

# INFORMATION NOTE - PROPOSED OSTRANDER POINT INDUSTRIAL WIND ENERGY PARK

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## REVIEW OF EXISTING INFORMATION

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### PURPOSE OF INFORMATION NOTE

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This information note is intended to provide a brief background review of some of the existing available information on the environmental and other impacts associated with the Gilead Power Corporation's proposal to construct an industrial wind energy park at Ostrander Point, South Marysburgh Township, Prince Edward County Ontario.

The information herein is intended to assist the Alliance to Protect Prince Edward County (APPEC) and the Prince Edward County South Shore Conservancy (SSC) in focusing on the relevant environmental and associated impacts related to this proposal. In particular, this note provides a brief review of available documentation relevant to the project with a focus on potential impacts to migratory birds and species at risk within the Prince Edward County South Shore Important Bird Area. The Author's qualifications are listed at the end of this note. It should be noted that this Note has been prepared by the Author alone. It has not been reviewed by or submitted to any organizations other than APPEC and SSC.

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### BACKGROUND

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Gilead Power Corporation (the proponent) proposes to construct a 22.5 MW Industrial Wind Turbine energy installation at Ostrander Point located on the south shore of Prince Edward County. The site is located on 324 hectares of the Ostrander Point Crown Land Block southeast of the Town of Picton in the Ward of South Marysburgh, Prince Edward County.

The Project will involve the construction of 9 number 2.5 MW wind turbines together with associated infrastructure including a 44 kV transmission line from the project site to the provincial electricity grid at the Milford Distribution Station. Gilead Power states that the proposed Industrial Wind Turbine Installation has the potential of providing power for the equivalent of approximately 5,600 homes per year at full nameplate capacity.

The Project Site is located within the Prince Edward Point Important Bird Area (IBA), noted by the South Shore Conservancy as one of the two most important migratory bird routes in Ontario. The IBA Program is an international conservation initiative coordinated by BirdLife International. The Canadian co-partners for the IBA Program are Bird Studies Canada and Nature Canada.

The Project Site is also located within a Candidate Ontario Ministry of Natural Resources Provincially Significant Life Science Area of Natural and Scientific Interest and is adjacent to Nationally and Provincially Significant Wildlife Areas.

This Information Note is intended to provide a brief review of some of the available background studies and information relevant to the Ostrander Point Project. It is not intended to provide an exhaustive literature review or a quantitative analysis of the potential project impacts.

On November 30, 2011 formal notification of the proposed Ostrander Point Project was posted on the Ontario government's Environmental Registry for public review and comment.

As part of the application process for approval of a Renewable Energy Project under the Ontario Environmental Protection Act, the proponent is required under Ontario Regulation 359/09 to prepare supporting documentation including relevant impact assessments. Gilead Power have posted a number of supporting documents on their website. Of particular interest is a report titled "Ostrander Point Wind Energy Park Natural Heritage Assessment and Environmental Impact Study", undertaken by Stantec Limited for Gilead Power Corporation (the Stantec EIS Report). Amongst other documentation Gilead have also posted a Cumulative Effects Assessment Report (the CEA Report)

Interested parties have until February 19, 2012 to provide comments on the project to the Minister of the Environment prior to his decision on approval of the application, or otherwise. This Note has been revised to take into account the final version of the Proponent's Ostrander Point documents noted above as well as two ecological studies carried out by internationally known authorities for SSC, and which are listed below.

Earlier drafts of this Note were provided to APPEC and SSC in September and December 2011 and comments have been incorporated where appropriate.

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#### **DOCUMENTS REVIEWED**

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The following documents are particularly relevant to this proposed project and were reviewed during the preparation of this note. Web addresses are provided where available and additional references are noted at the end of this note. Many of these documents were provided by Ms. Beth Harrington of the Alliance to Protect Prince Edward County. Others have been found during the process of this review. Where possible website references have been provided for referenced documents.

