

The Fundy Energy Research Network (FERN) is a collaborative hub dedicated to advancing and sharing tidal energy research in the Bay of Fundy and elsewhere. Members include academia, researchers, First Nations, industry leaders, government, resource users, and interested others. FERN's focus is on knowledge dissemination, tidal sector engagement, and the fostering of innovation and informed decision-making toward the responsible harnessing of tidal energy.

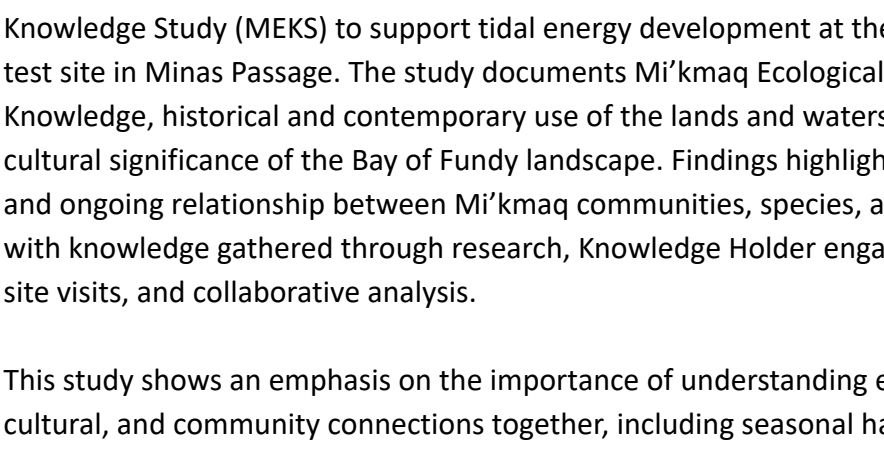
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Fundy's Tidal Sector Snapshots

Nova Scotia Dept. of Energy Launches Tidal Demonstration Permit Program

The Nova Scotia Department of Energy invites applications from tidal energy developers seeking to test innovative in-stream tidal energy technologies in the Bay of Fundy. An application window for the Demonstration Permit Program will be open from August 7 to September 30, 2026. Up to 7.7 MW of demonstration capacity is available under the program's 10 MW cap, with individual projects limited to less than 2 MW. Eligible projects must be located within the Fundy Area of Marine Renewable-energy Priority, excluding the FORCE Marine Renewable-electricity Area (both designated under the Marine Renewable-energy Act), and must utilize in-stream tidal technologies with a Technology Readiness Level (TRL) of 4 or higher. The program offers permit terms of up to five years, with opportunities for renewal, and successful projects will enter into a prescribed power purchase agreement with Nova Scotia Power. Interested proponents can find application details and program requirements on the program website.



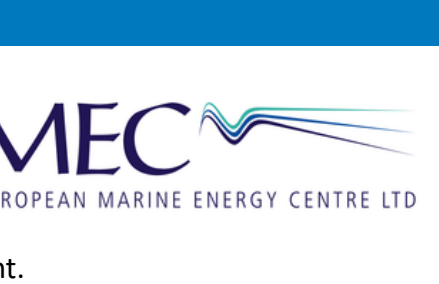
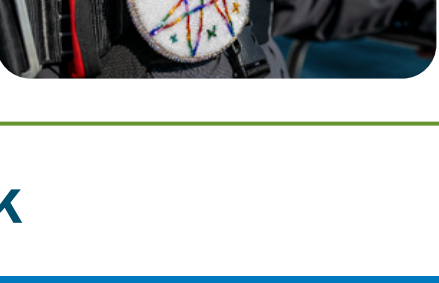
Program Website

FORCE Update: Bay of Fundy Mi'kmaq Ecological Knowledge Study Report

The Confederacy of Mi'kmaq Nations (formerly The Confederacy of Mainland Mi'kmaq), in collaboration with FORCE, has completed a Mi'kmaq Ecological Knowledge Study (MEKS) to support tidal energy development at the FORCE test site in Minas Passage. The study documents Mi'kmaq Ecological Knowledge, historical and contemporary use of the lands and waters, and the cultural significance of the Bay of Fundy landscape. Findings highlight the deep and ongoing relationship between Mi'kmaq communities, species, and place, with knowledge gathered through research, Knowledge Holder engagement, site visits, and collaborative analysis.

