Environmental Review Tribunal
Tribunal de l'environnement

ISSUE DATE: August 16, 2017 **CASE NO.:** 16-036

PROCEEDING COMMENCED UNDER section 142.1(2) of the *Environmental Protection Act*, R.S.O. 1990, c.E.19, as amended

Appellant:	See Appendix 1 – Appellant List
Approval Holder:	wpd Fairview Wind Incorporated
Respondent:	Director, Ministry of the Environment and Climate Change
Subject of appeal:	Renewable Energy Approval for Fairview Wind Project
Reference No.:	3948-9RDLRF
Property Address/Description:	Various sites
Municipality:	Township of Clearview
Upper Tier:	County of Simcoe
ERT Case No.:	16-036
ERT Case Name:	Wiggins v. Ontario (Environment and Climate Change)

Heard: February 28, 2017 in Collingwood, Ontario and in writing

APPEARANCES:

Parties	**Counsel**
Kevin Elwood and Gail Elwood	Glenn Grenier and Annik Forristal
Preserve Clearview Inc.	Paul Peterson and William Thomson
Corporation of the County of Simcoe and Town of Collingwood	Julie Abouchar and Richard Butler
Corporation of the Township of Clearview	Harold Elston

wpd Fairview Wind Incorporated	Jesse Long and Jameel Bassit
Director, Ministry of the Environment and Climate Change	Sylvia Davis, Daniel Carens-Nedelsky and Joslyn Currie (articling student)

Participant

Canadian Owners and Pilots Association	Glenn Grenier

DECISION DELIVERED BY DIRK VANDERBENT AND HUGH S. WILKINS

REASONS

Background

[1] On February 11, 2016, Mohsen Keyvani, Director, Ministry of the Environment and Climate Change ("MOECC") issued Renewable Energy Approval No. 3948-9RDLRF ("REA") to wpd Fairview Wind Incorporated ("Approval Holder"), granting approval for the construction, installation, operation, use and retiring of a Class 4 wind facility with eight wind turbines and a total name plate capacity of 16.4 megawatts ("Project"). The Project is proposed to be located in Clearview Township, Simcoe County, Ontario ("Project site").

[2] On February 19, 2016, John Wiggins, and on February 26, 2016, Gail Elwood, Kevin Elwood, Preserve Clearview Inc. ("PCI"), the Corporation of the County of Simcoe ("Simcoe County"), the Corporation of the Township of Clearview ("Clearview Township"), and the Town of Collingwood ("Collingwood") (jointly "Appellants") appealed the REA to the Environmental Review Tribunal ("Tribunal") under s. 142.1(2) of the *Environmental Protection Act* ("*EPA*"). The Canadian Owners and Pilots Association ("COPA") was granted participant status in this proceeding, as were three presenters. Each Appellant appealed on the grounds that the Project will cause serious harm to

human health and serious and irreversible harm to plant life, animal life and the natural environment.

[3] The main hearing in this proceeding was completed in June 2016. In an order dated October 7, 2016 (revised on October 18, 2016) ("October 2016 Order"), the Tribunal found that, pursuant to s. 145.2.1(2) of the *EPA*, engaging in the Project in accordance with the REA will cause both serious and irreversible harm to plant life, animal life or the natural environment, and serious harm to human health. These findings were based on evidence regarding the impact of the Project on a species at risk, specifically little brown myotis (little brown bat or *Myotis lucifugus*) and evidence regarding the impact of the Project on aviation safety. The Tribunal adjourned the proceeding in accordance with s. 59(2)1.ii of Ontario Regulation ("O. Reg.") 359/09 respecting Renewable Energy Approvals. The proceeding was again adjourned following each subsequent status update telephone conference call in this proceeding.

[4] The remaining issue before the Tribunal is to determine, under s. 145.2.1(4) of the *EPA*, whether to revoke the decision of the Director, direct the Director to take such action as the Tribunal considers the Director should take in accordance with the *EPA* and its regulations, or alter the decision of the Director. This phase of the proceeding is commonly referred to as a "remedy hearing".

[5] The Approval Holder requested a remedy hearing respecting the Tribunal's finding of serious and irreversible harm to the little brown myotis. More specifically, the Approval Holder has proposed an amendment to the REA to include a proposed revised mitigation plan, supported by expert witness evidence. The Approval Holder did not request a remedy hearing respecting the Tribunal's finding of harm to human health. The Appellants and the Director did not request a remedy hearing.

[6] By order dated December 12, 2016, and for reasons described in that order, the Tribunal determined that it would conduct a remedy hearing as requested by the Approval Holder. All those who participated in the main hearing participated in the

remedy hearing except for John Wiggins, Collingwood Flying Club, Susan Richardson, Mandy Bridson, Stephen Bridson, and Elizabeth Marshall. On February 28, 2017, the Tribunal conducted an in-person hearing in Collingwood to hear evidence on remedy, with written submissions to follow. Following the remedy hearing, the Tribunal again adjourned the proceeding under s. 59(2)1.ii of O. Reg. 359/09, leaving sufficient time for the parties to file written submissions and for the Tribunal to dispose of the proceeding.