Stantec Consulting Ltd, May 2011. Ostrander Point Wind Energy Park Natural Heritage Assessment and Environmental Impact Study. Gilead Power Corporation

[http://www.gileadpower.com/pdf/Dec-2011-Natural-Heritage-Assessment-Environmental-Impact-Study/OPWEP\\_NHA-EIS.pdf](http://www.gileadpower.com/pdf/Dec-2011-Natural-Heritage-Assessment-Environmental-Impact-Study/OPWEP_NHA-EIS.pdf)

Stantec Consulting Ltd, May 2011. Ostrander Point Wind Energy Park Cumulative Effects Assessment Report. Gilead Power Corporation

[http://www.gileadpower.com/pdf/Dec-2011-Consultation-Report/OPWEP\\_CR\\_Att-M\\_CEC.pdf](http://www.gileadpower.com/pdf/Dec-2011-Consultation-Report/OPWEP_CR_Att-M_CEC.pdf)

Ministry of Environment – EBR Notice of proposal for Approval for a Renewable Energy Project

<http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTE1MDIx&statusId=MTcyMzgx&language=en>

Ministry of Natural Resources - EBR Notice of proposal to Kill Harm or Harass Endangered Species

<http://www.ebr.gov.on.ca/ERS-WEB-External/displaynoticecontent.do?noticeId=MTEyODc0&statusId=MTY5Mjg1&language=en>

Wilson, W.G. and E.D. Cheskey. 2001. Prince Edward County South Shore Important Bird Area Conservation Plan. Prince Edward County South Shore Important Bird Area Steering Committee and Stakeholders

<http://www.ibacanada.ca/conservationplans/onprinceedwardsouthshore.pdf>

IBA Canada - Designation Information. Prince Edward County South Shore Important Bird Area, including location plans

<http://www.ibacanada.ca/site.jsp?siteID=ON003>

Environment Canada Canadian Wildlife Service, 2007. Wind Turbines and Birds: A Guidance Document for Environmental Assessment.

<http://www.ec.gc.ca/Publications/9B1BDC4A-E66F-4EAD-B5A9-20475F7DB29B%5CCWSWindTurbinesAndBirdsEAGuide2007.pdf>

Ewert, David N; Cole, James B; Grman, Emily; September 2011, Wind Energy: Great Lakes Regional Guidelines. Unpublished report, The Nature Conservancy, Lansing, Michigan

<http://www.glc.org/energy/wind/pdf/TNC-Great-Lakes-Regional-Guidelines.pdf>

Powlesland Ralph G., Impacts of Industrial Wind Turbine Installations on birds: a review – New Zealand Department of Conservation

<http://www.doc.govt.nz/upload/documents/science-and-technical/sfc289entire.pdf>

Ontario Ministry of Natural Resources (MNR), the Nature Conservancy of Canada (NCC) and The Nature Conservancy (U.S.) Islands of Life: A Biodiversity and Conservation Atlas of the Great Lakes Islands.

[http://nhic.mnr.gov.on.ca/MNR/nhic/projects/Islands\\_of\\_Life/Islands\\_of\\_Life\\_Final.pdf](http://nhic.mnr.gov.on.ca/MNR/nhic/projects/Islands_of_Life/Islands_of_Life_Final.pdf)

South Shore Conservancy Web Page

<http://southshoreconservancy.wordpress.com/maps/>

Alliance to Protect Prince Edward County Webpage

<http://appec.wordpress.com/>

Wind Concerns Ontario Webpage

<http://windconcernsontario.wordpress.com/>

Nature Canada Position on Ostrander Point

[http://www.naturecanada.ca/newsroom\\_nov\\_22\\_10\\_ostrander.asp](http://www.naturecanada.ca/newsroom_nov_22_10_ostrander.asp)

Wind Farm Realities Org – Website devoted to documenting correct information on Wind Turbine Developments

<http://windfarmrealities.org/>

Beaudry Frederic, September, 2011, Comments on the effects of the proposed Ostrander Point Wind Energy Park on a Blanding's turtle population. Prepared for SSC

Smith, Charles R., September 2011, Preliminary Review of Draft Ostrander Point Wind Energy Park Natural Heritage Assessment and Environmental Impact Study by Stantec Consulting Ltd, December 2010. Prepared for SSC

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#### **REVIEW APPROACH AND CRITERIA**

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As is evident from the list of relevant documents noted above, there is a huge amount of information available that is of interest in considering the Ostrander Point Project. It is beyond the scope of this brief review to summarise all of the available information. However, it is intended that this review will highlight some of the key issues that become apparent when the available information is examined.

