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Secretary Burgess  
New York State Public Service Commission  
Three Empire State Plaza  
Albany, New York. 12223-1350

Re: Galloo Wind Project (Case 15-F-0327)

Dear Secretary Burgess:

I'm writing to express opposition to the project referenced above. My specific concerns are related to the lack of information provided on the environmental impacts of underwater electric transmission lines on the Lake Ontario fishery.

The State of NY through the Department of Environmental Conservation (DEC), in concert with the US Fish and Wildlife Service and The Ontario Ministry of Natural Resources and Forestry has created and supports a world class fishery in Lake Ontario. The DEC has estimated that sport fishing in Oswego County alone has an annual economic impact in excess of \$42 million. Data provided by the DEC verifies that anglers from every state in America and more than 30 countries and provinces around the world visit Oswego County and purchase fishing licenses here. Their data also shows that more than 65% of the angler activity on Lake Ontario tributaries occurs on the Salmon River which is also home to the State's largest hatchery.

With that as background, I offer that there have been some limited studies on the impacts of underwater electric transmission cables on various species of fish, but most admit that there is a need for more research on this issue. What I have been able to find is excerpted below for your consideration before approving a cable that will cut through the heart of one of the best sport fishing regions in the world.

*Our current knowledge about effects of electromagnetic fields on the marine environment, in particular fauna, is not sufficient. Some aquatic species, such as the spiny lobster and loggerhead turtle, use the earth's geomagnetic field as a means of navigation and positioning. The presence of magnetite within many other migratory species, including salmonids, suggests that they also may use the earth's geomagnetic field for navigation.*

*In regard to effects on fauna it can be concluded that there is no doubt that electromagnetic fields are detected by a number of species and that many of these species respond to them. However, threshold values are only available for a few species and it would be premature to treat these values as general thresholds. The significance of the response reactions on both individual and population level is uncertain if not unknown. More field data would be needed to draw firm conclusions but data acquisition under field conditions is complicated.*

*According to POLÉO ET AL. (2001), eels and salmonids show a bradycardial response (i. e. a reduction in heartbeat rate) at minimum field strengths.*

*The influence of magnetic fields on orientation in teleost fish is still under discussion as some studies reported effects in salmonids and eels while other failed to do so (POLÉO ET AL. 2001). According to references in WARNEKE (2001), eels and several salmonid species react to experimental magnetic fields.*

*Magnetic fields generated by cables might impair the orientation of fish and marine mammals and therefore negatively affect especially migratory behavior. Although the biological process of magnetoreception is less well understood than that of electroreception there is sufficient evidence for the importance of magnetic information for orientation in a variety of animals. Marine fish use the earth's magnetic field and field anomalies for orientation especially when migrating (FRICKE 2000). Especially elasmobranch fish can detect magnetic fields which are weak comparable to the earth's magnetic field (POLÉO ET AL. 2001)*

*Also eggs and larvae of many fish species react very sensitive to electric fields. According to FRICKE (2000) magnetic fields can potentially affect the orientation of marine fish during their migrations or even redirect the migration. Electric fields can have scaring effects on marine fish and probably also redirect the migration pattern.*

It is clear from these sources that our knowledge of the impacts of these transmission cables on our natural environment is not yet sufficient to take a chance on ruining a world class fishery and the economic impact it has on the region. Before a project like this is approved there should be studies that would be relevant to the species, climatic and freshwater conditions that exist here. The applicant should be required to fund these studies like any developer would where there is a chance of negative environmental and economic impacts.

Thank you for your time and consideration of this request.

Sincerely,

A handwritten signature in blue ink, appearing to read 'D. Turner', is written over a light blue horizontal line.

David Turner, Director