[7] As described in greater detail below, the Approval Holder has proposed an amendment to the REA to include additional curtailment measures designed to reduce little brown myotis mortalities. The Tribunal finds that these additional measures, provided they are amended to require that they be implemented from sunset to sunrise, is likely to significantly reduce little brown myotis mortality over the life of the Project. However, as neither the Approval Holder nor the Director has proposed effective means to mitigate the serious harm to human health, as found by the Tribunal in its October 2016 Order, the Tribunal concludes that the decision of the Director should be revoked. As such, an amendment to the REA to address harm to little brown myotis via an amended mitigation plan is rendered unnecessary.

Issues

[8] The main issue is, in accordance with s. 145.2.1(4) of the *EPA*, whether to revoke the decision of the Director, direct the Director to take such action as the Tribunal considers the Director should take in accordance with the *EPA* and the regulations, or alter the decision of the Director. The sub-issues that need to be determined are:

1. Based on the Tribunal's finding of serious harm to human health, whether the Tribunal should revoke the REA, direct the Director to take certain actions, or alter the REA; and

2. Whether the Approval Holder's proposed mitigation plan will reduce the

risk of harm to the little brown myotis and, if so, whether the Tribunal should revoke the REA, direct the Director to take certain actions, or alter the REA.

Relevant Legislation

[9] The relevant provisions of the *EPA* that apply to this proceeding are:

> **Hearing required under s. 142.1**
>
> 145.2.1 (1) This section applies to a hearing required under section 142.1.
>
> **What Tribunal must consider**
>
> (2) The Tribunal shall review the decision of the Director and shall consider only whether engaging in the renewable energy project in accordance with the renewable energy approval will cause,
>
> (a) serious harm to human health; or
> (b) serious and irreversible harm to plant life, animal life or the natural environment.
>
> **Powers of Tribunal**
>
> (4) If the Tribunal determines that engaging in the renewable energy project in accordance with the renewable energy approval will cause harm referred to in clause (2) (a) or (b), the Tribunal may,
>
> (a) revoke the decision of the Director;
> (b) by order direct the Director to take such action as the Tribunal considers the Director should take in accordance with this Act and the regulations; or
> (c) alter the decision of the Director, and, for that purpose, the Tribunal may substitute its opinion for that of the Director.

Discussion, Analysis and Findings

Issue No. 1: Based on the Tribunal's finding of serious harm to human health, whether the Tribunal should revoke the REA, direct the Director to take certain actions, or alter the REA

Submissions

[10] COPA and the Elwoods submit that the Tribunal must revoke the decision of the

Director issuing the REA on the basis that engaging in the Project in accordance with the REA will cause serious harm to human health. They maintain that, given the Tribunal's findings of serious harm to human health in the October 2016 Order and given that there are no effective mitigation measures available to reduce that risk, there is no alternative for the Tribunal but to revoke the REA under s. 145.2.1(4)(a). They argue that amending the REA to include the proposed mitigation plan to address harm to little brown myotis does nothing to address the Tribunal's finding of serious harm to human health and therefore would not result in a viable renewable energy approval. They submit that the Tribunal cannot alter the REA to include the mitigation plan for little brown myotis while ignoring the human health consequences, nor should it ineffectually alter the REA to include the mitigation plan and then revoke the altered REA for not passing the human health test. They argue that, based on the use of the word "or" in s. 145.2.1(4), the Tribunal may only exercise one of the remedy options and may only issue one order, and that the Tribunal, therefore, cannot alter and then revoke a REA. COPA and the Elwoods submit that there is no evidentiary basis upon which the Tribunal may direct the Director or substitute its opinion for that of the Director with respect to determining a remedy arising out of its finding of serious harm to human health in the October 2016 Order. They argue that the exercise of the Tribunal's discretion under s. 145.2.1(4)(b) or (c) would not prevent serious harm to human health. They submit that there is no other option open to the Tribunal but to revoke the REA under s. 145.2.1(4)(a).

[11] Collingwood and Simcoe County submit that the party advancing a remedy bears the onus of proving, on a balance of probabilities, that its proposed remedy is appropriate and that, in the present case, the Approval Holder has chosen not to call evidence or make submissions on potential remedies to address the Tribunal's finding of serious harm to human health. They submit that revocation of the REA addresses applicable public policy and legislative objectives, noting that the Supreme Court of Canada in *Castonguay Blasting Ltd. v. Ontario (Environment)*, [2013] 3 S.C.R. 323, at para. 10, stated that the purpose of Ontario's environmental legislation includes protection of the environment and "those who *use* the natural environment by protecting

human health, plant and animal life, and property". Collingwood and Simcoe County submit that in the October 2016 Order, the Tribunal found, after considering proposed mitigation measures put forward by the Approval Holder's expert at the hearing, that the Project will cause serious harm to human health. They maintain that the Director withdrew support for two of the Approval Holder's proposed wind turbines because they posed an "unacceptable safety risk" and that the Project, as approved, is not in the public interest as shaped by the purpose and provisions of the *EPA*. Collingwood and Simcoe County submit that the Approval Holder has failed to demonstrate with any evidence that remedial measures exist to prevent serious harm to pilots. They further submit that allowing the Project: would be inconsistent with the general and renewable energy approval purposes in the *EPA*; would fail to protect the environment and those who use it; and would not serve the public interest. They argue that, based on the evidence and submissions before the Tribunal, it is in the public interest for the Tribunal to revoke the REA.