In reviewing the proposals for the Ostrander Point development a number of potential issues become apparent. Some of these issues are relevant to all Industrial Wind Turbine developments and these are only mentioned for background information and have not been fully referenced. However, there are several issues which are specific to the Ostrander Point proposals, most related to the status of the site selection at the centre of a globally significant Important Bird Area. These are the areas that are concentrated on.

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## GENERAL ISSUES WITH INDUSTRIAL WIND TURBINES

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Despite the promise of renewable ‘green energy’ that was so attractive to environmentalists and decision makers in the 1980s and 1990s, throughout the 2000s, it has become apparent that many of the ‘green’ promises were not based on evidence or fact but on unsubstantiated claims by wind energy proponents.

Over the past few years the opposition to Industrial Wind Turbine development has become organised and has begun to accumulate substantial evidence to support the position that Industrial Wind Turbines are not the unmitigated social, economic and environmental boon portrayed by proponents of the technology.

As noted above these general issues are secondary to the specific Ostrander Point issues and for that reason it is not intended to provide peer reviewed evidence of all of the general objections to Industrial Wind Energy. Although their validity is outside the scope of this note these issues are important as background to the Ostrander Point project. More detailed information on these wider issues is available at the following websites (amongst others):

<http://windconcernsontario.wordpress.com/>

<http://windfarmrealities.org/>

Amongst the general issues that have emerged:

- Economics – Wind energy is several times more expensive than conventional fossil fuel, nuclear or hydropower. Without high levels of subsidy from either taxpayers or consumers Industrial Wind Turbines would not be an attractive investment to the proponent power companies and developers. In addition, wind energy requires provision of virtually 100% back up capacity from conventional generation facilities (a requirement for near total redundancy in supply due to the intermittent nature of wind energy) as well as expensive and disruptive extensions to grid infrastructure to accommodate widely dispersed wind energy sites.

<http://windfarmrealities.org/?cat=9>

- Emissions reductions: - To date it appears that there have been no substantiated studies showing any large effective reduction in carbon emissions due to the use of wind energy. The general industry approach to equating the production of energy from wind turbines with an equivalent reduction in emissions through an assumed ‘displacement’ of fossil fuels has been shown to be incorrect. In practice, backup fossil fuel plants need to be run at inefficient levels to provide for near instantaneous load uptake due to wind’s fickle nature which results in higher emissions intensity. The subject is controversial and requires further credible research.

<http://windfarmrealities.org/?cat=7>

- Grid disruption – It appears that due to the intermittent nature of wind energy production, many grid operators have great difficulty in matching grid demand with supply. These issues add to costs of power generation and on occasion can result in localized grid failure through overload. Without ‘grid scale storage’ technologies, which are mostly theoretical, experimental and very expensive, it will remain extremely difficult for grid operators to accommodate wind energy. As more and more wind energy projects come on line this problem will grow.

<http://windfarmrealities.org/?cat=10>

- Human health effects – Despite the Ontario Government position that the mandated 550 m setback for Wind Turbines is sufficient to protect human receptors from adverse noise impacts, evidence continues to mount at a rapid rate that adverse human health impacts from wind turbines can extend out to many times this distance. Recent peer reviewed studies on human health impacts were presented in the August issue of the Bulletin of Science, Technology and Society and are reviewed in the following article available online

<http://windfarmrealities.org/wfr-docs/Summary%20of%20new%20evidence%20August%202011%20FINAL.pdf>

In addition, this paper also notes problems with the Ontario Government's calculated noise levels for setback purposes as well as other health related problems, including visual flicker and infrasound.

See <http://windfarmrealities.org/wfr-docs/gulden-notes-hall-memo.pdf>

- Effect on Property Values – Another controversial subject, property devaluation has been explored by various researchers. For a summary of the arguments on both sides see <http://windfarmrealities.org/?p=32#comments>
- Social Equity Issues – The imposition of the Green Energy Act in 2009 effectively took local planning authority from communities and transferred it to provincial authorities. This has resulted in marginalisation of local community stakeholders in favor of corporate wind industry interests. The effects of this have not been well analyzed to date but are being seen in increasing civil protests against the imposition of IWT developments.

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#### **OSTRANDER POINT KEY ISSUES – HABITAT DESTRUCTION AND WILDLIFE THREATS**

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While all of the issues listed above are relevant (at least in principle) to discussion on the Ostrander Point Project, the key issues related to Ostrander Point are those related to potential threats to bird life and the viability of the Important Bird Area together with the loss of habitat for Blanding's turtle.

