

February 29, 2008

OEER Association  
Suite 400, Bank of Montreal Building  
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Attention: Leslie Griffiths

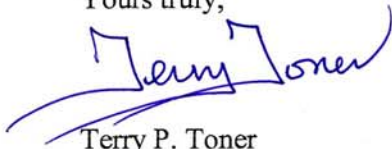
**Re: Final Report: Background Report for the Fundy Tidal Energy  
Strategic Environmental Assessment**

Dear Leslie,

Please accept the formal comments enclosed on behalf of Nova Scotia Power Inc. in response to the Strategic Environmental Assessment Final Report. Generally speaking, we feel the Final Report is well-written and appropriate as a background document to the SEA process. Our comments relate mainly to providing more clarity as to the scope of gaps that are identified, and more direction with the appropriate timing of the recommendations with respect to the different phases of tidal power development in the Bay of Fundy, i.e. between the demonstration phase and the scale-up to a commercialization phase.

If you have any questions or require clarification or additional information, please do not hesitate to contact the undersigned at (902) 428-6744.

Yours truly,



Terry P. Toner

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Encl.

**Strategic Environmental Assessment Final Report Comments**  
**Nova Scotia Power Inc.**

*Comment 1: Comprehensive scoping of issues*

The Final Report is well organized and addresses a multitude of interests. A foundation of background information needed to understand the nature of ocean energy development in the context of the Bay of Fundy is well delivered.

*Comment 2: Identified data gaps may be misleading*

The Final report weighs heavily on the lack of information unavailable to support a robust assessment of projected effects; these have been labeled as “data gaps.” While in agreement over the lack of scientific investigation into a number of key environmental issues, NSPI believes that some of the issues that have been identified as data gaps can not, nor should they be expected to be resolved at the demonstration phase of tidal stream power generation. The impetus for demonstration is to be able to accurately describe real interactions between the project and the biophysical and socio-economic environment of the Bay of Fundy which then feeds into the decision to move forward with full-scale generation (albeit incrementally). The demonstration phase in effect will only narrow the gap on unknown issues and support the research that is appropriate for commercial scale generation. Although the intention may not have been to suggest that all data gaps could be closed prior to or during the demonstration phase, the way in which the information is presented in the Final Report does not delineate at what point these gaps should be addressed.

The table provided on the following page identifies the key data gaps that NSPI believes can be appropriately addressed during the following four points of development:

1. Baseline data collection/collation and field work phase to support the approval and installation of the demonstration project; the size and scope of scientific investigation should be appropriate for this scale of demonstration.
2. Monitoring and adaptive feed-back phase during operation of demonstration unit. This information can be used to inform decisions for commercial scale generation.
3. Baseline data collection/ collation and field work phase for commercial scale development. This will build upon preliminary investigations made during the demonstration project; the size and scope of scientific investigation should be appropriate for this scale of development.

4. Monitoring and adaptive feed-back phase during commercial operation to ensure environmental integrity, sufficient generation and positive socioeconomic outcomes.

Generally speaking, there are three high level themes to consider during any editing of this Information Report, namely:

1. Ensure that is scope of the recommendations re data gaps is appropriate to the phase of development
2. Consider wording to make more objective recommendations; as stated very subjective with excessive use of adjectives.

Separate what needs to be done from how it should be done (e.g. using NGO's)

Key Environmental Issue	Data Gap	Recommendation	Phase of Tidal Development				NSPI Comments
			D: I <sup>1</sup>	D: O <sup>2</sup>	C: I <sup>3</sup>	C: O <sup>4</sup>	
Critical Physical Processes	Lack of detailed, site specific information on vertical and horizontal current structure and substrates for validation of models.	Gather site-specific information about substrates and sediment movement and currents for proposed development locations using in situ monitoring with ADCP and sediment sensors.	✓		✓		Agree with this recommendation, however, believe it should refer to <i>in situ</i> monitoring within footprint of unit.
	Inadequate fine-scale hydrodynamic and sediment models relevant to selected sites of tidal energy development.	Complete high density multibeam bathymetric surveys of the Bay, and complete the analysis of existing data.	✓		✓		Agree with this recommendation, however, believe it should not focus on the entire Bay but within an appropriate range from proposed development sites.
	Limited knowledge of the overall distribution and dynamics of sediments in the Bay of Fundy.	Adapt or refine hydrodynamic models to provide adequate small-scale analyses of the potential and effects of energy extraction developments.		✓	✓		Don't believe this data gap is a prerequisite to the demonstration projects. Do agree with this recommendation, however, believe that calibration of models may be initiated at demonstration operation phase with most of analysis done to support the development of a commercial array.
	Limited application of hydrodynamic models to assess the impacts of TISEC developments.	Hydrodynamic modelling should be used to assist with the selection of sites for TISEC developments in order to optimize the extractable tidal energy potential and minimize cumulative effects on physical or biological processes.			✓	✓	Agree with recommendation but believe than potential effects associated with demonstration project will not even be detectable in models and that this is an exercise that should focus on a commercial array.