[12] Clearview Township submits that, as the Approval Holder has not provided any further evidence, the Tribunal's finding in the October 2016 Order of serious harm to human health test must stand and the REA must be revoked.

[13] The Director disagrees with the submission that Tribunal may only exercise one of the remedy options and may only issue one order, and that the Tribunal, therefore, cannot alter and then revoke a REA. The Director submits that the word "or" in s. 145.2.1(4) of the *EPA* should be interpreted using the "modern approach to statutory interpretation" and that the Tribunal should not interpret its use in that section in a disjunctive manner as suggested by COPA and the Elwoods. He submits that such an interpretation would result in an absurd outcome that is not in harmony with the scheme of the *EPA*. The Director submits that the modern approach to statutory interpretation, as set out in *Re Rizzo and Rizzo Shoes Ltd.*, [1998] 1 S.C.R. 27, at para. 21, requires that "the words of an Act are to be read in their entire context and in their grammatical and ordinary sense harmoniously with the scheme of the Act, the object of the Act and the intention of Parliament". Citing Ruth Sullivan, *Sullivan on the Construction of*

Statutes 6th ed. (LexisNexis, 2014), at 4.98-4.99, the Director submits that generally when interpreting legislation, the word “or” is presumed to be inclusive unless the context clearly indicates that it is meant to be exclusive. He argues that in s. 145.2.1(4), the word “or” is clearly meant to be inclusive, which, he submits, is consistent with its use in s. 145.2.1(2) of the *EPA* under which the Tribunal has jurisdiction to find both serious harm to human health and serious and irreversible harm to animal life, plant life or the natural environment. He submits that following the arguments of COPA and the Elwoods would lead to the absurd result that the Tribunal may not make separate findings on separate issues prior to determining an appropriate remedy. He submits that the scheme of the *EPA* calls for an efficient and expedited hearing process for renewable energy approval appeals and for the Tribunal to make determinations on all of the issues before it.

[14] The Approval Holder did not make submissions on this issue.

Analysis and Findings

[15] At para. 150 of the October 2016 Order, the Tribunal addressed three primary considerations when assessing the risk that pilots flying the circuit at the Collingwood Regional Airport (“CRA”) might collide with a wind turbine:

- conditions resulting in a pilot flying very near the wind turbines;
- pilot inexperience, which would lead to a pilot requiring more time to recognize and respond to a hazard; and
- the volume of plane traffic at the CRA, which increases the likelihood that a hazardous situation could arise.

[16] At para. 151, with respect to CRA, the Tribunal concluded that:

> Considering all the above factors, the Tribunal accepts that the margin for error posed by introducing the proposed wind turbines at their

> proposed locations would be inadequate to prevent collision with a wind turbine.

At paras. 154-156, the Tribunal analyzed and made a similar finding with respect to Clearview Field, Stayner ("Clearview Field"), which is another aerodrome in the vicinity of the Project site.

[17] The Tribunal assessed the proposed mitigation measures put forward by the Approval Holder to address the Appellants' evidence regarding safety concerns both at CRA and Clearview Field. Specifically, with regard to the CRA, the Tribunal considered, at para. 158, the Approval Holder's proposed mitigation measures to:

> (1) maintain a left-hand circuit pattern, but require a "tighter" circuit path, so that slower flying … planes will not fly over the wind turbines...
>
> (2) as a variation of Option 1, slower [planes] would fly the tighter left-hand circuit, and faster … planes would fly a non-standard right-hand circuit; and
>
> (3) maintain a standard left-hand circuit for [Runway] 13/31, and a non-standard right-hand circuit for [Runway] 31/13. This would place the circuit path on the north side of the paved runway irrespective of the runway direction.

The Tribunal found that there was insufficient evidence that these mitigation measures would be either effective or feasible.

[18] Regarding Clearview Field, the Tribunal considered, at para. 170, the Approval Holder's proposed mitigation measures consisting of a standard left hand circuit for one runway and a non-standard right hand circuit for the other runway to "keep the aircraft outside and clear of the wind turbines as obstacles." The Tribunal found at paras. 171-172 that these proposed mitigation measures were not feasible and "would not significantly reduce the likelihood of a collision with a wind turbine, or ground crash caused by wind-turbine induced turbulence for all wind turbines other than wind turbine 2".

[19] In the remedy hearing, neither the Approval Holder nor the Director provided any additional evidence or mitigation proposals to address the Tribunal's finding in its October 2016 Order of serious harm to human health.