These issues have been considered in the Ostrander Point Wind Energy Park Natural Heritage Assessment and Environmental Impact Study (EIS), undertaken by Stantec Limited for Gilead Power Corporation. However, there are a number of areas where this Study may be flawed.

As set out by IBA Canada, by the Prince Edward County South Shore Important Bird Area Conservation Plan and by the Ostrander Point Wind Energy Park Natural Heritage Assessment and Environmental Impact Study, the Prince Edward County South Shore IBA has been designated a Globally Significant IBA under the congregatory species category and a Nationally Significant IBA under the threatened species category.

Large concentrations of migratory birds pass through the area, including passerines, waterfowl and a number of raptor species. In addition to the wider concerns with the location of the site within

the IBA, the EIS has identified that the site itself contains or is adjacent to provincially significant wetland and coastal wetland, significant woodland and significant wildlife habitat (seasonal concentration area for migrating landbirds; rare alvar vegetation communities, specialized habitat for woodland amphibian breeding and declining shrub/succession breeding bird species of conservation concern).

As noted in the MNR publication *Islands of Life: A Biodiversity and Conservation Atlas of the Great Lakes Islands* (P – 140):

*“There is a strong presence of migrating birds, and many nesting birds. The diversity of species at this site is exceptional with 162 species of landbirds recorded here. Birds found in groups exceeding 1% of their North American populations include the Greater Scaup, Oldsquaw and White-winged Scoter”*

The Draft Stantec EIS was reviewed by the Ontario MNR, and Environment Canada and the Agency Comments are included at Appendix C of the EIS. Despite recommendations in the report that the construction and operation of the Project is not predicted to result in significant residual environmental impacts on the significant features and functions identified through the Natural Heritage Assessment process, both agencies have expressed concerns about loss of habitat and risks to significant wildlife resources. Environment Canada has gone on to point out a number of uncertainties and areas of concern with the data presented in the EIS.

During September 2011, the SSC commissioned ecological reports on the Ostrander Point project by two recognized international authorities, Dr. Charles R. Smith and Dr. Frederic Beaudry. Dr. Smith is Senior Research Associate for the Department of Natural Resources, Cornell University. Dr. Smith’s research focus is in avian ecology and science-based conservation and he has more than 40 years of teaching and research experience. Dr. Beaudry is Assistant Professor of Environmental Science at Alfred University, New York and specializes in population ecology, habitat ecology and land use and he has published a number of papers specifically devoted to Blanding’s turtle. These reports are noted in the report list above but do not appear to be available on-line.

Dr. Smith’s report comprises a preliminary review of the December 2010 draft Cultural Heritage and Environmental Impact Study (The Stantec EIS Report). Though other aspects of the Stantec EIS Report were discussed, his review focused primarily upon those parts of the report related to birds and bird habitats, especially Appendix E, “Ostrander Point Wind Energy Project Bird Report.”

Dr. Smith’s report concludes that in general, the Stantec EIS Report exhibits a number of significant limitations in the collection, analysis and reporting of data for the Ostrander Point Site. He considers that the deficiencies of the Stantec EIS Report make it difficult, at best, to achieve an accurate assessment of the adverse effects of the proposed development and call into question the potential effectiveness of proposed mitigation efforts, especially for activities that will permanently and irrevocably alter natural features of continental and global significance, and which will adversely affect multiple endangered, threatened, and sensitive species of plants and animals. In particular Dr. Smith states that based on his professional judgment, the proposed mitigation area does not constitute an appropriate or effective mitigation strategy for the Ostrander Point Site.

Dr. Beaudry’s report reviews the effects of the proposed project on the Blanding’s turtle population and provides a critique of the portions of the Stantec EIS Report relevant to Blanding’s turtle.

Dr. Beaudry identifies limitations in the field data collection methods which call the results of the wildlife survey into question. He concludes that he does not agree with the results of the assessment with regards to Blanding's turtle and in particular feels that the proposed mitigation will be ineffective. He concludes that even with mitigation in place the project will likely result in a serious threat of extinction to the local Blanding's turtle population.

