

Although this document was informative on the technical and ecological aspects of tidal in-stream energy conversion possibilities in the Bay of Fundy, it overlooked an important idea – sustainable growth of alternative energy generation in Nova Scotia. The report introduces the development of renewable methods of power generation in Nova Scotia as a method to fulfill the Renewable Energy Standard 2013, which requires each load serving entity to provide its customers with renewable low impact electricity equal to at least 10% of its total annual sales by 2013. I consider this to be a shortsighted and minor goal. Without drastic changes in our current energy consumption, our energy needs are likely to increase in the years to come, resulting in a greater dependence on alternative power generation methods, larger government mandated goals, and a stronger need for growth of the renewable energy industry. I think that the most important step to be taken to determine whether, when, and how commercial projects should be developed is a plan for the future. Without a plan for sustainable expansion of the renewable power generation industry, we are only providing a band-aid, short-term solution to what could become the most drastically and widely felt crisis ever to affect Canada.

The plan for the future will need to focus on expansion and development, with the final goal of producing all or at least most of Nova Scotia's power from alternative, low-impact sources. Only with this goal in mind can the province begin to research and develop renewable power generation sources. Now your fourth and fifth questions can be answered - *“Under what conditions should pilot projects be permitted?”* and *“What ongoing research and monitoring is required to gather the information needed to make decisions about commercial developments?”*

The first area of research relates to the financial viability of the project. Is one large project that could be expanded to meet our total energy needs more feasible than many smaller projects? It is more likely that one large scale development will have a smaller capitol cost than the cumulative capitol cost of many smaller projects; however, it is also more likely that the large project will have a slower economic return and the goal set out by the Renewable Energy Standard 2013 may not be met, costing \$500 000 per day, the specific punitive fine outlined in the standard. And if many smaller projects are chosen to be developed, which projects should be? Which technologies can be applied to achieve sustainable income without high overhead costs? The finances of these projects must be thoroughly investigated and the results should be included in the decision to move forward with pilot projects.

The options must also be examined for environmental impact, in both the short term and long term. In focusing in on this perspective, one question must always remain at the forefront for review - how can we minimize the impact on the Nova Scotian environment and on Nova Scotians themselves? I believe that the answer to this lies in moderation. The long term plan should include starting renewable energy projects now that are able to grow without overly affecting the lives of Nova Scotians and the natural environment. In the case of tidal in-stream power generation, further research into effects on the fishing, aquaculture, and tourism industries needs to be explored. Also, the effects of all power generation sources on human life need to be investigated whether it be noise or air pollution, the decrease of property values on land near the generation sites, or negative

effects on humans caused by changes in wildlife patterns. As well, the positive effects like jobs and economic growth need to be considered in the long term. Construction jobs during the installation of the project may be beneficial to the community in the short term, but will the power source contribute to a sustainable economy within the community? We also have to consider the impact on wildlife and nature. How will migratory patterns be changed in marine and bird life? Will the food chain be displaced or altered because of construction? Will nature be able to sustain itself after construction and redevelop habitats near the generation facility? The province must consistently be reminded of the goal to reduce the impact on Nova Scotia's natural marine and land environment in the short and long term when deciding which pilot projects to move forward. The secondary effects of these projects on human life and the biodiversity of our natural environment may be difficult to measure and care must be taken to limit these as much as possible.

In conclusion, I believe that the most important factor that should be used to govern the development of Nova Scotia's power generation sources is a strong plan for the future. Government mandated requirements are great to encourage development of the renewable energy industry, but more than just a five-year goal is needed to create a sustainable long-term power industry in Nova Scotia. Both long term financial, human, and natural environmental effects will need to be further researched in order to determine which projects should move forward and contribute to the long term goal of independence from fossil fuel energy production. I personally am in favour of tidal in-stream energy conversion methods in the Bay of Fundy, but only if the generation methods fit into the necessary long term plan.