[20] As the Tribunal has found that engaging in the Project in accordance with the REA will cause serious harm to human health, and neither the Approval Holder nor the Director have proposed effective means to mitigate this harm, the Tribunal finds that it is in the public interest to revoke the REA under s. 145.2.1(4)(a).

Issue No. 2: Whether the Approval Holder's proposed mitigation plan will reduce the risk of harm to the little brown myotis and, if so, whether the Tribunal should revoke the REA, direct the Director to take certain actions, or alter the REA

Evidence

[21] For the remedy hearing, only the Approval Holder and PCI provided evidence. Dr. Scott Reynolds provided opinion evidence on behalf of the Approval Holder and Susan Holroyd and Sarah Mainguy each provided opinion evidence on behalf of PCI.

[22] Two objections were raised, one in respect of Dr. Reynolds' evidence, and one in respect of Ms. Mainguy's evidence. These objections are described and addressed in Appendix 2, attached to this Decision. By way of summary, the Tribunal found that these objections did not warrant excluding either Dr. Reynolds' or Ms. Mainguy's evidence.

The Mitigation Plan

[23] The Approval Holder submitted a revised "Mitigation Plan for Operation of the Fairview Wind Energy Project" ("Mitigation Plan") developed by its consultant, Stantec Consulting Ltd., dated December 23, 2016. The Approval Holder requests that the REA be amended to add a new Condition I6.1, which would require implementation of the measures in the Mitigation Plan. The proposed Condition I6.1 states:

> I6.1 The Company shall implement the Mitigation Plan for Operation of the Fairview Wind Energy Project (the Mitigation Plan), dated December 23, 2016, prepared by Stantec Consulting, including:
>
> (1) implement the monitoring and mitigation measures as outlined in Table 2 of the Mitigation Plan;
>
> (2) adjust cut-in speed to 5.5 [metres per second ("m/s")] between sunset and midnight from May 1 – September 30 at all turbines for the operating life of the Facility;
>
> (3) in the event of a mortality of a bat species at risk, successively increase the operational mitigation as detailed in Table 1 of the Mitigation Plan.

[24] The Mitigation Plan:

- incorporates operational curtailment from the onset of operation that utilizes a 5.5 m/s cut-in speed from sunset to midnight throughout the bat active season from May 1 to September 30 each year;

- provides a mortality monitoring protocol extending to 60 metres ("m") from the turbine bases;

- provides a monitoring program to examine site-specific environmental influences on bat mortality and supplements the existing Environmental Effects Monitoring Plan ("EEMP") monitoring by conducting biweekly species-specific surveys of all turbines in years in which the EEMP monitoring is not occurring; and

- creates a technical advisory committee that will analyse data, annually report on its findings, and make recommendations for modification to the Mitigation Plan using adaptive management practices.

[25] Under the Mitigation Plan, a single species at risk bat fatality (little brown myotis, northern myotis, eastern small-footed myotis or tri-colored bat) would result in curtailment at the particular turbine being extended to sunrise for the remainder of the

active bat season and behavioural studies would be conducted in the vicinity of that wind turbine to identify causal risk factors. If additional mortalities are experienced, further curtailment measures would be taken, up to and including the shutting down of the relevant wind turbines during periods of highest risk. The Mitigation Plan requires additional monitoring, including establishing baseline data and monitoring the effectiveness of mitigation measures that are taken. If there is a continuing impact, the Approval Holder must consult with a technical advisory committee to be established to oversee the Project, consisting of the principal investigator, a delegate of the Project operator and a third party bat expert, and also with staff from the Ministry of Natural Resources and Forestry ("MNRF"), to determine additional actions. The monitoring results would be reviewed annually by the committee and provided to MNRF.

Evidence of the Approval Holder

[26] Dr. Reynolds provided opinion evidence on behalf of the Approval Holder. Dr. Reynolds was qualified at the main hearing as "an expert on bats and the impacts of wind energy projects on bats". This qualification was confirmed for the purpose of the remedy hearing.

[27] Dr. Reynolds opined that the Mitigation Plan will significantly reduce bat mortality, preventing serious and irreversible harm to little brown myotis. He stated that the Mitigation Plan "is preventative in nature and designed to dramatically reduce the potential for bat mortality" at the Project site. He characterized the Mitigation Plan as "an aggressive and proactive effort to minimize the impact of the [Project] site on the little brown myotis" and "has the potential to lower bat mortality from turbine collisions an additional 80%-90%".

[28] Dr. Reynolds stated that the Mitigation Plan's mitigation measures aim at avoiding impacts to species, avoiding impacts to habitat, and creating or enhancing bat habitat. He said the Mitigation Plan is a supplement and extension of the EEMP. He stated that the Mitigation Plan's monitoring programme aims to establish baseline data

to determine the scale of operational mitigation and to monitor its effectiveness. He stated that the key element to the Mitigation Plan is the operational mitigation, which consists of two components: preventative curtailment at the onset of operations; and adaptive curtailment in the event of a species at risk mortality. He said it is a proactive set of measures that is consistent with and in some respects more extensive than the mitigation plan developed for the project in *Assn. for the Protection of Amherst Island v. Ontario (Ministry of the Environment and Climate Change)*, [2016] O.E.R.T.D. No. 36 ("*Amherst Island*"). He concluded that, "if operated in accordance with the Mitigation Plan, the Fairview Wind Project site would not impact the conservation [or] recovery of little brown myotis, and therefore would not pose serious or irreversible harm to any of the [species at risk] bat species in Ontario".

