

New Brunswick Joint Response

To the

Bay of Fundy Ecosystem Partnership's Strategic Environmental Assessment

Department of Energy

March 2009

Introduction:

The New Brunswick Department of Energy embarked on a Strategic Environmental Assessment (SEA) of in-stream tidal energy in the Bay of Fundy in 2007. This SEA was comprised of two components; a Background Report and a public consultation process.

The Background Report was completed in partnership with the Province of Nova Scotia through the Offshore Energy Environmental Research Association. A team lead by Jacques Whitford was contracted to complete the Background Report for the entire Bay of Fundy, which was submitted in January 2008.

The Marine Energy Working Group of the Bay of Fundy Ecosystem Partnership (BoFEP) submitted a proposal and was contracted to complete the public consultation process and write the in-stream tidal energy SEA document for the Province of New Brunswick. Public consultation events were held in April 2008, and a final document was submitted in July 2008.

This is a joint response to the 19 recommendations in the final SEA document submitted by BoFEP from the New Brunswick Departments of Energy, Environment and Natural Resources.

The New Brunswick Departments of Fisheries and Agriculture and Aquaculture have been consulted and have provided input into the joint response. Some of their concerns could not be addressed through this process but will be considered as policies are developed.

It should be noted that all current initiatives and committees such as the Southwest Bay of Fundy Marine Resources Planning Initiative and all other relevant policies such as the Coastal Areas Protection Policy and regulatory requirements will be considered and followed throughout the development of the tidal energy industry in New Brunswick, where appropriate.

Recommendations and Responses:

Recommendation 1: *The Province of New Brunswick should establish and make public its priorities for tidal energy development in the Bay of Fundy in terms of how it will fit into the overall NB energy picture, the flow of benefits and how such development will affect communities. In particular, it should acknowledge that local benefits have priority in the Province and over exports, and should require that all proponents identify the type and extent of such benefits in their project proposals.*

Response: The New Brunswick Department of Energy is currently coordinating the renewal of the Province's energy policy, including the establishment of strategies for the deployment of new renewable energy technologies such as in-stream tidal energy. It is envisioned that tidal energy will contribute to our Province's efforts to increase its renewable energy generation content over the longer-term.

New Brunswick's vision for the development of an energy hub focuses on maximizing benefits for both citizens and ratepayers. Deploying new renewable energy technologies for domestic and export markets is being explored by the Province of New Brunswick as a means to stabilize electricity prices, reduce our dependency on imported fossil fuels, reduce greenhouse gas emissions, and create sustainable and tangible economic development opportunities in all communities and regions of the Province. Clean renewable energy is part of ensuring community sustainability over the long term.

Recommendation 2: *The Province of New Brunswick should immediately involve fishermen, and other marine industry representatives, in the process of site selection and approval at all stages, even at the beginning research level. On any new site application all relevant provincial departments should work with local fishermen and others to determine whether it should go ahead, and if so, the objectives and conditions under which it should do so. Such conditions should include as a standard element an oversight mechanism with fishermen members. This recommendation is to be superseded by Recommendation 11 as sites progress beyond the research level.*

Recommendation 3: *On any site which is approved to go beyond the research level, the Province of New Brunswick should set up a process to consult/negotiate with local coastal communities and the proponent regarding the potential requirements of specific tidal development projects, and the possible benefits that might accrue, with specific recognition of the human and financial resource implications for all three parties; agreements to be ratified by the NB Bay of Fundy Marine Energy Development Committee (see Recommendation 11).*

Response: The Department of Natural Resources will require proponents of tidal in-stream energy conversion (TISEC) projects to demonstrate the local, regional and provincial benefits associated with their project. They must also demonstrate that they have consulted with existing Bay of Fundy resource users and have taken into consideration any relevant issues as part of an approval process for the allocation of the Province's Crown Land Resources.

Recommendation 4: *The Province of New Brunswick should specify within its tidal energy development policy that no areas which consist of narrow channels through which marine mammals, fish and/or shellfish migrate seasonally will be considered for tidal energy generation. Such areas should be defined in the near future, with the help of fishermen and the Southwest New Brunswick Marine Resources Initiative, and excluded from further consideration. Applications which come in prior to this determination should have to establish that such migrations do not occur in their areas of interest.*

Response: The Federal Department of Fisheries and Oceans' mandate includes fish migration and habitat protection issues, and would be consulted as part of any TISEC proposal evaluation. Recognizing that the Federal Department of Fisheries and Oceans may not have all relevant information, other sources such as industry associations may be consulted.

