



September 7, 2010

Barry Duffey
Manager
Program Planning and Implementation Branch
Ministry of the Environment
4th Floor, 135 St. Clair Avenue West
Toronto, Ontario M4V 1P5

Re.: Renewable Energy Approval Requirements for Off-shore Wind Facilities - An Overview of the Proposed Approach (EBR #011-0089)

Dear Mr. Duffey,

Thank you for the opportunity to provide comments to the “Off-Shore Wind Facilities Renewable Energy Approval Requirements” discussion paper that was posted on the Environmental Registry (EBR #011-0089) for public comment. The following comments are submitted for your consideration by Conservation Ontario, which is the network of Ontario’s 36 Conservation Authorities (CAs). These comments are not intended to limit your consideration of comments submitted individually by CAs.

Conservation Ontario acknowledges the importance of renewable energy for sustainable growth, to combat climate change and to protect, maintain and restore the health of our watersheds and supports the Province’s intent to develop legislation, regulations and other policies that facilitate renewable energy projects and streamline the application process for these projects. The Province is commended for its intention to develop policies that address the need for greater renewable energy capacity in Ontario while protecting human health and the environment. It is understood that the off-shore wind policies the Province is developing will reflect the research currently underway in government ministries including the Ministry of Natural Resources (MNR), the Ministry of the Environment (MOE) and the Ministry of Tourism and Culture (MTC). The Province’s aim to develop policies based on sound science is supported fully. The Province is requested to consult with Conservation Ontario and CAs throughout the development of these policies, as the jurisdiction of many CAs extends into the Great Lakes and large inland lakes.

The Ministry is commended for proposing a minimum exclusion zone for off-shore wind facilities in combination with a requirement to undertake various studies to assess impacts and determine appropriate mitigation techniques. While the proposed five kilometre exclusion zone appears to be sufficient to ensure that littoral transport and coastal processes, habitat function and recreation opportunities are not negatively impacted, it is important that the exclusion zone be science-based and a precautionary approach be applied due to the limited knowledge of off-shore wind turbines in fresh water areas and possible major negative impacts. For example, the depth of Lake Ontario at five kilometres can be over 60 metres which may minimize potential impacts

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to littoral drift or disruption to fish habitat but present challenges to the feasibility for wind facility development here. On the other hand, the shallowness of the water of Lake St. Clair renders this lake highly reactive to disturbances in the littoral zone. Disturbances in the lakebed due to the construction of wind turbines of the nature being proposed along the reaches of the shoreline of Lake St. Clair would increase turbidity in both the short term and into the future (though it is difficult to estimate how long into the future) and the shallow nature of the lake would inhibit dispersion of turbidity in and around its two intake protection zones.

Each of the Great Lakes and inland lakes in the system hosts a unique set of challenges and constraints, which should be considered through the Province's approach to allowing development of windpower facilities. These constraints will require a comprehensive review to provide a clear assessment of all resource management issues. It is recommended that, rather than a one-size-fits-all exclusion zone, the delineation of this area be based on a precautionary approach that respects intake protection zones, avian migration routes, navigation routes, etc., and is supported by site specific studies and modeling (e.g. hydrodynamic modeling; geotechnical investigations addressing concerns for soil chemistry and potential instability, including subsidence, soil characteristics, soil types, etc.).

The exclusion zone must also consider water quality issues that could impact intake protection zones as mandated through source protection planning under the *Clean Water Act*. The exclusion zone must ensure that levels of turbidity are not aggravated and pose a threat to drinking water. Similarly, direction should be developed regarding turbine design to ensure the turbine model used will not impact water quality (e.g. through oil spills from petroleum products for cooling and lubrication within the nacelle). In the case of protecting water quality, specifically sources of drinking water, we recommend the approach of preventing negative impacts rather than mitigating impacts.

It is recommended that an aquatic impact assessment should also be required for off-shore wind turbine projects as part of the studies required by the proponent in advance of submission of the Renewable Energy Approval (REA) application. It is recommended that the terms of reference for an aquatic impact assessment should be approved by MNR, Fisheries and Oceans Canada and local CAs where applicable, and address all appropriate guidelines. The terms of reference should stipulate that the impact assessment address things such as, but not limited to:

- the timing of all surveys and survey techniques;
- aquatic habitat classifications;
- fish community inventories; and,
- a determination of the potential impacts of proposed development activities on aquatic habitats and aquatic organisms (fish, mussels, amphibians, aquatic invertebrates).

Section 2.5 of the discussion paper states that "Applicants may also be required to provide financial assurance for the decommissioning of an off-shore wind facility." It is recommended that technical and financial planning for decommissioning be a requirement for approval of off-shore wind projects. The proponent should be required to provide securities in the amount required to cover the cost of decommissioning. As well, it is recommended that MOE have a policy in place regarding the timing for decommissioning and removal of off-shore wind facilities, such as 12 months after the turbines have ceased to provide power.

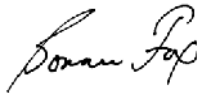
The discussion paper identifies that MNR will be the responsible legislated body for developing a guidance document to address coastal engineering matters. CAs have a regulatory responsibility to issue permissions for off-shore wind turbine projects within their jurisdiction under their

individual Development, Interference with Wetlands and Alterations to Shorelines and Watercourses Regulation, made under Section 28 of the *Conservation Authorities Act*. MNR is requested to consult with Conservation Ontario on the development of the guidelines.

There is limited knowledge of the impacts of off-shore wind facilities on sediment transport possibly further impacting water quality, coastal processes impacting shoreline erosion and lakebed bathymetry and many factors contributing to impacts on avian wildlife, and cumulative impacts. Therefore, the Province is urged to take a science-based and precautionary approach when developing policies for approving the construction of off-shore wind facilities. It is noted that many of the comments provided here relate to the exclusion zone that will be prescribed through the REA regulation for off-shore wind facilities; these comments will be reiterated in a response to MNR regarding EBR posting #011-0907 (Off-shore Windpower: Consideration of Additional Areas to be Removed from Future Development).

Thank you again for the opportunity to provide comments on MOE's Off-Shore Wind Facilities Renewable Energy Approval Requirements discussion paper. If you have any questions regarding these comments please contact myself at (905) 895-0716 ext. 223, or Natasha Leahy at ext. 228.

Sincerely,



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