[29] Regarding the status of little brown myotis, Dr. Reynolds stated that there is evidence that the regional population is beginning to stabilize and that the most important variable influencing population growth in little brown myotis is the survival of juveniles. He said there are likely some little brown myotis at the Project site, and stated that when comparing this population with those in other locations, mortality rates are not strongly influenced by topography.

[30] Regarding means to determine population levels, Dr. Reynolds stated that confirming the identification of a bat species using acoustic monitoring is not easy. He agreed that the monitoring efforts of Susan Richardson (a lay participant in this proceeding who undertook acoustic recordings of bat calls in the vicinity of the Project site in 2016) likely recorded some little brown myotis, but the number of little brown myotis that made the calls is uncertain. He said He further stated that visual identification of bats in flight is not a reliable means to estimate population numbers. He stated that bat population estimates are speculative and biased by the methodologies used.

[31] Reviewing the literature, Dr. Reynolds stated that curtailment efforts are generally undertaken at the times when bats are most active on the landscape. He said

this is usually early in the evening. Referring to data taken at Mount Storm, West Virginia in 2010, which were summarized in E.B. Arnett, et al., *A Synthesis of Operational Mitigation Studies to Reduce Bat Fatalities at Wind Energy Facilities in North America* (Bat Conservation International, 2013) ("Arnett 2013"), researchers found a 77% reduction in bat mortality during the early portion of evenings, while curtailing later in evenings experienced a lesser 58% reduction. He said the findings in J. Gruver, et al., *Summary and Synthesis of Myotis Fatalities at Wind Facilities with a Focus on Northeastern North America* (West Inc., April 13, 2015) ("Gruver 2015") that curtailment can result in significant reductions in bat mortalities, are consistent with the findings of other experts on this issue.

[32] Dr. Reynolds stated that little brown myotis are attracted to water features and opined that there is little reason for them to randomly pass across the Project site's open fields to forage. He stated that even if they did cross the Project site, they typically commute at an elevation well below the sweep of turbine blades and would not be at high risk of impact.

[33] Dr. Reynolds stated that most bat mortality occurs within 50 m of turbine bases and that most bat carcasses are found within 35 m of turbine bases. He opined that the 60 m search radius set out in the Mitigation Plan would be effective.

[34] In reply to the evidence of Ms. Holroyd and Ms. Mainguy, Dr. Reynolds stated that:

- although the area in the vicinity of the Project site includes habitat used by bats, it lacks key bat attractants and does not contain high quality bat habitat;

- the presence of hibernacula (hibernating habitat) has no measurable effect on bat mortality levels from wind turbines and the location of

Niagara Escarpment near the Project site poses no additional risk factor for little brown myotis mortality from wind turbines; and

- there is no evidence that myotis bats are under-estimated by post-construction mortality surveys and that in fact, with the application of mortality estimators, adjusted mortality figures generally over-estimate bat mortality.

Evidence of PCI

[35] Two witnesses testified on behalf of PCI. Ms. Holroyd was qualified as a wildlife biologist with specialized expertise in bat ecology and conservation strategies. Ms. Mainguy was qualified at the main hearing by the Tribunal as an ecologist with expertise in wildlife surveys and impact assessments, including bats.

[36] Ms. Holroyd opined that the bat foraging, drinking and commuting habitat in the vicinity of the Project site is of very high quality. She described her experience using acoustic monitoring equipment with Ms. Richardson searching for little brown myotis in the vicinity of the Project site and assessing the results. She stated that many of the local farms include buildings that provide roosting habitat for bats, including little brown myotis. She stated that there are many local waterways, ponds and wetlands that constitute prime foraging and commuting habitat for the species and that these bats use this area. However, she stated that no assessment has been done to determine baseline information. She said there is potential hibernating habitat close to the Project site and that she captured, measured and identified a little brown myotis in Nottawa, close to the Project site. She stated that more baseline information on the local little brown myotis population is needed and that Ms. Richardson's roost counts at buildings in the vicinity of the Project establishes the basis for gaining reliable data from year to year regarding breeding in the area.

[37] Ms. Holroyd described the content of the Best Management Practices Guidelines

for Bats in British Columbia (“BC Bat Guidelines”) of which she is a co-author, and its chapter on wind energy development. She stated that the BC Bat Guidelines recommend curtailment of rotor speed from 30 minutes before sunset to 30 minutes after sunrise throughout the active period for little brown myotis. She opined that mitigation for myotis should be for the entire night throughout the species’ entire active period.