This study shows an emphasis on the importance of understanding ecological, cultural, and community connections together, including seasonal harvesting, travel, species movement, and changing environmental conditions. The MEKS provides an important foundation for informed project planning, environmental monitoring, mitigation, and decision-making that respects Mi'kmaq rights, values, and priorities.

Read the Full MEKS Report



International Outlook

Tidal Stream Has Crucial Role in Scotland's Energy Future, Says Industry Body

Scottish Renewables is calling on the Scottish Government to publish a dedicated policy statement for tidal stream energy in its upcoming Programme for Government. They argue that a clear and coordinated policy framework is needed to build investor confidence, address growing planning and consenting pressures, and accelerate commercial deployment.



With several developers progressing projects in Scotland, the sector is at a pivotal stage. Research from the University of Edinburgh estimates that tidal stream energy could generate £4.5 billion in Gross Value Added and support up to 22,500 jobs in Scotland by 2050, with an additional £11 billion in economic benefits from international projects.

Scotland already has a strong foundation, with tidal stream projects achieving an 80% UK-based and 50% Scottish-based supply chain and more than 300MW of projects under development in the Pentland Firth and Orkney Waters.

Scottish Renewables and the European Marine Energy Centre (EMEC) are urging the government to provide stronger policy support, arguing that a clear commitment would help unlock investment, strengthen local supply chains, create jobs, and position Scotland as a global leader in tidal energy.

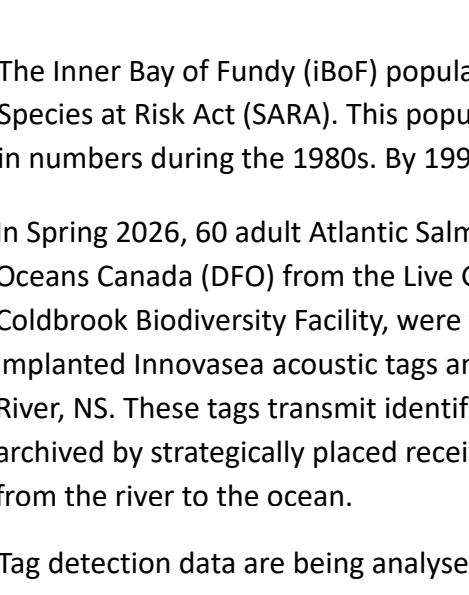
Read the Full Article

National & International Outlook

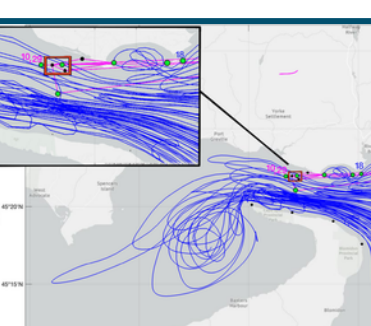
Submit News

We invite you to send us current tidal energy research updates and project milestones for consideration in a future FERN newsletter.

Tidal Energy Researcher Profile



Benjamin Williamson, Ph.D



for floating tidal turbines through field trials in Scotland, and more recently with Acadia University and FORCE to evaluate monitoring techniques with FORCE's sensor platforms in the Minas Passage, Bay of Fundy.

Dr Benjamin Williamson is a Chartered Engineer, a Principal Investigator in Engineering and Environmental Science at the Scottish Association for Marine Science (SAMS), and an Associate Professor at the University of the Highlands and Islands (UHI), Scotland.

Benjamin's research spans marine sensing techniques and multi-modal sensor fusion, remote sensing, computer vision and coordinated sensor networks across mobile and static platforms. This includes novel sensor platforms to investigate ecosystem effects of fixed and floating offshore wind, and UAVs to investigate seabird behavioural associations at tidal energy sites.