<sup>1</sup> D: I denotes Demonstration: Installation

<sup>2</sup> D: O denotes Demonstration: Operation

<sup>3</sup> C: I denotes Commercial: Installation

<sup>4</sup> C: O denotes Commercial: Operation

Key Environmental Issue	Data Gap	Recommendation	Phase of Tidal Development				NSPI Comments	
			D: I <sup>1</sup>	D: O <sup>2</sup>	C: I <sup>3</sup>	C: O <sup>4</sup>		
Fisheries	Absence of information on fish behaviour with respect to TISEC technologies.	Conduct experimental and field-based monitoring studies of fish behaviour and mortality, in the vicinity of tidal power devices.		✓		✓	Agree.	
		Conduct experimental studies of fish responses to vibrations or noise generated by TISEC devices.		✓		✓	Agree, but believe that experimental studies should be conducted <i>in situ</i> .	
	Inadequate knowledge of the effects of remobilized sediments on commercially important species of fish and shellfish.	Conduct experimental studies of effects of high suspended sediments on migratory and commercial fish species.			✓		✓	Agree this is a data gap, however, but high suspended sediment levels are already present as part of baseline conditions; these studies should be conditional if issues are observed in operation phase of demonstration project.
	Questions about EMF from sub sea-cables and the effects on demersal fish and shellfish.				✓		✓	Agree this is a data gap and that preliminary monitoring (of receptor species) of induced EMFs should be conducted in the demonstration phase with a more robust study in the operation of commercial arrays.
	More specific information is required regarding the number of fishing operations, vessels and products, and locations of fixed gear fisheries.	Work with fishing groups to obtain better fisheries data particularly with respect to activities near proposed development sites.	✓	✓	✓	✓		Good recommendation.
	Present data gathered for fisheries management purposes is insufficient for assessment of tidal power implications.	Gather detailed information on potential adverse effects of on local fisheries, and necessary mitigative measures (including project site selection).			✓		✓	Agree with data gap and believe more complete information needs to be gathered. With respect to recommendation, first evaluate potential effects in operation phase and then consider mitigation as required.
	Assumed existing infrastructure such as wharves would be used to support TISEC development projects-infrastructure status and availability or requirements for tidal power is not well known.	Determine infrastructure requirements (e.g. wharves, supply bases) and necessary upgrades for each proposed project.	✓				✓	Agree.

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	Lack of clarity on set-back requirements for marine energy developments.	Establish consultative group including fishers and developers to create effective set-back guidelines.	✓	✓	✓	✓	Good recommendation.
Fish and Fish Habitat	Data on distribution, seasonality and trophic relations of many non-commercial species of fish are not available.	Conduct experimental and field-based monitoring studies of fish behaviour and mortality, in the vicinity of tidal power devices.		✓	✓		Agree.
	Absence of information on fish behaviour and/or mortality with respect to TISEC technologies, particularly with respect to noise and vibration.	Conduct experimental studies of fish responses to vibrations or noise generated by TISEC devices.		✓		✓	Agree, but believe that experimental studies should be conducted <i>in situ</i> .
	Questions about EMF from sub sea-cables and the effects on demersal fish and shellfish.	Establish an ongoing and updatable database of knowledge about local and migratory fish stocks.	✓	✓	✓	✓	Agree. This is a federal, i.e. Fisheries & Oceans, responsibility.
		Identify potential mitigative measures for effects on fish populations based on experimental results.		✓	✓		Mitigation should be conditional on results of preliminary monitoring in the demonstration operational phase; and based upon current industry standards for EMF mitigation (e.g. depth of cable); will need to conduct pre-installation feasibility studies.
Marine Habitat and Benthic Communities	Available data on existing benthic communities are limited in the Outer Bay.	Replication of broad benthic surveys that were conducted in the 1970's.			✓	✓	Any studies that are conducted should be appropriate to the scale of development and within reasonable footprint of TISEC array.
	Available data on existing benthic communities of the Upper Bay are limited, especially in view of some significant changes that have happened in the Bay since the data were obtained.	Establishment of long-term survey transects of benthic habitats and communities in priority areas for energy developments, including reference (i.e. non-impacted) sites.			✓	✓	Good recommendation.
	Little existing data for many areas of the Bay.	Creation of a coordinating agency to ensure consistency and quality of monitoring activities.	✓				Agree with data gap. Believe this falls under the authority of existing regulatory agencies. Suggest the formation of a multi-stakeholder committee to coordinate and review and advise on monitoring activities.

