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March 8, 2013

Re: EBR Registry Number: 012-0774 – Approval for a renewable energy project - EPA s.47.3(1) Windlectric Inc., Amherst Island Wind Energy Project

Dear Ms. Edwards,

Nature Canada and Ontario Nature appreciate this opportunity to comment on the proposed Renewable Energy Approval permit by Windlectric Inc. for the Amherst Island Wind Energy Project, proposed to be located in Loyalist Township, County of Lennox and Addington, Ontario.

Nature Canada is one of Canada's oldest national non-profit conservation organizations with a mission to protect and conserve wildlife and habitats in Canada by engaging people and advocating on behalf of nature. This network includes 40,000 supporters and more than 375 naturalist organizations across Canada. Nature Canada is also the Canadian co-partner of Bird Life International and along with Bird Studies Canada is responsible for the Important Bird Area program here in Canada. The facts that the project is within the Amherst Island Important Bird Area, and that it will impact migratory birds which are both a national and international concern, are the reasons for Nature Canada's decision to comment on this particular project.

Ontario Nature protects Ontario's wild species and wild spaces through conservation, education, and public engagement. Established in 1931, Ontario Nature is a charitable, membership-based conservation organization with over 140 member groups and over 30,000 individual members and supporters.



Our organizations believe that climate change poses one of the greatest risks to biodiversity. We support the government's intention to expand the use of clean and renewable sources through the *Green Energy and Green Economy Act, 2009*. However in responding to climate change, we must remember the importance of protecting wildlife and intact ecosystems to enhance landscape resilience. Protecting wild species and wild spaces is vitally important if we are to adapt to the effects of climate change and provide options for wildlife that must cope with predicted changes. While we accept that nothing comes without a cost and that wind energy projects will kill some wildlife, it is unacceptable to both our organizations - and we believe to the broader public - to be siting wind energy projects in areas of high conservation value, such as Important Bird Areas.

The Ministry of Environment along with the Ministry of Natural Resources is charged with the obligation to protect wildlife and prevent loss of biodiversity through our adhesion to international conventions to which Canada is signatory including the Convention on Biological Diversity and the Migratory Bird Convention and the various laws and policies that resulted from these agreements.

We strongly oppose the granting of a Renewable Energy Approval to Windlectric Inc. for their Amherst Island Project on multiple grounds, primarily:

- possibility of serious and irreversible harm from this project's contribution to the cumulative impact of many project currently established of planned for the eastern end of Lake Ontario in Ontario and New York State;
- possibility of overall damage to species at risk populations without any credible evidence of overall benefit to the species in the mitigation plans;
- possibility of serious and irreversible harm to the Eastern Ontario populations of swallows, including Purple Martin and possibly other swallow species;
- possibility of serious and irreversible harm to the island's raptor populations including but not limited to Short-eared Owl, Rough-legged Hawk, Northern Harrier, Red-tailed Hawk, Bald Eagle, and -other species;
- possibility of serious and irreversible harm to some grassland bird species' populations on Amherst Island; and
- Windlectric's failure to consider alternative locations or offer credible mitigation to high probability impacts;



These comments are in response to Windlectric's Application for a Renewable Energy Approval (012-0774), integrating our earlier comments on the Endangered Species Overall Benefit Permit (011-9446).

Many other reasons why this project is not in the public interest:

Tarnish Industry Reputation

We sincerely believe that if this project is approved, it will further tarnish Ontario's green energy industry, and ultimately undermine future projects in less controversial areas. The opposition of this project in the naturalist community is palpable. The risks of killing large numbers of raptors, swallows and bobolinks is high. Approval will further alienate a segment of Ontario's population from the green energy agenda and tip an already fragile balance.

