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John Cianfaglione  
Offshore Energy Associations  
Suite 400, Bank of Montreal Building  
5151 George Street  
Halifax, NS B3J 3P7

Dear Mr. Cianfaglione:

I am writing in response to the call for public comments your organization put forth, with respect to the future of Tidal and Wind Energy production in the Bay of Fundy. It is truly an exciting time for renewable energy in the Atlantic Provinces. Recent years have seen the continued growth of a budding wind energy industry, and the construction of a premiere tidal power facility in Annapolis Royal. The Bay of Fundy holds an enormous amount of untapped green energy, and with Nova Scotia and New Brunswick recently committing to large percentage increases in renewable energy production, it seems likely this could prove a lucrative opportunity for both existing power producing companies and any interested parties. With this great opportunity comes risk; the risk that the full impacts of a potential project will be overlooked due to the huge economic potential, both for the company and the region. This could have many troubling impacts, biologically and socioeconomically. I've decided to focus on some of the areas that I am most familiar with, including the fish populations of the bay, particularly the Atlantic Salmon. The second area is the monitoring and considerations required for pilot projects, when and if they do proceed.

In the past the largest danger facing fish populations in the Bay of Fundy was the commercial fishery. With improper management, the offshore renewable energy industry has the potential to be even larger. The actual site disturbance size would be relatively small in comparison to the total bay study area, but little is known about the distribution of fish populations within the bay. This is why it is critical to establish baseline data for fish numbers and distribution within the bay. This way any variations can be tracked, regardless of their source. Although I do have minor concern with marine stocks, my main concern deals with migratory species, including the endangered Atlantic Salmon. The Bay of Fundy Atlantic Salmon population has declined 90% over the last thirty years and it is estimated there are only 200 mature adults left in the bay (Environment Canada, 2008). It is listed under Schedule 1 of the endangered species act, with only eleven other fish species at this level of protection in Canada. Under Section 2, Article iii in the Accord for Protection of Species at Risk, provinces agreed to:

Establish complementary legislation and programs that provide for effective protection of species at risk throughout Canada, and that will ... consider the needs of species at risk as part of environmental assessment processes.

It would seem that all but the most careful planning and regulation of the offshore renewable energy industry would be in violation of the aforementioned terms. By careful planning I mean actions including but not limited to:

- a) Careful site evaluation and assessment by biologists familiar in the study of Atlantic Salmon populations, environmental engineers, and other relevant disciplines
- b) Placement of tidal projects away from the influence of the few remaining salmon rivers on the Bay of Fundy.
- c) Placement of tidal projects away from the influence of rivers with historic salmon populations and the potential for restoration.
- d) Placement of tidal projects away from potential salmon rivers draining from protected areas, be they parks or registered wilderness areas.
- e) Careful consideration in the planning of tidal projects near critical Salmon habitat, which are likely found in natural bay constrictions, which also feature large tidal currents.
- f) Further study on the effects on low-level vibration on fish migration and population densities.

The Bay of Fundy Atlantic Salmon is at a critical stage in its history, and only a sound recovery plan can pull it back from the brink of extirpation. The Atlantic Salmon has played an important in Atlantic Canadian culture, beginning with early native populations. I urge careful consideration in this matter.

Despite my concerns with the impact to Atlantic Salmon in the region, I believe that it is advisable for the slow and controlled development of offshore renewable energy to take place. The economic benefits for the region have the potential to be enormous and should certainly be perused. In today's debt restricted North American economy, Canadian energy and resource companies are still proving to be sound opportunities. The development of the industry will certainly begin, as it did in wind, with small pilot projects. These projects will have a wealth of information to offer once they are constructed and provincial authorities, and organizations such as yours have a responsibility to extract as much as you can. The study of how in-stream tidal

generation affects long-range current patterns is very poorly understood, and a pilot project in a dynamic area such as the Bay of Fundy would be a rich resource in this field. Measurement of acoustic disturbance should be undertaken, as well as its effects on fish and marine mammal populations. On a mechanical reliability level, the sediment rich waters of the bay may affect the performance of the units, and design requirements and maintenance schedules should be investigated thoroughly. Local fishers should be consulted to determine if the sites negatively affect marine navigation. Another major consideration should be baseline evaluation. Baseline evaluation is extremely important in investigating impacts, and should be a cornerstone of any EA.

The offshore renewable energy sector should be pursued, but it should be pursued carefully and slowly. If managed properly, it has the potential to become an example on the world stage. If managed poorly it will become an environmental catastrophe, and a major setback for renewable energy in Nova Scotia and New Brunswick

Sincerely,

Matthew Davidson