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## DISCUSSION – ENVIRONMENTAL ASSESSMENT OF WIND TURBINES AND BIRDS

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As referenced in Section 3.1.5 of the Stantec EIS Report, the Environment Canada Canadian Wildlife Service 2007 document "Wind Turbines and Birds: A Guidance Document for Environmental Assessment" is highly relevant to Ostrander Point:

Under S 5.0, of the EC Guidance Document guidelines are provided for determining site sensitivity. It is clear that the Ostrander Point site rates the highest level of site sensitivity::

**Site sensitivity** (table 1) Very high

- *The presence of a bird species listed as "at risk" by the SARA, COSEWIC or provincial/ territorial threat ranking, or the presence of the residence(s) of individuals of that species if listed under the SARA, or of its critical habitat. To be of concern, either the bird or its residence or critical habitat must be considered to be potentially affected by the project.*
- *Site contains significant staging or wintering area for waterfowl or shorebirds, or significant areas of bird concentrations.*
- *Site is in, or is adjacent to, an area recognized as nationally important for birds (e.g., by being located in or adjacent to a National Wildlife Area, Migratory Bird Sanctuary, Important Bird Area, National Park, Western Hemisphere Shorebird Reserve Network (WHSRN) site, or similar area specifically designated to protect birds).*
- *Site contains large concentrations of raptors.*
- *Site is on a known migration corridor*

As detailed in Appendix E of the May 2011 Stantec EIS Report. (para 1.2.3 of the Ostrander Point Wind Energy Project Bird Report), the level of concern of the site is defined as Category 4 based on site sensitivity and the scale of the project. Under Section 7.0 of the EC Guidance Document the following advice is given for Category 4 sites:

**Category 4:** *Projects in this category present a relatively high level of potential risk to birds, and consequently are likely to require the highest level of effort for the EA. As with category 3 projects, relatively comprehensive baseline surveys will usually be required. In many cases, these can still be completed over the course of one calendar year, unless there are specific factors that require more intensive survey (e.g., if there is a major concern over a species that shows considerable annual variation in abundance), in which case an additional year of pre-construction assessment may be required. For this reason, proponents are strongly encouraged to design and initiate baseline surveys as far in advance as possible, so that delays in data gathering do not affect EA approval of the project. **Depending on the findings of baseline studies, project proponents whose projects fall into this category may be encouraged or even required to seek alternative locations if significant adverse effects on birds are anticipated.*** (emphasis added)

A footnote goes on to state that:



*“The environmental assessment will need to determine the likely significance of adverse effects, including effects on birds. Projects in this level of concern are more likely to lead to significant effects on birds, which is why proponents are encouraged to consider other locations. At a screening level, the RA (**Responsible Authority**) must determine whether the project, taking mitigation into account, is likely to lead to significant adverse effects, in which case it can either be abandoned or must be referred to a panel or mediation. The RA can exercise a duty or perform a function that will allow the project to proceed only if the screening determines that the project is unlikely to cause significant adverse environmental effects.”*

Under S 3.0, of the EC Guidance Document guidelines are provided for site selection. Based on the identification of the Ostrander Point Site as meriting a Level 4 Category of Concern, the recommendation in S 3.1 is relevant – to wit: **“the proponent may wish to choose another site that presents less risk to birds, prior to initiating the EA”**

It may be helpful to review a particularly concise statement of the risk factors to birds from the New Zealand Department of Conservation report “Impacts of wind farms on birds: a review”:

- *The four main factors that contribute to collision fatalities at a wind farm are high densities of birds or frequency of movements through it, presence of species prone to collision with turbines, landscape features that concentrate bird movement, and poor weather conditions.*
- *Species groups that are most prone to collision fatalities at wind farms in Europe and North America are herons and allies, swans, geese, ducks, large soaring raptors, gulls, terns, owls, and nocturnal migrant passerines.*
- *While carcass numbers found at wind farms have been documented, these will underestimate fatalities unless a systematic methodology is used, including taking into account scavenger rate and searcher efficiency.*
- *Loss of or damage to habitat as a result of wind farm construction (roads, turbines, buildings) tends to be a minor impact, unless sensitive or rare habitats are involved, or habitat management at the site changes as a result of the development.*
- *Disturbance of birds as a result of wind farm development and operation may arise from increased activity of people and/or the presence, motion or noise of turbines. Disturbance may lead to displacement or exclusion of birds from areas of suitable habitat. The degree of disturbance can be highly variable, depending on the bird species, wind farm layout and availability of alternative habitat nearby.*
- *The choice of an appropriate site for a wind farm is the most useful way to ensure minimal negative effects on birds.*

Clearly, based on the Stantec EIS Report all of these factors are relevant.

