



FERN
FUNDY ENERGY RESEARCH NETWORK

Fostering Collaborations in Tidal Energy Research



Working Together to Address the Environmental, Engineering & Socio-economic Issues associated with Tidal Energy Developments

The Fundy Energy Research Network (FERN) is a non-profit organization created as a forum for fostering Bay of Fundy tidal energy-related research collaborations, identification of issues, information exchange and capacity building.

For information about the network, becoming a member, and sharing and accessing research information through FERN, please visit <http://fern.acadiau.ca> or contact the FERN coordinator.

Lisa Isaacman, Coordinator

Fundy Energy Research Network (FERN)
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Funding and host support:



Main Roles and Functions of FERN

1. To identify and provide guidance on emerging and priority issues related to tidal energy proposals and developments;
2. To facilitate research collaboration and information sharing among government scientists, academia and tidal energy developers to address environmental, socio-economic and engineering issues and challenges associated with tidal energy developments in the Bay of Fundy;
3. To enable creation of research teams capable of obtaining funding to support collaborative research and training of the next generation of highly qualified people;
4. To enhance communication and cooperation among those involved in tidal energy research and development;
5. To develop and maintain productive relationships with regional, national and international groups involved in tidal energy research;
6. To communicate information and research progress through meetings, seminars, conferences, reports, FERN website, and/or other forms of public presentation.

FERN also serves as a central hub for information exchange on tidal energy research:

- Registry of experts on environmental, engineering, and socio-economic aspects of tidal energy
- Database of current tidal energy-related research activities in the Bay of Fundy and elsewhere
- Tidal energy publications & related information resources

FERN Governance

FERN is governed by an Executive Committee. Three technical sub-committees will direct activities to advance tidal energy research associated with **Hydrodynamic & Geophysical Effects, Biological & Ecological Effects, and Engineering Challenges**. The creation of a fourth sub-committee to address **Socio-Economic Issues** is forthcoming.

The Executive Committee members for 2010/11:

- Dr. Anna Redden (Acadia Centre for Estuarine Research) - Co-chair
- Dr. Ken Lee (COOGER, Fisheries and Oceans Canada) - Co-chair
- Dr. Graham Daborn (Acadia) - Lead, Biological & Ecological Effects Sub-committee
- Dr. Peter C. Smith (DFO) - Lead, Hydrodynamic & Geophysical Effects Sub-committee
- Dr. Mohammed E. El-Hawary (Dalhousie) - Lead, Engineering Sub-committee

Membership Benefits

- Exclusive access to FERN's registry of Experts, Research Activities/Project database, and Information Library
- Regular email updates on activities related to tidal energy research in the Bay of Fundy
- Research collaboration, communication, & information sharing support services
- Opportunities to contribute to the development and direction of activities that advance tidal energy research, increase regional research capacity, and inform both tidal energy developers and regulators

Membership is **FREE** and open to anyone involved in tidal energy-related research, including academic institutions, government agencies, environmental NGOs, consultants, and the private sector.

To apply for membership, please return a completed membership form to the FERN coordinator or fill it out online at <http://fern.acadiau.ca>.



F E R N
FUNDY ENERGY RESEARCH NETWORK

COMMENTS REGARDING MARINE RENEWABLE ENERGY LEGISLATION FOR NOVA SCOTIA

Submitted by the Fundy Energy Research Network (FERN)

October 27, 2010

The Fundy Energy Research Network (FERN) is a non-profit organization, created by the academic and government research community, as a forum for fostering Bay of Fundy tidal energy-related research collaborations, information exchange and capacity building.

FERN's main roles and functions are:

- *To identify and provide guidance on emerging and priority issues related to tidal energy proposals and developments;*
- *To facilitate research collaboration and information sharing among government scientists, academia and tidal energy developers to address environmental, socio-economic and engineering issues and challenges associated with tidal energy developments in the Bay of Fundy;*
- *To enable creation of research teams capable of obtaining funding to support collaborative research and training of the next generation of highly qualified people;*
- *To enhance communication and cooperation among those involved in tidal energy research and development;*
- *To develop and maintain productive relationships with regional, national and international groups involved in tidal energy research;*
- *To communicate information and research progress through meetings, seminars, conferences, reports, FERN website, and/or other forms of public presentation.*

FERN fully supports the formation of legislation regarding the marine renewable energy industry in Nova Scotia and commends the Province of Nova Scotia for providing this opportunity for early stakeholder involvement in the creation of such legislation. We are pleased to contribute our input and perspectives to the development of marine renewable energy legislation in Nova Scotia. The following comments and recommendations address several of the Questions put forth in the *Marine Renewable Energy Legislation for Nova Scotia* Discussion Paper:


- 1) FERN believes that a key principle of any Marine Renewable Energy legislation for Nova Scotia should be to ensure the development of these technologies proceed in an environmentally and socially sustainable manner. This can be achieved by building strong regulatory and institutional capacity for environmental, socio-economic, and engineering research and monitoring and the adoption of a transparent, precautionary, and adaptive management-orientated regulatory / permitting process.

- 2) FERN recommends that Marine Renewable Energy legislation in Nova Scotia enable and necessitate collaborations and information sharing (through incentives, regulations, or other mechanisms) among private technology developers, researchers, and regulators. In order for the marine renewable industry in Nova Scotia to progress in an ecologically and socially responsible manner, we need rigorous, non-biased and transparent research, monitoring and mitigation programs to support adaptive management and regulatory decisions. This will require the development and implementation of protocols for information sharing, collaboration, and coordinated monitoring and research programs, which take account of intellectual property and proprietary rights.
- 3) FERN recommends that the legislation include provisions to encourage developers to locate their trial, pilot, demonstration, or pre-commercial-scale projects at FORCE and/or at a few additional designated, grid-connected test/demonstration sites. Other sites may be considered for commercial-scale and small, community-based projects, as appropriate. Establishing shared, designated testing sites would:
 - a. Reduce the footprint of environmental impacts and thus overall environmental risk from this new and developing industry;
 - b. Reduce regulatory costs (e.g. joint regulatory approvals, monitoring) and facilitate more rapid and effective adaptive management;
 - c. Reduce project-specific infrastructure and associated costs (e.g. cable sharing); and
 - d. Foster collaborative research and monitoring programs for the assessment of cumulative effects from multiple-device arrays.

Nova Scotia has the opportunity to become the first jurisdiction in the world with a collaborative, adaptive and research-focused marine renewable energy regulatory system and thus in position to become a world recognized hub for marine renewable energy research and development.

Thank you for the opportunity to provide input on this important issue. Please do not hesitate to contact us for further details or clarification.

Sincerely,



Lisa Isaacman, Coordinator (with approval of the FERN Executive Committee)

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