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Marine Mammals	Lack of data on marine mammal behaviour responses to TISEC devices.	Study long term effects of health and behaviour (e.g. mortality, migration, avoidance, attraction) of tidal power development on marine mammals including monitoring of results from pilot and demonstration projects in the Bay of Fundy and elsewhere.	✓	✓	✓	✓	Appropriate baseline monitoring should be completed as part of demonstration project. If presence of marine mammals is determined to be an issue, then proceed with study to evaluate potential effects and develop required mitigative measures.
	Limited data available on the occurrence of marine mammals in the Upper Bay of Fundy.	Establish long term monitoring programs for marine mammals in the Upper Bay of Fundy, incorporating NGO resources.	✓	✓	✓	✓	
		Identify and assess possible mitigative measures for effects of TISEC development on mammals.		✓		✓	
Marine Birds	Lack of data on marine seabird and shorebird activity in the area of priority sites.	Establish long term monitoring programs for marine birds in the Upper Bay of Fundy, incorporating NGO resources.	✓		✓	✓	Should first determine whether TISEC devices have any effects on marine birds in demonstration phase and then determine what level of monitoring is necessary. Agree with appropriate baseline surveys as part of project EA. Mitigative measures should be evaluated if potential effects are observed.
	Lack of information on the trophic relationships of many marine birds, and their ability to adjust feeding preferences.	Surveys to support project-specific environmental assessment prior to deployment.	✓		✓		
		Identify and assess possible mitigative measures for effects of TISEC development on birds, including the secondary effects associated with changes in prey availability.			✓	✓	
Species at Risk	Requirement for better site-specific information on species presence (depending on species and location).	Establish an ongoing and updatable database of knowledge about local and migratory species at risk in the Bay of Fundy.	✓	✓	✓	✓	Good recommendation.
		Identify and assess potential mitigative measures for different species at risk.		✓	✓	✓	Purpose of demonstration phase is to evaluate potential effects. Potential mitigation should be evaluated in the event of observed effects.

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		Work with Species Recovery Teams to develop comprehensive strategies for species at risk that use areas of high priority for energy extraction.		✓	✓	✓	Agree with this recommendation where effects have been observed and require mitigation. Consult with Recovery team to ensure species at risk are integrated into baseline monitoring programs.
		Where necessary, conduct species-specific surveys in high priority areas.		✓	✓	✓	Agree, within the operational footprint of TISEC devices.
Marine Transportation	Uncertainty regarding level of interaction with other marine transportation users in the study area.	Stakeholder consultation (other marine users).	✓	✓	✓	✓	Good recommendation.
		Regulatory consultation (e.g. NWPA process).	✓	✓	✓	✓	Good recommendation.
		Detailed navigation safety assessments and underkeel clearance surveys in the context of site specific project EA and project site selection.	✓	✓	✓	✓	Good recommendation.
Tourism and Recreation	Lack of information on informal and unregulated recreational activities.	Project-specific data gathering as part of site specific EA process (including shore-based facilities).	✓	✓	✓	✓	Agree.
Marine and Coastal Archaeological and Heritage Resources	Uncertainty regarding the location and condition of many potential archaeological and heritage resources (marine and shore-based) in the study area.	Detailed site specific bathymetric survey using side-scan sonar as part of project specific EA process.	✓		✓		Agree.
		Follow up with ROV survey if sonar shows potential resources.	✓		✓		Agree.
		Detailed archaeological survey may be necessary as part of shore-based facility site selection and EA process.	✓		✓		Agree.

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Economic Development	Uncertainty in identification of specific business opportunities for local business. Local capacity not clear.	Local economic benefits study in context of project specific EA process.	✓		✓		Agree.
		It is recommended that an Energy Sector Capability Study be commissioned for Atlantic Canada to address the barrier to supply-chain deficiencies within Atlantic Canada's Energy Sector, particularly within Nova Scotia and New Brunswick.	✓		✓		Agree.
		Study potential benefits agreements.	✓		✓		Agree.
		Project-specific job fairs.				✓	The nature of operating this technology is not labour intensive. There may be more short-term opportunities during the construction phase of a tidal array.