He has developed multi-sensor hydroacoustic platforms to track interactions of fish, seabirds and marine mammals with wave and tidal stream energy devices. This has involved integrating imaging sonars, echosounders, ADV/ ADCPs and wider sensors into seabed observatories around wave and tidal energy sites at EMEC (Orkney) and MeyGen (Pentland Firth). Benjamin is working with Orbital Marine Power and EMEC to validate monitoring systems

Send us a recommendation for a tidal energy researcher we should feature!

Suggest An Expert Today!

Research Project Spotlight

Using Tag Detection Data, Drifters and Models to Understand Atlantic Salmon Movements Through Minas Passage

As a part of Acadia University's NRCAN funded tidal energy project, "Reducing Fish Turbine Collision Risk Uncertainty in Minas Passage, Bay of Fundy", Acadia researchers are studying the spatial and temporal migration patterns of a range of fish species of interest, including Atlantic Salmon (juveniles and adults).

The Inner Bay of Fundy (iBoF) population of Atlantic salmon is a listed endangered designatable unit under Canada's Species at Risk Act (SARA). This population, which is of cultural importance to the Mi'kmaq, began to decline rapidly in numbers during the 1980s. By 1999, an estimated 250 adult Atlantic Salmon remained.

In Spring 2026, 60 adult Atlantic Salmon, provided by Fisheries and Oceans Canada (DFO) from the Live Gene Bank program at the Coldbrook Biodiversity Facility, were tagged with surgically implanted Innovasea acoustic tags and released in the Gaspereau River, NS. These tags transmit identification information that is archived by strategically placed receivers as tagged fish migrate from the river to the ocean.



Tag detection data are being analysed for estimating the probability that iBoF Atlantic Salmon (and other tagged species) will encounter tidal turbines installed at FORCE in Minas Passage. This includes the modelling of fish movement trajectories. The model combines simulated tidal currents from a regional ocean model with a semi-Lagrangian particle tracking model. The model was calibrated and validated against data collected from custom-made drifters deployed in the Minas Channel-Minas Basin system for more than a month. Both observed and simulated drifters have trajectories that exhibit chaotic behaviour, jumping between quasi-stable periodic orbits in Minas Basin, through Minas Passage, and in the outer Minas Channel.



This plot shows behaviour of a Spring-2019 salmon smolt (juvenile; pink line) as observed through receiver detections of tags and a single simulated fish (blue curve), which produces a similar number of detections. Recent tag detection data, and a denser array of receivers across Minas Passage, will be used to improve model validation for estimating characteristics of fish movements and turbine encounter probabilities.

This ongoing research project involves collaboration with DFO, FORCE, Ocean Tracking Network (OTN) at Dalhousie University, University of Edinburgh (EPCC), Minas Select, and the Confederacy of Mi'kmaq Nations. For further information, contact the project lead, Dr Anna Redden (anna.redden@acadiau.ca).

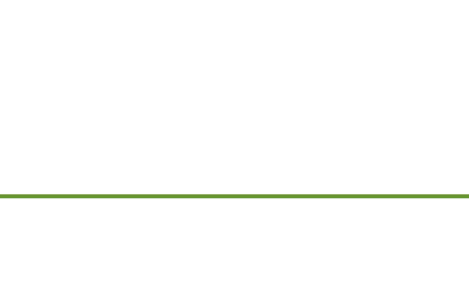
Knowledge Gaps Survey

FERN is seeking to identify knowledge gaps for priority areas within the tidal energy sector. We want to hear from you! This short survey will help direct future FERN activities to ensure we are focusing on topics of interest.