[38] Ms. Mainguy also testified on behalf of PCI. She opined that there is a greater abundance of little brown myotis in the vicinity of the Project site than previously thought, which is evidenced by her observations and Ms. Richardson’s acoustic recordings. She said she reviewed the bat calls identified by Ms. Richardson’s equipment and found that generally those identified as myotis calls were correct. She opined that most of these were from little brown myotis. She opined that the area in the vicinity of the Project site provides attractants for little brown myotis and that this species roosts in the area and commutes throughout the area. She also opined that there are likely hibernacula close by on the Niagara Escarpment and that more studies on the local little brown myotis population are needed.

[39] Ms. Mainguy stated that there are considerable differences between the landscape topography, bat populations and bat habitat at the Project site and those at Amherst Island. She said that the Tribunal’s findings in *Amherst Island* are distinguishable. Responding to Dr. Reynolds’ testimony that regional little brown myotis populations are stabilizing, she stated that there is no evidence to support this in Ontario. She also stated that, with the emergence of White Noise Syndrome (a disease that has significantly reduced regional little brown myotis population numbers in recent years), the most important factor for little brown myotis population growth is not juvenile survival, but survival of adults that have avoided or resisted the disease. She questioned Dr. Reynolds’ testimony on the percentage of little brown myotis killed at wind farms and stated that there is a need for local baseline information to be collected in order to evaluate the impacts of the Project. She also stated that the Mitigation Plan’s extension of carcass searches to 60 metres from turbine bases is inadequate

and increased monitoring frequency is also needed.

[40] Ms. Mainguy questioned the effectiveness of the Mitigation Plan's proposed curtailment measures. She stated that the Gruver 2015 research, relied on by Dr. Reynolds, is statistically flawed, not published in a peer-reviewed journal, and dependent on incomplete and inaccurate data. She said data relied on in Gruver 2015 in some cases demonstrated increases in little brown myotis mortality after curtailment measures were taken and did not take into account the impact of White Nose Syndrome in reaching the Study's findings. Referring to Arnett 2013, she stated that there is not much data available on whether curtailment works and concluded that curtailment results are variable and "its effectiveness is often just above half of the mortalities that would have been caused pre-curtailment".

[41] Ms. Mainguy stated that bat activity does not necessarily decrease after midnight and that, in her experience, bat calls often do not dramatically decrease in abundance after midnight. She referred to M. Henry et al., "Foraging Distances and Home Range of Pregnant and Lactating Little Brown Bats (*Myotis Lucifugus*)", 83:3 *Journal of Mammalogy* (2002), 767-774, which reported bats not returning to maternity roosts until roughly eight hours after sunset. She opined that curtailment should continue until sunrise.

[42] She opined that even with curtailment measures in place, significant numbers of bat mortalities will still occur. Ms. Mainguy stated that without "qualitative information on roosting sites, feeding areas, travel routes, other areas of concentration, and population", there is an insufficient basis for the Approval Holder's claim that its proposed remedy will prevent serious and irreversible harm to the local little brown myotis population. She opined that the proposed remedy "would not be sufficient to ameliorate a high potential for serious and irreversible harm to local bat populations".

Submissions

Submissions of the Approval Holder

[43] The Approval Holder requests that the appeals be dismissed and that the Tribunal alter the decision of the Director under s. 145.2.1(4)(c) of the *EPA* to incorporate its proposed avoidance and mitigation measures. The Approval Holder submits that the Mitigation Plan is more stringent than the mitigation plan at Amherst Island and is consistent with the BC Bat Guidelines in relation to monitoring and mitigation. The Approval Holder further submits that its proposed remedy is sufficient to reduce the impact of the Project to below serious and irreversible harm to little brown myotis.

[44] The Approval Holder submits that the Tribunal must determine on the balance of probabilities whether the proposed changes effectively address the identified harms and will not create the potential for some as yet unanticipated and unstudied impact. The Approval Holder acknowledges that the Approval Holder and the Director have the onus of demonstrating that amendments to the REA are the appropriate remedy.

[45] The Approval Holder maintains that Ms. Mainguy and Ms. Holroyd have mischaracterized the Project site as a high quality habitat, which the Approval Holder submits is refuted by Dr. Reynolds. The Approval Holder argues that PCI's evidence in this regard is based on Ms. Richardson's acoustic survey results, which, it submits, are unreliable and lack credibility. The Approval Holder also argues that curtailment measures have been proven to be effective and that Ms. Mainguy failed to produce evidence to contradict this. The Approval Holder argues that the conclusions of Gruver 2015 are consistent with the findings of other researchers on this topic. The Approval Holder maintains that PCI's argument that the situation at Amherst Island is distinguishable from this case is not supported by the facts. The Approval Holder emphasizes that Ms. Mainguy admitted that she did not review the Amherst Island mitigation plan in detail and, therefore, her critique of it should be attributed little weight.

Regarding pre-construction monitoring, the Approval Holder submits that most carcasses are found within 40 m of turbine bases and that Ms. Mainguy's statement that 60 m is insufficient is not supported in most literature. The Approval Holder submits that preconstruction surveys are not an effective means to establish post-construction mortality, referring to Dr. Reynolds' testimony that bat population estimates are speculative and biased by the methodologies used. The Approval Holder submits that Ms. Mainguy's statements that baseline information must be collected prior to construction are unsupported.