Undermine global conservation alliance to protect shared bird populations

Amherst Island is a recognized globally significant Important Bird Area (IBA) by BirdLife International's Important Bird and Biodiversity Area Program.¹ BirdLife is the recognized global authority of bird populations and bird conservation with a global network of over 120 countries and conservation organizations dedicated to conserving the earth's birds and biodiversity. IBAs are increasingly seen and used as a tool to protect birds and biodiversity, including species at risk. The Environmental Commissioner of Ontario has publically stated that IBAs in Ontario should be turbine-free zones. Many jurisdictions, from member states of the European Union to the Nunatsiavut government in Labrador offer various levels of protection to IBAs from industrial activities. It is time that Ontario recognized that IBAs are a legitimate conservation tool and directed industrial projects that pose high risks to biodiversity such as this project away from IBAs.

Cumulative Impacts not addressed

We are extremely concerned by the current build-out of industrial wind energy projects in north-eastern Lake Ontario, specifically from Prince Edward County to the Thousand Island, and south into New York State. This area could see upwards of 500 to 800 wind

¹ <http://www.birdlife.org/worldwide/programmes/important-bird-and-biodiversity-areas-ibas>



turbines in the next 10 years. This area is a sensitive and highly significant corridor for migratory birds that circumvent Lake Ontario, follow the shoreline, use the coastal vegetation and the islands as stop-over, and feed on the prolific insect populations of coastal wetlands and the near-shore zone and of unknown but likely high significance to migrating bats.

The cumulative impacts of multiple wind turbine projects on bird and bat populations have not been properly examined. Each project continues to be assessed in a vacuum, without regard for large-scale impacts to various species populations. The operational Wind Energy plant at Wolfe Island is already killing large numbers of Tree Swallows, Purple Martins, Bobolinks, Red-tailed Hawks and Turkey Vultures at rates unseen anywhere in Canada or Eastern North America for a project of its magnitude. Another major project in sensitive habitat only a short distance away (one of many) is very likely to result in serious cumulative impacts on vulnerable populations of birds and bats. The USA border is only kilometres away, and similar projects are being considered there.

We have a collective responsibility with the United States authorities and partners to manage and protect our shared bird and other wildlife populations. Until the issue of cumulative impact is properly addressed, other projects including this one in the eastern basin of Lake Ontario should not be considered.

Strong possibility of serious and irreversible harm to species on Amherst Island

Impact to Grassland birds

The State of Canada's Birds Report, 2012 describes the grassland bird community and aerial insectivores as two of the most imperilled groups of species in Canada. Grassland birds in the Great Lakes St Lawrence ecozone have declined by over 70% in the past 40 years, with species like Eastern Meadowlark, Eastern Kingbird, Bobolink, Field Sparrow and Grasshopper Sparrow experiencing some of the greatest declines. Stantec identified Bobolink, Eastern Meadowlark and Eastern Kingbird at 32 of 33 grassland bird survey locations.²

² Stantec: Natural Heritage Assessment: Table G



If the proposed wind energy plant is built, it is estimated that each turbine will result in the direct loss of approximately 1 hectares of habitat, all of it grassland bird community. In addition, we understand that 35 kilometres of road will be constructed for this project, effectively doubling the amount of road on the island and significantly fragmenting remaining habitat. Some studies have shown a number of grassland species, including Bobolink and Grasshopper Sparrow are displaced by wind turbines, with effects reaching up to 200 metres from the turbine base³ or 12 hectares of lost habitat for sensitive species per turbine.⁴

Stantec describes this loss of habitat as insignificant in the Natural Heritage Assessment:

“As the majority of the island is comprised of grassland habitat, avoidance of this habitat type was not possible; most project components are sited in the significant open country breeding bird habitat and Short-eared Owl breeding habitat. As such, construction will result in direct loss of a relatively small amount of habitat. In total, approximately 67.8 ha of open country breeding bird habitat will be temporarily removed and approximately 17.2 ha of open country breeding bird habitat will be removed for the life of the project; this respectively represents 2.1% and 0.6% of the total identified significant open country habitat of 3113 ha. ⁵

Bobolink

Loss of habitat

For the Bobolink, as Species at Risk in Ontario, Stantec predicts a loss of up to 160 hectares of habitat ⁶. At .2 to 2 females per hectares, which is the range abundance known for this species, this would mean loss of 32 to 320 adult females plus a similar number of young lost that could otherwise be recruited into the population.

