working on applied research projects involving industry, governments, First Nations, or communities.
- Demonstrated success in securing research funding or fellowships.
- Experience mentoring undergraduate or junior graduate students.

Compensation and Benefits

- Competitive salary commensurate with experience ($60,000 - $80,000 per year).
- Comprehensive benefits package (extended health & dental).
- Professional development and training opportunities.
- Access to state-of-the-art research facilities and resources.
- Support for conference travel and publication costs.
- Casual dress, paid time-off, excellent work-life balance.

Application Process

Applicants should submit a single email with subject: "Marine Energy and Community Microgrids-PostDoc Position_[Name]" to:

contactacet@uvic.ca

Applicants should submit the following materials:

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

Application Deadline: November 16th, 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.