

Environmental Assessment Approval

Approval Date: *Original dated September 15, 2009*

Fundy Tidal Energy Demonstration Project **Fundy Ocean Research Centre for Energy, Proponent** **Minas Passage, Nova Scotia**

The Fundy Tidal Energy Demonstration Project (the "Undertaking"), proposed by Fundy Ocean Research Centre for Energy (the "Approval Holder"), in the Minas Passage, Nova Scotia is approved pursuant to Section 13(1)(b) of the Environmental Assessment Regulations. This Approval is subject to the following conditions and obtaining all other necessary approvals, permits or authorizations required by municipal, provincial and federal acts, regulations, by-laws, guidelines, policies or standards before commencing work on the Undertaking. It is the responsibility of the Approval Holder to ensure that all such approvals, permits or authorizations are obtained before commencing work on the Undertaking.

This Environmental Assessment Approval is based upon the review of the conceptual design, environmental baseline information, impact predictions, and mitigation presented in the Registration Document.

Terms and Conditions for Environmental Assessment Approval

1.0 General Approval

- 1.1 The Environmental Assessment Approval for the Undertaking is limited to the project as described in the Registration Document. Any proposal by the Approval Holder for expansion, modification or relocation of any aspect of the project from that proposed in the Registration Document must be submitted to the Environmental Assessment Branch for review and may require an environmental assessment.
- 1.2 The Approval Holder must, within two years of the date of issuance of this approval, commence work on the Undertaking unless granted a written extension by the Minister.
- 1.3 The Approval Holder must not transfer, sell, lease, assign or otherwise dispose of this approval without the written consent of the Minister. The sale of a controlling interest of a business or a transfer of an approval from a parent company to a subsidiary or an affiliate is deemed to be a transfer requiring consent.

- 1.4 The Approval Holder must implement all mitigation and commitments in the Registration Document, unless approved otherwise by Nova Scotia Environment (NSE).

2.0 Operation and Decommissioning

- 2.1 If it is determined that significant adverse environmental effects are occurring, the Approval Holder must cease operation of turbines or remove them from the water as directed by NSE.
- 2.2 The Approval Holder must provide security in the form of either a bond or insurance to ensure financial resources are in place to cover the costs of device removal and site restoration.
- 2.3 The Approval Holder must notify and seek written approval from NSE's Environmental Assessment Branch prior to installation of any turbines other than those described in the Registration Document.
- 2.4 Prior to construction or device installation, the Approval Holder must submit an Environmental Management Plan (EMP) for review and approval of NSE and Fisheries and Oceans Canada (DFO). The EMP must address construction, installation, operation, and decommissioning phases of the Undertaking. The EMP shall include but not be limited to:
 - environmental management roles, responsibilities and commitments
 - environmental protection plans
 - all monitoring, maintenance and inspection requirements
 - training and education requirements
 - communication and reporting protocols
 - process and schedule for plan updating
- 2.5 The Approval Holder must update and revise the EMP as required by NSE and DFO throughout the life of the project.
- 2.6 The Approval Holder must prepare a decommissioning plan for review and approval of NSE and DFO prior to site construction or device installation.

3.0 Environmental Effects Monitoring

- 3.1 The Approval Holder, as part of the project EMP, must develop and implement an environmental effects monitoring program (EEMP). The EEMP must be developed using relevant baseline data and identify appropriate environmental effects indicators. The plan must be developed and implemented in consultation with the project

Environmental Monitoring Advisory Committee and shall consider project effects on, but not limited to, the following:

- fish and lobster
- marine birds
- marine mammals
- acoustics
- physical oceanography
- currents and waves
- benthic environment

- 3.2 Environmental effects monitoring results must be submitted to NSE and DFO at a schedule to be determined by NSE and DFO.
- 3.3 The Approval Holder must form an Environmental Monitoring Advisory Committee to provide advice on monitoring programs and review and advise on monitoring results. The Approval Holder shall seek committee membership from government, the local fishing industry, and the academic community.
- 3.4 The Approval Holder must develop a terms of reference for the Environmental Monitoring Advisory Committee to be reviewed and approved by NSE and DFO.

4.0 Wetlands, Wildlife and Habitat

- 4.1 There shall be no permanent loss of wetland area or function as a result of project development and operation.
- 4.2 The Approval Holder must consult with Nova Scotia Natural Resource's Wildlife Division and the Canadian Wildlife Service on measures to reduce effects of construction on nesting birds.

5.0 Surface Water Protection

- 5.1 The Approval Holder, as part of the EMP, must submit for review and approval a Sedimentation and Erosion Control Plan to minimize impacts and monitor effects to surface water during site development, construction and operational stages of the Undertaking. The plan must be developed in accordance with NSE's Erosion and Sedimentation Control Handbook for Construction Sites.

6.0 Public and Stakeholder Consultation

- 6.1 The Approval Holder, as part of the EMP, must submit to NSE for review and approval, a stakeholder communication and complaint response plan.

- 6.2 The Approval Holder must submit to NSE for review and approval, a plan for the formation and operation of a community liaison committee (CLC) for the project, including a terms of reference.
- 6.3 A project CLC must be established prior to commencement of construction or device installation.
- 6.4 The Approval Holder must seek CLC members from the local fishing industry, and the aboriginal community.

7.0 Archaeological and Cultural Resources

- 7.1 The Approval Holder, as part of the EMP, must develop and implement an Archaeological Monitoring and Contingency Plan which includes details of monitoring procedures and locations, mitigation measures, and protocols to be implemented in the event of the discovery of an archaeological site or artifact.
- 7.2 The Approval Holder must cease work and contact the Director, Heritage Division, Nova Scotia Department of Tourism, Culture and Heritage, the Executive Director, Confederacy of Mainland Mi'kmaq, the Executive Director, Union of Nova Scotia Indians, and Executive Director of the Kwilmu'kw Maw-klusuaqn Negotiation Office immediately upon discovery of an archaeological site or artifact unearthed during any phase of development.

8.0 Accidents and Malfunctions

- 8.1 The Approval Holder, as part of the EMP, must submit for review and approval a Contingency Plan developed in accordance with NSE's Contingency Planning Guidelines that addresses:
- discharges, emissions, escapes, leaks or spills of dangerous goods or waste dangerous goods;
 - collisions, fires, accidents or other potential emergencies
- The plan must consider the effects of the environment on the project including effects from weather, waves and sea ice.

Original Signed by

Sterling Belliveau
Minister of Environment