Direct morality from turbine blades

³ Johnson, Douglas and Jill A. Shaffer. Avoidance of wind turbines by grassland birds (USGS);

⁴ Johnson, Douglas, *Habitat Fragmentation Effects on Birds in Grasslands and Wetlands: A Critique of our Knowledge* (2001). *Great Plains Research: A Journal of Natural and Social Sciences*. Paper 568

⁵ Stantec Natural Heritage Assessment : 5-15

⁶ Stantec, Species At Risk Report, Feb, 2013, pg. 3.19



Wolfe Island Wind Plant has 86 turbines. Based on Stantec's 2011 July to December Post Construction Monitoring Report, they estimate 42 Bobolink casualties from direct strikes with turbine blades in 2011. Correcting for radius bias⁷ increases this number to near 60. While there are fewer turbines on Amherst Island, the turbines are larger – covering 30% more air space per turbine or 62.5% of the air space of the Wolfe Island turbines. Therefore it can be expected that the Amherst Island project would kill between 35 and 40 Bobolinks annually and eliminate the habitat for 32 to 320 more. For a rapidly declining species this is a significant number, adding to the cumulative impact of the above), which makes the following misleading comment on page 8.2 of Stantec's Species at Risk report all the more troubling with regard to the Wolfe Island project.

"Post-construction studies conducted at Wolfe Island Wind Plant, located near Kingston, Ontario, have recorded very low mortality rates of Bobolink relative to the local population sizes and no Eastern Meadowlark mortality over the three year program (Stantec, 2010a; Stantec, 2010b)"

In their Natural Heritage Assessment, Stantec implies that grassland bird populations, including Bobolink, on Amherst Island do not have viable populations despite no direct evidence to support this claim:

Large, contiguous undisturbed grasslands of at least 30 ha (and preferably 50 ha or more) are considered likely to support and sustain a diversity of grassland species (MNR 2012). Agricultural habitat is found in the Study Area that could support grassland breeding bird species. Open country habitat contained in and within 120 m of the Study Area is generally composed of actively hayed field and grazed pasture; however, there are some cultural meadows. The farming practice of hay field cutting before the end of the breeding cycle for grassland birds can reduce breeding success for these species up to 94% and hayfields are not

⁷ A., P. Kerlinger, R. Curry, and L. Slobodnik. 2007. Annual report for the Maple Ridge Wind Power Project: post-construction bird and bat fatality study - 2006. Report to PPM Energy and Horizon Energy and Technical Advisory Committee for the Maple Ridge Project Study, McLean, VA, USA. Stantec does not include a correction for radius bias which leads to a chronic underestimation of turbine casualty numbers in all of their studies. See discussion on page 14.



considered to support viable populations of grassland breeding bird species (COSSARO 2010)”⁸

This allegation that grassland bird populations on Amherst Island are not viable is not proven. In fact, Kurt Hennige of the Kingston Field Naturalist, who has studied the Bobolink populations on Amherst Island believes there to be 1000 pairs, which may well be a source population for elsewhere in the larger region (Hennige, personal communication). Based on the numbers that Stantec has provided in their reports on habitat loss and fragmentation from infrastructure, and knowledge from the Wolfe Island Wind Energy Plant, the only logical conclusion is that this project is very likely to seriously and permanently damage the Bobolink populations on Amherst Island.

The Passenger Pigeon was once believed to be the most common bird on earth, yet were pushed to extinction in less than 100 years entirely through human greed. Though Bobolink populations may still be relatively high, their rapid decline, along with declines of other species, suggests that we are blindly heading down the same path that will result in the same conclusion for many other species.