Recommendation 5: *The Province of New Brunswick should instigate a research project to determine the possible impacts of vibrations, noise or electromagnetic interference on fish, shellfish and marine mammals and their movements from tidal energy devices and their associated transmission lines.*

Response: The Department of Natural Resources is developing a policy to allow developers to use Crown land for TISEC projects and will consider requiring proponents to determine environmental impacts including, but not limited to; the possible impacts of vibrations, noise or electromagnetic interference on fish, shellfish and marine mammals and their movements from TISEC devices including their associated transmission lines.

Recommendation 6: *The Province of New Brunswick should compile all existing information on the possible location of potential development sites, the timeframe associated with any development activities, the types of equipment that might be employed and just how such development might unfold through all of its stages, and prepare presentations oriented toward each stakeholder group as a basis for the finalization of this SEA process.*

Response: The Province of New Brunswick has no current plans to invest directly in the actual development of tidal energy projects in the Bay of Fundy. It is envisioned that private industry and investors will fund tidal energy projects that are developed along the coast of New Brunswick. Preliminary research has been supported by the Department of Energy to determine the potential for in-stream tidal development within the Bay of Fundy. The conclusions and reports that resulted from this research are available to the general public and can be used to determine ideal locations from a resource perspective only.

Preliminary site assessment research work completed by the Huntsman Marine Science Centre in areas around Head Harbour Passage and Western Passage have determined that some areas which appeared to have a strong tidal energy resource were not ideal from an environmental perspective. Specific locations were deemed unlikely for development at this time, while others were sited as having more appropriate conditions for development.

Based on preliminary research and site assessment work completed to date within the Bay of Fundy, it is not feasible to identify all potential in-stream tidal locations and the technologies that could be used in those locations. However, in an effort to provide Bay of Fundy stakeholders with a sampling of emerging in-stream tidal energy technologies, the New Brunswick Department of Energy organized and sponsored a stakeholder technology information session in October 2008. The session provided a forum to discuss global in-stream tidal industry trends and share best practises, as well as advise a diverse group of Bay of Fundy stakeholders on the long-term nature of developing in-stream tidal energy technologies in potentially complex and environmentally sensitive marine environments.

Recommendation 7: *The Province of New Brunswick should hold immediate consultations with stakeholders of all marine industry sectors (in particular with commercial fisheries) on an individual group basis throughout the Bay of Fundy to clarify government tidal energy development objectives and the SEA process, and solicit their opinions and involvement both now and in further development activities.*

Response: The Province of New Brunswick is committed to engaging stakeholders in the exploration of new renewable energy technologies. The public input sessions held in support of the SEA process in April 2008 are a very important component of the overall stakeholder engagement process for the development of in-stream tidal energy within the Bay of Fundy. In response to multiple requests for additional information resulting from the April public input sessions, a stakeholder technology information session was held in October 2008. The primary objective of the October session was to provide Bay of Fundy stakeholders with more detailed information with respect to global industry trends, as well as expose them to a sampling of emerging in-stream tidal energy technologies.

Feedback from citizens of New Brunswick, including Bay of Fundy and tidal energy stakeholders, will form part of the Province of New Brunswick's energy policy renewal process.

Recommendation 8: *The Province of New Brunswick should immediately clarify with both Bay of Fundy stakeholders and coastal communities the current process underway in terms of tidal energy permits for exploration and research, so that a transparency of process is supported and seen to be supported. In addition, some form of regular timely communications mechanism (possibly an electronic newsletter) should be developed to keep these stakeholders and communities informed of all further tidal energy development activities in the Bay, which would allow them to respond accordingly.*

Response: All information related to the Interim Policy for Allocation of Crown Lands for Research in Support of In-Stream Tidal Power Generation, including the Request for Proposals that was issued and the announcement of the awarded sites, has been shared with the Provincial Department of Fisheries and has been made public through announcements and news releases. The interim policy is available on the Department of Natural Resources web site as well as the news releases. Further information on the process and the sites awarded can be requested from the Department of Natural Resources on-line or through written request.

The Province of New Brunswick through the Department of Energy will explore the development of a marine energy stakeholder newsletter and communications list for future information sharing.

Recommendation 9: *The Province of New Brunswick should, in the very near future, hold consultations with coastal communities and aboriginals on a group by group basis throughout the Bay of Fundy to clarify government tidal energy development objectives and the SEA process, and solicit their opinions and involvement both now and in further development activities.*

Response: Similar to the response to Recommendation 7, The Province of New Brunswick is committed to engaging stakeholders in the exploration of new renewable energy technologies. Appropriate mechanisms for engaging stakeholders in the exploration of new energy technology projects are being explored.