It is also relevant to briefly review recent recommendations put forward by the Nature Conservancy in a report issued in September 2011 at Lansing Michigan entitled “Wind Energy: Great Lakes Regional Guidelines”.

This report provides recommendations for wind energy siting and operation with respect to birds, bats, and communities and is based primarily on peer-reviewed literature and published reports. Although the report has not been reviewed in detail in this Information Note it seems to be an attempt to amalgamate, justify and rationalize requirements of many different agencies through publishing consolidated pre- and post-construction guidelines. The point is made that while many previous guidelines provide general guidance for siting and/or recommended protocols for monitoring, the underlying documentation and caveats for these recommendations is often not provided or made explicit. The Authors of this report provide comprehensive guidelines applicable to the entire Great Lakes Region, together with a transparent and well-documented account of the

scientific rationale used to develop these guidelines and including recommendations for further research.

The following specific siting guideline recommendations are directly applicable to the Ostrander Point Project. The Nature Conservancy Report goes on to discuss the caveats applicable to each of these guidelines but that level of detail is beyond the scope of this Information Note:

- *Sensitive biodiversity sites. Avoid sites with state and federally threatened or endangered species or lands designated or appropriate for biodiversity conservation.*
- *Birds. Avoid areas where large numbers of migrating birds concentrate (e.g., Audubon Important Bird Areas [IBAs]) or where large numbers of migrating birds are predicted to occur*
- *Birds. Avoid Audubon IBAs for breeding birds, terrestrial and aquatic.*
- *Great Lakes Open Waters. Avoid cross-lake migratory bird routes and pelagic staging areas.*
- *Coastal. Avoid wind energy development within 5 miles (8 km) of Great Lakes shorelines, including islands, and including agricultural fields traditionally used by large numbers of waterfowl.*
- *Inland Wetlands. Avoid areas within 1,980 ft (600 m) of inland wetland complexes >2.5 acres (1 ha); avoid separating herpetofauna breeding areas from non-breeding habitat.*

The Ostrander Point IWT Project appears to violate all of these guidelines.

Arguably based on the siting guidelines set out above, including Environment Canada's recommendations, the New Zealand recommendations and the recent Nature Conservancy Guidelines, Ostrander Point is not a suitable site for Industrial Wind Turbine development.

It should be noted that the Stantec EIS Report has not specifically identified whether or not a Federal EA is required under the Canadian Environmental Assessment Act or whether or not a Federal Responsible Authority exists. As noted in the Guidance Document the CEAA and its regulations are the principal legislative basis for Federal involvement in EA. An EA under CEAA will be triggered when the Federal Government is the proponent of a project, grants an interest in land for the purpose of enabling the project to be carried out in whole or part, provides funds, or makes a regulatory decision that is prescribed on the Law List Regulations in respect of the project. A Federal Authority responsible for decisions with respect to a project that triggers the Act is legally required to ensure that the environmental effects of the proposed project are considered, that the significance of those effects is understood and that mitigation measures are identified and applied where required.

Information on the CEAA and its regulations, including triggers and requirements, is available at the Canadian Environmental Assessment Agency Web site

[http://www.ccaa-acee.gc.ca/index\\_e.htm](http://www.ccaa-acee.gc.ca/index_e.htm)

The most frequent CEAA trigger for wind energy installations has been the provision of Federal funds through the WPPI Program and its successor EcoENERGY for Renewable Power. In such cases, Natural Resources Canada (NRCan) is the Responsible Authority for the Federal EA.

It is clear that were this study being undertaken as a Federal EA, whatever the findings of the study, the project should either be abandoned or referred to a review panel or for mediation due to the public concerns expressed by community interest groups.

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## DISCUSSION – CUMULATIVE ENVIRONMENTAL ASSESSMENT

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Under Federal Environmental Assessment regulations there is a requirement for a Cumulative Impact Assessment to consider the effects of projects when combined with those of other past, existing and imminent projects and activities. Although it is not mentioned in the Stantec EIS Report there are a large number of other IWT Projects in various stages of planning in Prince Edward County and its environs with as many as 12 other onshore IWT projects in Prince Edward County alone. There is no consideration of cumulative impacts in the Stantec EIS Report.