Eastern Meadowlark

The impacts of this project on Eastern Meadowlark will likely be less severe than with the Bobolink, but will include significant loss of habitat. Stantec’s 5th Wolfe Island Post Construction Monitoring Report demonstrated that Eastern Meadowlark post construction densities were approximately half the preconstruction densities. Eastern Meadowlark is rarely reported as a casualty at wind energy facilities, and has not been reported as a casualty at Wolfe Island Wind Plant to date. Therefore the major impact on this species will result from both direct loss of habitat, and displacement effects from the turbines and infrastructure.

It is not clear at all from the literature and Stantec’s Species at Risk Report if this project could impact productivity and reproductive success of this and other species. Pre and post studies on distribution and density do not answer this question. It is possible that the birds that remain near the turbines are simply occupying sub-optimal habitat, as is often the case in degraded woodlands near urban areas, and that areas near the turbines could be acting as ecological sinks. This is a clear gap in the science and one that should

⁸ Stantec Natural Heritage Assessment: 2-17-18



be addressed before more projects receive approval in viable grassland habitat that support strong grassland breeding bird communities, as well as an over-reliance of consultants, such as Stantec, on presence/absence and density as an index of reproductive success.

Impacts to Whippoorwill

In the Species At Risk Report there appears to be no discussion of Whippoorwill impacts, beyond speculating that the species will not be impacted:

“3.2.7.4 Conclusions

Eastern Whip-poor-will and its habitat occurred near the Project Location. No Project components are located in the identified Eastern Whip-poor-will habitats. Impacts, avoidance and mitigation measures for Eastern Whip-poor-will are discussed in **Section 8.0.**”

Whippoorwill is not mentioned in Section 8. We raised this issue in our comments on the EBR posting Number 001-9446. This is a sign to us that this Report is incomplete.

Impacts to Barn Swallow

The treatment of Barn Swallow is wholly inadequate given the well-known use of Amherst Island as a congregation site and staging area for this and other swallow species from July to September.

“Barn Swallow was observed foraging within the Project Area; however, no breeding habitat was identified in the Project Location. No structures that currently support, or have the potential to support Barn Swallow nesting will be altered or removed for the Project.”⁹

Despite this disclaimer in the Species at Risk report, Stantec reports in the Natural Heritage Assessment and Environment Impact Study that 2378 Barn Swallows were counted between mid-July and early September with a peak of 655 on August 3 (Stantec: Appendix F, Staging Swallow Survey).

⁹ Stantec Species at Risk Report, page 3.16



Impacts to Tree Swallow, Bank Swallow and Purple Martin

The potential impact of this project on all swallow species and Purple Martins, which have the smallest population of any of Ontario's swallows, needs to be carefully considered. Amherst Island provides ideal foraging habitat, and the marshes in the ANSI provide roosting habitat. Large concentrations of swallows on Amherst will make them highly vulnerable to collision.

Swallows are aerial insectivores – the fastest declining group of bird species in Canada according to the State of Canada's Birds Report: 2012. There is a strong likelihood that more Swallow species will be added to the list of Threatened Species by the Council on the Status of Endangered Wildlife in Canada in the next few years. Amherst Island is an impressive staging site for swallows by any standard, and particularly for Tree and Bank Swallow in the mid to late summer, as well as Purple Martin and other swallow species (IBA Canada, Stantec 2012). One only needs to visit the island from mid-July to the end of August to see thousands of swallows cutting through the air, flying low over the hay fields, perching in long lines on telephone wires, and circling high above during hot and humid days of low air pressure in pursuit of flying insects. Swallows go where the flying insects go, which depends on air pressure. There is evidence that wind turbines may attract insects, perhaps due to the turbine blade colour, perhaps due to air pressure, no one really knows why, but this could be a contributor to reason why turbines kill disproportionately high numbers of swallows and bats.¹⁰

The Wolfe Island wind plant turbines are swallow killers, based on Stantec's Bird and Bat monitoring reports for TransAlta Corporation. Approximately 50 Purple Martins were killed in each of its first two years of operation, while over 200 Tree Swallows were killed on Wolfe Island in its first year of operations and over 100 in the second year without correcting for radius bias.¹¹