Recommendation 10: *This NB SEA process set up by the Province of New Brunswick is intended to provide the basis for tidal development policy. Such policy should focus upon incremental development, done in harmony with other marine stakeholders, and with due consideration of the precautionary principle, utilizing a small scale/small unit perspective to meet community need rather than export opportunity. Its overall objective should be to complement the mix of energy production in the Province, and to promote a reduction in the total carbon footprint.*

Response: The Department of Natural Resources is exploring many options for the crown land allocation policy for tidal energy developments in the Bay of Fundy and is considering an incremental approach and the potential for exclusion zones.

The electricity market in the province is open for developers to connect and sell electricity either locally or to the export market. The Province will give consideration to the marine environment prior to finalizing any allocation policy in order to ensure the benefits of the potential development outweigh any potential interference with other uses.

Recommendation 11: *The Province of New Brunswick should set up a permanent NB Bay of Fundy Marine Energy Development Committee, with representatives of all relevant provincial departments, all marine industry sectors (including energy) and major coastal communities, and establish a travel expense fund for those non-government members who required it for participation in committee meetings. The responsibilities of the committee should be two-fold: (1) to plan for the long-term development of marine energy, and (2) to consider all tidal energy development proposals for the Bay of Fundy and to which proponents would have to justify their evaluations. The committee would make recommendations on planning and on each proposal to the Province, which would take them under advisement in decision-making. Any request to change the status of a project, from research base, to pilot, to demonstration, to commercial, should be required to go through the committee again. This recommendation should be in place prior to any tidal energy development project going beyond the research level.*

Response: Similar to previous responses, the New Brunswick Department of Energy is coordinating the review and renewal of the Province's energy policy, including recommendations with respect to the development of new renewable energy technologies such as in-stream tidal applications. Feedback from citizens of New Brunswick, including Bay of Fundy and tidal energy stakeholders, will form part of the Province of New Brunswick's energy policy renewal process.

It is the Department of Natural Resources' mandate to ensure that all Crown land use is for the benefit and in the best interests of all New Brunswickers. The Department of Natural Resources current policy development practices are designed to include fairness and consistency of application while evaluating requests for Crown land use.

Furthermore as our response to SEA Recommendations 2 and 3 have indicated; the Department of Natural Resources will require proponents of TISEC projects to demonstrate the local, regional and provincial benefits associated with their project. They must also demonstrate that they have consulted with existing Bay of Fundy resource users and have taken into consideration any issues as part of an approval process for the allocation of the Province's Crown Land Resources.

Recommendation 12: *The Province of New Brunswick should work to improve the EIA process to enhance public confidence so that, when applied to all tidal development projects in the Bay, they are seen to be more open and transparent, and decision-making is done based on known principles and adequate information.*

Response: New Brunswick's Environmental Impact Assessment (EIA) review process is open and transparent. Proponents are currently required to undertake public engagement activities for every project that undergoes an EIA review. Stakeholders and other interested members of the public are notified of the project and are given an opportunity to review the details of the project and provide comments to the proponent, who must subsequently address these comments. This will also apply for any TISEC projects that trigger the EIA Regulation (e.g., with a generating capacity of 3 MW or greater, etc.). Furthermore, Project Managers from the Department of Environment's (DENV) Project Assessment Section are always available to discuss the EIA review of specific projects or the EIA process in New Brunswick in general. DENV encourages stakeholders and members of the public to get involved in the EIA reviews for projects that may be of concern to them.

Furthermore, decisions related to the EIA process are based on recommendations from a Technical Review Committee (TRC) comprised of experts in different fields from a variety of municipal, provincial and federal agencies. The TRC can request additional information from proponents to clarify the details of a proposed project, and they can also require that modifications be made to a project in order to ensure that it does not cause any significant negative environmental impacts.

It should also be noted that DENV is continuously looking to improve its EIA process, and therefore any specific suggestions from stakeholders and/or interested members of the public as to how to accomplish this are always welcome.

Recommendation 13: *The Province of New Brunswick should make a clear assignment of responsibility and accountability for tidal energy development within its structure (who does what, when, where and how), including that which might be the responsibility of other agencies, and this information should be made available to all the public/stakeholders; and appropriate regulations should be developed, approved, implemented and enforced, with the resources identified within departmental budgets to do so.*

Response: The Province of New Brunswick will consider developing a separate area on the Department of Energy web site that will outline all regulatory agencies and approval processes associated with energy projects.