[46] Regarding Ms. Holroyd's evidence, the Approval Holder submits that her testimony regarding local bat habitat is unsupported, noting, for example, that she failed to identify any specific foraging sites in the area or commuting pathways. The Approval Holder also argues that her testimony on the location of hibernacula sites nearby is irrelevant and submits that there is no established association between the location of hibernacula and bat mortality from wind turbines. The Approval Holder also contests her testimony that little brown myotis movement patterns are essentially random in nature. It argues that Ms. Holroyd offered no evidence on whether the Project, if operated with the implementation of the Mitigation Plan, would cause harm to little brown myotis. However, the Approval Holder notes that Ms. Holroyd's evidence indicates that the Mitigation Plan is consistent with the BC Bat Guidelines of which she is a co-author.

[47] The Approval Holder requests that, under s. 145.2.1(4)(c), the Tribunal alter the Director's decision approving the REA by incorporating in it the Approval Holder's proposed Condition I6.1. It submits that the Tribunal has jurisdiction to direct a remedy resolving only one component of the harms identified in the October 2016 Order. It refers to the Divisional Court's finding in *Association for the Protection of Amherst Island v. Windelectric Inc*, [2017] ONSC 1012, at para. 18, where the Court found that s. 145.2.1(4) conveys broad remedial power on the Tribunal. It also refers to *Erickson v. Ontario (Director, Ministry of Environment)*, [2011] O.E.R.T.D. No. 29, at para. 577, where the Tribunal stated:

> While it is clear that the power of the Tribunal is limited by the statutory provisions, the Tribunal does not agree with the proposition that the provisions effectively limit the Tribunal to giving a "yes or no" answer to a proposed renewable energy project.

Submissions of the Director

[48] The Director submits that the Approval Holder's proposed remedy is in the public interest and the Tribunal should amend the REA to incorporate the Mitigation Plan. He argues that the Approval Holder's proposed remedy addresses the harms identified by the Tribunal in the October 2016 Order, does not create the potential for new impacts to the environment and achieves the objectives of the *EPA*. The Director submits that the Mitigation Plan aims to avoid impacts to little brown myotis and its habitat and aims to create or enhance bat habitat.

[49] The Director submits that Dr. Reynolds was the most qualified expert at the remedy hearing and relies on his conclusions that the Mitigation Plan will significantly reduce bat mortality and prevent serious and irreversible harm to little brown myotis. The Director accepts Dr. Reynolds' conclusions that there is a low risk of little brown myotis mortality at the Project site, even without the Mitigation Plan, and that inclusion of the Plan reduces the risks substantially. The Director also maintains that the Mitigation Plan supports Dr. Reynolds' conclusion that the most important variable influencing little brown myotis population growth is the survival of juveniles.

[50] The Director submits that Ms. Holroyd's evidence should be given little weight, stating that she was not certain whether she reviewed the REA or the Mitigation Plan prior to completing her witness statement. He submits that her evidence on the presence of little brown myotis in the vicinity of the Project is based on acoustic evidence, which Dr. Reynolds opined is of limited value as it does not clearly distinguish between species and provides limited information about population size. He argued that it does not distinguish calls between individuals and therefore does not indicate the number of individuals in an area. The Director also submits that Ms. Holroyd's evidence

that the area in the vicinity of the Project is very high quality little brown myotis habitat was critiqued by Dr. Reynolds as being outside the Project site, which Dr. Reynolds stated was mostly agricultural land and not suitable habitat. The Director submits that Dr. Reynolds also said that nearby wetlands were not wetlands that would attract foraging bats. The Director submits that the Project conforms to the BC Bat Guidelines' recommendations on the siting of wind turbines near bat habitat, the seasonal timing of curtailment measures, adaptive management, and post-construction monitoring. He emphasizes that Ms. Holroyd co-authored these Guidelines. The Director also notes that under cross-examination, Ms. Holroyd agreed that preconstruction surveys do not necessarily accurately predict post-construction mortalities.

[51] Regarding Ms. Mainguy's evidence, the Director submits that her testimony, that bats occur in the vicinity of the Project site in greater numbers than previously thought, is based on her interpretation of Ms. Richardson's acoustic recordings and visual observations in flight. The Director submits that this evidence should be given limited weight due to the challenges in interpreting acoustic recording data and in visually identifying little brown myotis in flight. The Director also questioned the reliability of Ms. Mainguy's assertions that: (i) little brown myotis frequently travel across the Project site; (ii) topographical differences between Amherst Island and the Project site would affect the presence of bats in each area; and (iii) pre-construction surveys were necessary. Regarding Ms. Mainguy's evidence that the Mitigation Plan is inadequate, the Director submits that Dr. Reynolds' evidence demonstrates that the peak active times for bats are before midnight. He argues, therefore, that the proposed curtailment measures would be effective. The Director also maintains that the scope of the Mitigation Plan's proposed carcass searches covers the areas where carcasses are generally found.