The IBA Canada website notes high single observation numbers of Tree Swallows both on Wolfe Island (10,000) and Amherst Island (15,000). Stantec's field workers recorded 2682 Bank Swallow with a daily maximum of 990, 6087 Tree Swallows with a daily

¹⁰ C. V. Long & J. A. Flint & P. A. Lepper, Insect attraction to wind turbines: does colour play a role? European Journal of Wildlife Research Volume 57 Number 2 (2011) 57:323-331

¹¹ WOLFE ISLAND WIND PLANT POST-CONSTRUCTION FOLLOWUP PLAN BIRD AND BAT RESOURCES. MONITORING REPORT NO. 4 JANUARY - JUNE 2011, July to December, 2010, Stantec Consulting Ltd



maximum of 1600, and 160 Purple Martins with a daily maximum of 50. The first week of August appears to be the peak of the swallow numbers.

The life history of many swallow species may predispose them to the turbine blades in these locations. Tree Swallow, Purple Martin and other swallow species congregate in very large regional roosts from mid-July to late August after they have bred and prior to their long migrations to over-wintering grounds. While knowledge of these roosts is still rudimentary, it is known that there are roost sites that accommodate thousands of individuals in the Amherst Island and Wolfe Island area. During the night, the birds congregate in the roosts, which are typically in a marsh or wetland. Birds leave the roosts at day break to foraging areas that can be dozens of kilometres away. Amherst and Wolfe Island appear to be the most productive and most convenient foraging sites, perhaps due to proximate roosts combined with productive insect habitat (hay fields and wetlands).

Despite the clear risk that this project poses to Swallows and Purple Martins, and the good knowledge of species' phenology, there is no specific mitigation proposed or suggested. Rather, the risk is trivialized in the following passage from the Stantec Report on page 149:¹²

"Overall, the annual fatality rate for all birds on Wolfe Island is likely a reasonable indicator of fatality rate on Amherst Island. This rate has been higher than average for wind power facilities; 13.4 birds/turbine/year during the first year of operation (2009/2010) and 10 birds/turbine/year during the second year of operation (2010-2011). The higher mortality rates on Wolfe Island can be attributed partially to the high density of grassland breeding birds and the large number of late summer staging swallows; similar risk factors occur on Amherst Island."

Despite this comment recognizing the potential for high mortality rates, the Report goes on to say:

"Monitoring results to date from operational facilities indicate that wind turbines are not a major concern with respect to the sustainability of migratory bird populations in Ontario (Friesen 2011; MNR 2011c) and are a small contributor to overall bird mortality when compared to other

¹² Stantec: Natural Heritage Assessment, Pg 149.



anthropogenic influences (e.g. farming practices and house cats) (Arnett et al. 2007; Kingsley and Whittam 2007; National Academy of Sciences 2007; Kerlinger et al. 2011). Friesen (2011) concludes the mortality rates at Wolfe Island are likely not significant with respect to local or regional populations of species, in part because the mortality is spread among at least 58 species. The mortality rates observed to date at operational facilities in Ontario are considered low, with no evidence of large scale fatality events or significant population impacts (Friesen 2011). Monitoring results to date from operational facilities indicate that wind turbines are not a major concern with respect to the sustainability of migratory bird populations in Ontario (Friesen 2011; MNR 2011c) and are a small contributor to overall bird mortality when compared to other anthropogenic influences (Arnett et al. 2007; Kingsley and Whittam 2007; National Academy of Sciences 2007; Kerlinger et al. 2011)."

In addition to the fact that Friesen, 2011 is cited numerous times in this passage from an article allegedly published in Ontario Nature in 2011¹³ though no such article was every published in Ontario Nature, denial that this project has the potential to damage swallow and Martin populations, particularly when coupled with Wolfe Island, is troubling.