Click to Complete the Survey

Upcoming Events

FERN Webinar Series

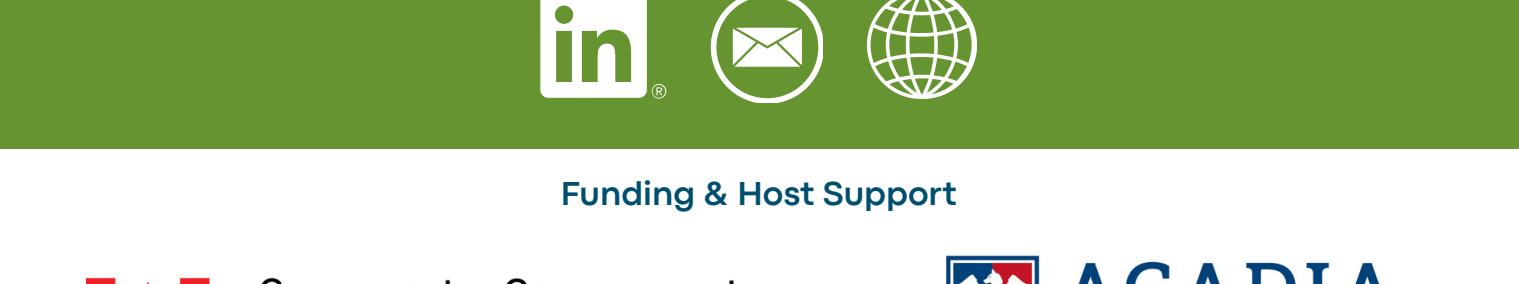


Register Now

The Future of Tidal Power in Canada

📅 September 29, 2026
🕒 12:00 ADT (8:00 PDT)
📍 Online - ZOOM
🗣️ Oliver Wragg, Development Director

This webinar will provide an overview of the company's world-leading tidal energy technology and ongoing projects in the UK, sharing key lessons and insights from the deployment and operation of their floating tidal energy turbines. Oliver will also look ahead to Orbital's plans and opportunities in Canada, exploring how the technology can be adapted and deployed in Canadian waters. The webinar will highlight the importance of understanding local marine conditions and environments, alongside the role of local collaboration in supporting successful and responsible project delivery.



Marine Renewables Canada 2026 Conference

Full Conference Program Released

Taking place this November 17-19 in Ottawa, Marine Renewables Canada has now released the complete conference program. Explore the various Industry Sessions and concurrent Research & Technical Talks covering the opportunities and challenges in Canada's marine renewable energy sector, and hear from innovators shaping the future of the industry.

FERN is the official partner of the Research & Technical Speaker Sessions.

See Full MRC Conference Program

Marine Renewable Energy Sector Events

Asian Offshore Wind, Wave and Tidal Energy Conference (AWTEC)

📅 September 6-10, 2026
📍 Kaohsiung, Taiwan

International Conference on Ocean Engineering (ICOE)

📅 October 5-7, 2026
📍 The Hague, The Netherlands

Marine Renewables Canada Conference & Exhibition (MRC) 🇨🇦

📅 November 17-19, 2026
📍 Ottawa, Ontario

International OTEC Symposium

📅 November 30-December 4, 2026
📍 Bora Bora, French Polynesia

View All Upcoming Events

Opportunities Corner

Demonstration Opportunities & Research Funding

Tidal Demonstration Permit

📅 September 30, 2026
🏢 Nova Scotia Department of Energy
🔍 Organizations and/or project developers looking to test and demonstrate tidal stream energy technology in the Bay of Fundy

Alliance International Grant

🕒 No deadline
🏢 NSERC
🔍 University researchers working in partnership with international collaborators from the academic sector

Alliance Advantage Grant

🕒 No deadline
🏢 NSERC
🔍 Organizations collaborating with private-sector, public-sector, or not-for-profit organizations

Innovation Ecosystem Enablers Proposal Stage

🕒 No deadline
🏢 NRCan
🔍 Organizations looking to establish, expand, or operate shared testing and demonstration facilities for clean energy technologies in Canada

Careers

Industry Postdoctoral Fellowship

📄 Applications considered as received
🏢 Ocean Frontier Institute
🔍 Postdoctoral researchers to be matched with leading ocean organizations

Click here to share your tidal energy research funding or career opportunities!

For any feedback on the FERN Newsletter, and suggestions for future content, please contact the FERN Network Manager at the email link below.

fern@acadiau.ca

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