As part of their report on Public Consultation efforts, Gilead has published a separate Cumulative Effects Assessment Report on their website. As set out in S 2.0 of the CEA Report, this report has been produced because:

*“...expressed public interest in cumulative effects related to the Ostrander Point Wind Energy Park is predominately directed at the potential interaction of multiple wind projects within and immediately surrounding Prince Edward County*

This Cumulative Assessment considers the Ostrander Point project together with 4 other 'reasonably foreseeable or certain wind projects' including the existing Wolfe Island project and the proposed White Pines and Amherst Island Projects. The Wolfe Island project is operational and the Amherst Island and White Pines Projects are at advanced stages of planning. There are a large number of other proposed projects both onshore in Prince Edward County and offshore throughout the Eastern end of Lake Ontario which have not been considered.

A summary of some of the proposed projects known as at Mid-2010 is available at

<http://amherstislandwindinfo.com/aiw-docs/pec-turbines.jpg> and at

<http://amherstislandwindinfo.com/wp-content/uploads/2011/11/lake-ontario-turbines3.jpg>

It is clear that the CEA report has ignored a large number of proposed projects both on and offshore in Prince Edward County and environs.

In addition the CEA Report avoids the question of cumulative impacts on the threatened species that Gilead proposes to "kill, harass and harm" on the grounds that these are dealt with under the Endangered Species Act permitting process and thus do not need to be considered in the CEA.

The CEA Report concludes that since Ostrander Point comprises only a small portion of the overall number of proposed turbines in the area, its contribution to cumulative impacts on Valuable Ecosystem Components including birds and bats will likely be small and acceptable. This is based on equating mortality levels measured at the operational Wolfe Island project with potential mortality throughout the rest of the CEA study area. This approach assumes, on no evidence, that mortality levels on Wolfe Island would be comparable to levels at Ostrander Point.

This approach also does not provide any kind of assessment, quantitative or otherwise to consider the question as to whether the overall impact of these projects taken over the whole area

including the projects not considered in the CEA will be acceptable. The report fails to define what the term 'acceptable' means as regards regional impact.

In fairness, it can be argued that the CEA carried out by Stantec on behalf of Gilead Power has considered those 'reasonably foreseeable' projects which are most likely to go forward. It can be argued that it is not Gilead's responsibility to demonstrate acceptable levels of environmental impact for the entire proposed IWT industry in Eastern Ontario and that this is beyond the scope of their project responsibilities.

Nonetheless, these outstanding questions need to be addressed.

It is noted that on 30 November 2011 a motion was proposed in Canada's Senate by Senator Bob Runciman calling on the province of Ontario to institute a moratorium on wind-farm development along eastern Lake Ontario until the impact on birds and bats can be studied. The motion was endorsed unanimously.

Clearly the relevant studies need to be undertaken at Provincial or Federal level and the Senate's proposed moratorium should stand until they are.

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#### SUMMARY

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Ostrander Point is located in an Internationally Significant Important Bird Area and is host to several hundred species of birds, including raptors, migratory waterfowl and passerines and species at risk. It is within a Candidate Area of Natural and Scientific Interest and if the ANSI designation were confirmed this development would be prohibited.

Independent review of the Stantec EIS Report has indicated a number of technical issues with the report which call its conclusions and recommendations into question. In particular there are troubling questions as regards the methodologies used in surveying important avian and amphibian species and as a result the report conclusions and recommendations are considered unreliable.

An independent appraisal of Federal Environment Canada site selection criteria for Wind Turbines considered together with recent siting guidelines for Great Lakes wind energy put forward by the Nature Conservancy indicates that the site should be considered not suitable for wind turbine development due to the potential impact on avian species.

Both Federal and Provincial Authorities have expressed concerns with regard to draft versions of the Stantec EIS Report. Although there have been no significant changes to the findings and recommendations of the report since those reservations were expressed, it appears that provincial authorities have agreed that the report and the proposed approval of the project under O Reg 359/09 is now suitable for public consultation. There is no evidence as to whether Federal Authorities now agree that their concerns have been addressed.