Swallow populations are plummeting and compounding the risks for these species in an area of considerable importance for them would seem irresponsible. In our view, the failure for the Proponent to credibly address the risk that this project presents to swallows, and offer meaningful alternatives or mitigation runs amuck of the Migratory Bird Convention Act, and likely the Species at Risk Act in the near future when more swallow species are listed. For us, this position is unacceptable, and in itself should be reason enough to deny this application.

Impacts to Blanding's Turtle

¹³ Friesen, L.E. 2011. No evidence of large-scale fatality events at Ontario wind power Projects. *Ontario Nature*. Vol 29, No 3. Pg 149.



Though it is well-known that there is a healthy Blanding's-Turtle population on Amherst Island, the species is inadequately addressed in Stantec's Species at Risk Report in which no concrete attempts at mitigation or avoidance are presented.

"Installing the various Project components is anticipated to have limited effect on the Species at

Risk turtle habitat as no removal of habitat is proposed.

Species at Risk turtles are considered to be at very low risk from mortality as a result of the installation of access roads given the infrequent use roads will receive (private roads used infrequently for occasional maintenance) combined with the mitigation measures in place as outlined above."

It is our understanding that 35 kilometres of service roads will be built, and regularly travelled, as turbines require regular servicing, and corpse counters will be busy monitoring. Blanding's Turtle is highly mobile and is likely to use or cross this network of roads often. We believe that the risk to the turtle is much higher than portrayed in the Stantec Species at Risk Report, and the total lack of plan to address these risks or address how the company plans to realize overall benefits for the species is a significant gap.

Impact on bat populations

TransAlta's Wolfe Island Wind Energy Plant killed approximately 15 bats per turbine in its first full six months of operation, equivalent to 30 bats per turbine per year. For this project, bat mortality is considered significant at 10 individuals per turbine per year.¹⁴ The company describes mitigation contingencies as an adaptive management process, informed by monitoring, and involving the implementation of cut-in speeds.¹⁵ In the event that this measure fails, the following is the contingency:

Should cut-in speed mitigation be implemented and the bat mortality threshold continue to be exceeded, additional mitigation and scoped monitoring requirements will be determined in consultation with MOE and other relevant agencies.¹⁶

¹⁴ Stantec: Design and Operations Report: 3.3.1

¹⁵ Stantec: Design and Operations Report: 3.3.1, 3.4.1.

¹⁶ Ibid



At this point, we do not believe that the commitment to wildlife protection goes far enough. The contingency is disturbingly vague. Turbine shutdown should be an explicit option and one that the Ministry must be prepared to enforce.

Impacts to Raptor populations

Amherst Island is without a doubt the most reputed location for viewing raptors in the winter in Eastern Canada, and perhaps Eastern North America. Birders travel extremely distances to visit the island and take in the spectacle that is like no other place in the winter. Stantec surveyed winter raptors as part of the Natural Heritage Assessment:

Short-eared Owl was the most common species observed, with a total of 242 observations over 18 surveys. Other commonly observed species include Rough-legged Hawk, Northern Harrier and Red-tailed Hawk with respective totals of 199, 128 and 119 observations over the 18 surveys. The highest one day totals observed during the driving transect surveys, which provide a conservative estimate of raptors using the Study Area; include 37 Rough-legged Hawks, 22 Red-tailed Hawks, 20 Northern Harriers, 2 American Kestrels, 2 Snowy Owls and 23 Short-eared Owls.¹⁷ The hayfields and pastures where the project is proposed is prime habitat for this species where it roosts, nests and hunts.

Wolfe Island also has concentrations of raptors, though not to the extent of Amherst Island. The Wolfe Island Wind Energy Plant killed over 44 raptors in its first three years of operation including at least 18 Red-tailed Hawks, 9 Turkey Vultures, 5 Osprey and 5 Rough-legged Hawks. The local population of Red-tailed Hawk has been effectively eliminated, according to local biologist and bird expert Kurt Hennige of the Kingston Field Naturalists (personal communication).