Recommendation 14: *In tidal energy development in the Bay of Fundy at any scale, whether pilot, demonstration or commercial, the Province of New Brunswick should require that every development proposal demonstrate its feasibility on a full-cost accounting basis, which would include not only its commercial investment potential, but also the financial impact of such development on the ecosystem, on other marine stakeholders, on coastal communities and on the province-wide energy situation. This assessment should include any anticipated offset by potential local benefits from such development.*

Response: Any electricity generation project that is developed for domestic use and sold to the Provincial utility, or developed for export markets, will have to demonstrate economic viability, financial self-sufficiency and environmental sustainability. It should be noted that local content and benefits has, and will continue to be, an important component of Requests for Proposals (RFPs) from NB Power for new renewable electricity generation sources.

The Department of Natural Resources will require proponents of TISEC projects to submit a business plan for activities undertaken on Crown land; tidal energy proponents must also fulfill the Department of Environment's EIA requirements.

Recommendation 15: *The Province of New Brunswick should require that tidal energy developers indicate, within their project proposals, specifically how they will assess the effectiveness of the technology they intend to employ, and how they will assess the possible impacts of that technology on the Bay of Fundy ecosystem (both living and non-living components), and be required to submit that data and information on a timely basis to relevant provincial departments and the NB Bay of Fundy Marine Energy Development Committee.*

Response: Should Crown land be used to test prototype units, the Department of Natural Resources would require proponents to provide a full explanation of *what* they plan to do and *how* they plan to carry it out.

In addition, for any TISEC project that triggers the EIA Regulation, the proponents will have to describe the potential environmental impacts of their project and they will have to indicate how they propose to either avoid or mitigate these impacts in order to ensure that the project does not have any significant negative environmental impacts.

Recommendation 16: *The Province of New Brunswick should anticipate that any tidal energy development in the Bay of Fundy will entail some level of impact, directly or indirectly, on the ecosystem, on other marine stakeholders and on coastal communities. On a project by project basis, it should require that proponents establish a compensation fund to remediate such impacts, and that an impartial group be set up to assess ecosystem impacts and associated remediation projects, and to assess short and long-term compensation to affected stakeholders and communities, with a timely delivery process and an independent appeal process.*

Response: It is not the intention of the Province of New Brunswick to replace one viable industry, such as tourism, aquaculture or the traditional fisheries, with another emerging industry. The provincial EIA review would look at ways of potentially modifying proposed projects so that any anticipated impacts are avoided or mitigated to acceptable levels. Should a project be more costly to a community or region than it is beneficial, it will not be deemed appropriate for development. Projects will be evaluated on a case by case basis and should mitigation not be feasible, compensation may be considered.

Recommendation 17: *The Province of New Brunswick should require that all tidal energy development proposals for the Bay of Fundy include a shut down and removal process based on specific physical, biological and financial criteria, and that each such proposal also include a monitoring and reporting process to address these criteria, such information to be delivered in a timely manner to provincial personnel who have the assigned responsibility to manage this process.*

The Department of Natural Resources is currently going through a policy development process for the allocation of Crown land for tidal in-stream energy conversion projects and will consider this in the policy development process. These issues would also be examined during the course of the provincial EIA review for projects that trigger the EIA Regulation.

Recommendation 18: *As tidal energy develops, the Province of New Brunswick and tidal energy industry proponents should promote and become a part of or more involved in the integrated management process within the Bay of Fundy, and work toward the betterment of the Bay as a whole, rather than the more-limited interests of the tidal energy sector, starting with participation in existing groups working toward such goals in their operational regions.*

Response: The Province of New Brunswick will work to bring together stakeholders and developers as well as existing integrated management groups in order to facilitate discussions and share important information. As an example, the well attended tidal energy technology information session that was held in October 2008 began the process of achieving this goal.

Recommendation 19: *The Province of New Brunswick should work with the Province of Nova Scotia, the State of Maine and appropriate federal agencies to initiate a cumulative impact assessment process for tidal energy development in the Bay of Fundy, upon the results of which to base its tidal energy development capacity guidelines and future planning initiatives.*

Response: The Government of Canada has indicated its interest in defining cumulative impacts in the Bay of Fundy as well as exploring impacts and effects in the Gulf of Maine. The Province of New Brunswick will build on its positive relationships with the Government of Canada, the Province of Nova Scotia and the State of Maine to explore opportunities to work towards a cumulative impact assessment in regards to tidal energy and attempt to further define an appropriate level of development for tidal energy in the region.

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