Under Federal EA Requirements the Public Concerns expressed to date would require that the Project be taken to review or mediation.

In addition, Federal EA procedures include a requirement for a cumulative impact assessment which is particularly relevant in view of the large numbers of other IWT projects proposed for the

area. The proponent has undertaken a limited cumulative assessment, however the results and conclusions leave a large number of questions unanswered as regards the impacts of this project and the other proposed IWT projects in the area.

In view of the information above considered together with recent calls by the Senate of Canada for a moratorium on IWT development in Eastern Lake Ontario, this project should not proceed in its present form.

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#### ADDITIONAL REFERENCES

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[http://www.naturecanada.ca/newsroom\\_nov\\_22\\_10\\_ostrander.asp](http://www.naturecanada.ca/newsroom_nov_22_10_ostrander.asp)

[http://canada.wpd.de/fileadmin/pdfs/rpt\\_2011-Mar\\_60594\\_PDR\\_WhitePines\\_final%20w-appendixes.pdf](http://canada.wpd.de/fileadmin/pdfs/rpt_2011-Mar_60594_PDR_WhitePines_final%20w-appendixes.pdf)

[http://nhic.mnr.gov.on.ca/MNR/nhic/projects/conservation\\_blueprint/blueprint\\_main.cfm](http://nhic.mnr.gov.on.ca/MNR/nhic/projects/conservation_blueprint/blueprint_main.cfm)

[http://windconcernsontario.files.wordpress.com/2009/10/mnr-bat-draft-compiled-comments\\_6\\_no\\_personal\\_info1.pdf](http://windconcernsontario.files.wordpress.com/2009/10/mnr-bat-draft-compiled-comments_6_no_personal_info1.pdf)

<http://www.windpowerfacts.info/>

<http://www.transalta.com/facilities/plants-operation/wolfe-island/post-construction-monitoring>

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#### AUTHOR QUALIFICATIONS

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##### **Bernard Ian Dubin – B.Sc., M.Sc. (Eng), LL.B. R.Eng, MHKIE, FHKIEIA**

Ian Dubin holds Undergraduate and Postgraduate degrees in Geology, Civil Engineering and Law from Queen's University in Canada and London University in the UK. He has numerous Academic and Professional Certifications in a number of other technical disciplines including Environmental and other forms of Impact Assessment, Problem Solving and Decision Making, Alternative Dispute Resolution, Expert Determination, Mediation and others. After starting his professional career as a Consulting Geotechnical Engineer in Toronto, he spent 25 years with the Hong Kong Government in Geotechnical Engineering and Environmental Protection. He holds or has held memberships in a wide range of International professional and technical institutes in Canada, Hong Kong and the UK including Corporate Membership of the Hong Kong Institution of Engineers, the Hong Kong Environmental Law Association and the International Association of Impact Assessment. He is a Fellow of the HK Institution of Environmental Impact Assessment and has held Registered Professional Engineer status in Ontario (P.Eng) and Chartered Engineer designation in the UK (C.Eng).

Mr. Dubin retired in 2005 as head of the Strategic Planning Section of the Environmental Assessment Division of the Hong Kong Environmental Protection Department and returned to Kingston to be closer to family and friends. During his career with the EPD he specialized in co-

coordinating Project Environmental Assessments and Strategic Environmental Assessments for Development Projects and for Policies Plans and Programmes with development budgets up to the US \$10 Billion range. He currently undertakes independent consultancy work in the following areas of professional expertise: and has published in peer reviewed journals in many of these areas.

- Environmental Impact Assessment and Strategic Environmental Assessment
- Environmental Monitoring and Audit
- Civil/Geotechnical Engineering including Site Investigation and Contaminated Land Remediation
- Conflict Resolution, Technical Coordination, Consolidation and Communication
- Environmental Policy Analysis
- Independent Expert Review including Expert Witness Testimony
- Environmental and Integrated Community Sustainability

Mr. Dubin also undertakes pro-bono environmental work. He was co-Founder and first Vice Chairman of the Hong Kong Environmental Law Association and he is currently co-Chair of the Kingston Environmental Advisory Forum (KEAF) which advises Kingston City Council on environmental matters. It should be noted that this Information Note has been produced entirely independently of KEAF and should in no way be interpreted to reflect the views of KEAF or of the City of Kingston.



B.I. Dubin  
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