There is a strong likelihood that this project will result in many more annual raptor casualties, perhaps impacting the populations of these slow-reproducing species. In Europe and California, wind energy plants have been implicated in population-level impacts on species of raptors. The conflagration of projects, including this one, in the

¹⁷ Stantec Natural Heritage Report 4-14



Eastern Lake Ontario basin, has the potential to add this area to the list of global sites that causing population level declines in raptor species.

Short-eared Owl

Amherst Island is world-renowned for its breeding populations of Short-eared owl.

Stantec concludes that the project will have a minimal impact on Short-eared Owl: In most cases, Short-eared Owls would be are expected to continue using sites adjacent to the access roads, as documented on other wind projects (i.e. Wolfe Island).¹⁸ The Report continues:

“The post-construction studies have demonstrated that wintering raptors continue to use the Wolfe Island Wind Plant project area in high numbers (Stantec 2010b, 2011b and 2012a). The studies have found some localized avoidance around operational wind turbines; for example, Short-eared Owls have rarely been observed foraging within 200 m of turbines with spinning blades. However, the impact of localized avoidance does not appear to have limited the number of raptors supported by the project area. Short-eared Owls have been recorded in significantly higher numbers during post-construction surveys than during pre-construction surveys.¹⁹

Evidence from the Kingston Field Naturalists, who have been diligently monitoring Short-eared Owls for decades, comes to the opposite conclusion, suggesting that Short-eared Owls have largely abandoned their traditional habitat on the west end of Wolfe Island as a result of the Wind energy project there (Kurt Hennige, Kingston Field Naturalists personal communication). The higher numbers reported during post construction surveys are an artifact of the natural cycle of owl populations in response to their small mammal prey, and have nothing to do with the wind turbine project.

“Due to the concentration of raptors on Amherst Island during the winter, there is some risk of mortality. Some of the species present are known to hover while hunting, or fly erratically at dusk, potentially

¹⁸ Stantec – 5-10

¹⁹ Stantec: IBID 5-25



making them susceptible to collisions with the wind turbines. Because raptors have relatively low reproductive rates, population recovery from mortality effects can be slow (Kingsley and Whittam 2007).

With regard to potential mitigation if thresholds are surpassed, the Environmental Effects Monitoring Plan (included in the Amherst Island Wind Project Design and Operations Report) describes a response and contingency plan that will be implemented if performance objectives cannot be met.²⁰

Post-construction mortality studies at the Wolfe Island Wind Plant have been extended through the winter, to monitor potential fatalities to wintering raptors. Results from the 3 years of post-construction monitoring have found relatively few raptor fatalities during the winter months, despite the high concentration of raptors in the project area. Overall, based on these results, direct mortality is not likely to have a significant impact on the wintering raptor population on Amherst Island.

According to the Wind Energy Bird and Bat Monitoring Database (Environment Canada et al. 2012), no Short-eared Owl or other owl fatalities has been recorded at Ontario wind farms to date. The monitoring database shows that owl mortality across all wind farms in Canada has been very low. This is likely due to their low flying nature and potentially the keen hearing of owls that alert them to the presence of wind turbines. It can be expected the risk of mortality from turbine collision to wintering and breeding owls on Amherst Island would be low.”²¹

We are concerned that the impacts of this project on raptors will manifest themselves in two ways: high collision mortality for soaring species like the Buteos, Osprey, Northern Harrier, and Turkey Vulture, and abandonment of the island by Short-eared Owl due to disturbance, noise and habitat fragmentation associated with the turbines, servicing them, and their operation. As the Stantec report admitted, and Kurt Hennige observed, Short-eared Owls avoid turbine clusters on Wolfe Island. Turbines are concentrated in

²⁰ Stantec IBID 5-26

²¹ 5-34-35 Stantec.Natural Heritage Report



one end of Wolfe Island, whereas they are spread through much of Amherst Island, turning it into a sort of wind factory.

Infringement of Significant wildlife habitat:

All of Amherst Island is essentially significant wildlife habitat, which the naturalist community has known and attested to for over a century. It is not surprising that Stantec found 86 significant natural heritage features are within project infrastructure, and that 50 natural heritage features, including significant wildlife habitat for birds, are within 120 m. of a turbine. The impacts from this industrial activity on the Significant Wildlife Habitat of Amherst Island should render this application unacceptable.

Mortality monitoring underestimates true impact

Stantec's monitoring and mitigation report²² describes the mortality monitoring protocol for birds and bats in the following way with regard to area monitored:

"Based on OMNR guidelines and on industry standards, the search area will be a minimum 50 m (with consideration for searching in a 10m wide search area (i.e. 50-60m from turbine base with corresponding analysis of the results) given a 55m blade length) from a wind turbine base."

We challenge MNR and the proponent on this methodology and contend that it will significantly underestimate the number of birds killed due to radius and crippling biases. Jain, Kerlinger et al (2007) found that "36% of avian carcasses were found beyond 50 m from WTG base."²³ This study was based on turbines with even smaller blades than the 55m blades proposed by Windlectric. Large blades mean greater tip speed, resulting in flinging the birds even further or obliterating the birds on impact, so that identifiable parts cannot be detected and attributed. We contend that limiting the search radius to 50 metres will result in a higher percentage than 36% of the casualties falling outside of the 50 metre radius.

It is time that MNR and the top consulting firms like Stantec recognize radius bias, and account for it in their estimated casualty rates.

²² Stantec: **Post Construction monitoring for bird and bat mortality**

²³ Jain, A., P. Kerlinger, R. Curry, and L. Slobodnik. 2007. Annual report for the Maple Ridge Wind Power Project: post-construction bird and bat fatality study - 2006. Report to PPM Energy and Horizon Energy and Technical Advisory Committee for the Maple Ridge Project Study, McLean, VA, USA.



Crippling bias is also not acknowledged or accounted for by Stantec, yet is particularly a concern with raptor species. Gauthereau cited one study by Winkelman (1992) that reported that 17% of collisions related to turbines did not immediately kill animals but rather wounded them.²⁴ This crippling bias, though not easy to estimate, is additional to the Stantec calculations and increases the mortality rate further. Without recognizing these factors, the actual impact on wildlife populations of wind energy projects is routinely underestimated and misleading the public and the policy makers. We believe most projects will still fall well within the acceptable threshold with this correction, but egregious projects will become obvious.

Conclusions

There are many strong and undeniable reasons why this project should not go ahead. There is a strong possibility that it will cause serious and irreparable harm to many wildlife populations including grassland birds, swallows, species at risk including Bobolink, Eastern Meadowlark, Short-eared Owl and Blanding's Turtle, it will harm bat and raptor populations, and it is clearly being pushed through the system despite overwhelming public opposition. In our opposition to this project, the irony is that both Nature Canada and Ontario Nature are strong supporters of renewable energy, and the Green Energy Act in Ontario. This project, just like Ostrander Point, undermines the good intent of the Green Energy Act and we believe, risks alienating the naturalist community even further.

In closing, we would implore the Ministry of the Environment to turn down the Application for a Renewable Energy Approval by Windlectric Inc., for its Amherst Island Wind Energy Project. The reports that the consultant produced fall short in demonstrating that the project will not cause significant and irreversible harm to the populations of wildlife that depend upon Amherst Island. We feel the evidence suggests that this project will further marginalize these threatened and declining species and others that were inadequately addressed.

Please contact the signatories below if you have any questions regarding our comments.

²⁴ Gauthreaux, S.A. 1996. Suggested practices for monitoring bird populations, movements and mortality in wind resources areas. National Avian-Wind Power Planning Meeting Proceedings



Sincerely,

A handwritten signature in blue ink, appearing to read "T. Cheskey".

Ted Cheskey
Manager of Bird Conservation Programs,
Nature Canada

A handwritten signature in black ink, appearing to read "J. Wise".

Joshua Wise
Greenway Program Coordinator
Ontario Nature