[52] The Director submits that the Mitigation Plan comprehensively addresses the Tribunal's concerns regarding harm to little brown myotis and represents a curtailment approach that has been successively used elsewhere with the potential to reduce mortalities by 80% to 90%. He argues that it is more stringent than the mitigation measures required for the Amherst Island project, and conforms to the monitoring

provisions and exceeds the mitigation provisions in the BC Bat Guidelines. The Director further submits that altering the Director's decision to include the proposed mitigation measures is consistent with the precautionary principle, which, he submits, does not require that there be absolute proof that no harm will occur. He argues that if harm is unlikely, the precautionary principle is satisfied. He also argues that the Mitigation Plan satisfies the general purpose of the *EPA* (s. 3(1)) and the purpose of Part V.0.1 (Renewable Energy) of the *EPA* "to provide for the protection and conservation of the environment" (s. 47.2).

[53] The Director supports the Approval Holder's remedy request. He argues that, based on the measures set out in the Mitigation Plan, it is in the public interest for the Tribunal to alter the Director's decision to approve the REA by incorporating in it the Approval Holder's proposed Condition I6.1.

Submissions of PCI

[54] PCI argues that Dr. Reynolds failed to survey, inventory, or provide detailed data on the habitat and presence of little brown myotis in the vicinity of the Project site or in the region. PCI submits that he also provided contradictory and unsubstantiated evidence; particularly that the population of little brown myotis is stabilizing, curtailment is an effective mitigation measure, and the use of acoustic data is unreliable. PCI argues that he mischaracterized data and findings in the literature, including Bird Studies Canada's estimates (see Bird Studies Canada et al., *Wind Energy and Bat Monitoring Database Summary of the Findings from Post-construction Monitoring Reports* (Bird Studies Canada, 2016) ("Bird Studies Canada 2016")) on little brown myotis mortalities at wind energy facilities in Ontario. PCI also argues that Dr. Reynolds' consideration of harm to little brown myotis was based on his assessment of the species population on a provincial scale, not the local, and that Dr. Reynolds is not adequately familiar with the Project site. PCI submits that Dr. Reynolds' conclusions on habitat are contradicted by Ms. Holroyd and Ms. Mainguy, each of whom has familiarity with the area.

[55] PCI argues that curtailment effectiveness is variable among species and has not been proven for little brown myotis populations. PCI further argues that Gruver 2015's conclusions are not substantiated by complete or reliable data and should be given little weight. PCI submits that, in any event, some of the data relied on in the Gruver 2015 research demonstrates that there were increases in little brown myotis mortality after curtailment measures were implemented, and that the research findings do not take into account the impact of White Nose Syndrome.

[56] PCI submits that Ms. Holroyd's evidence demonstrates that the Project site includes suitable habitat for little brown myotis and is in proximity to potential hibernacula, and that there are insufficient baseline data on the local population.

[57] PCI maintains that Ms. Mainguy's evidence demonstrates that little brown myotis are present in the vicinity of the Project, and that this conclusion is supported by the acoustic surveys undertaken by Ms. Richardson. PCI submits that Ms. Mainguy's evidence demonstrates that the local landscape provides attractants for little brown myotis, including roosting and foraging habitat, and that the species likely travels through the area multiple times per night. PCI further relies on her opinion that there is insufficient information to indicate that mitigation measures, which might be effective in other areas such as Amherst Island, would be effective at the Project site, given differences in topography and landscape. PCI also relies on her evidence that: (i) literature does not demonstrate that local little brown myotis populations are stabilizing in Ontario; (ii) data from the Bird Studies Canada 2016 research indicates that a significant percentage of bat mortalities caused by wind turbines are little brown myotis; and (iii) there has been insufficient pre-construction scientific study of the local little brown myotis population, roosting sites, foraging areas, and travel routes. PCI further relies on Ms. Mainguy's opinion that the Approval Holder's proposed curtailment measures are insufficient as they do not curtail operations after midnight.

[58] PCI submits that the present case is distinguishable from *Amherst Island* in that no little brown myotis were visually observed on Amherst Island, the population there is

very small, and there is insufficient evidence that mortalities would occur there. In further support of this submission, PCI also emphasizes that the mitigation strategy adopted in *Amherst Island* includes curtailed operations from sunset to sunrise (curtailment does not end at midnight) and that there is to be daily monitoring for little brown myotis carcasses at many of the *Amherst Island* wind turbines. PCI submits that the Project is also distinguishable from *Hirsch v. Ontario (Environment and Climate Change)* 2017 Carswell Ont 6173 ("*Hirsch 2017*") in that there were greater numbers of little brown myotis and better habitat documented at the *Hirsch 2017* project site and there is a more comprehensive monitoring regime required for that project.

[59] PCI submits that, for the Approval Holder to overcome the Tribunal's finding of serious and irreversible harm in the October 2016 Order, the Approval Holder must demonstrate on a balance of probabilities that even small-scale impacts on the local population are not likely to occur, and that the proposed remedy will prevent serious harm over the lifespan of the Project. PCI argues that Dr. Reynolds' conclusion that implementation of the Mitigation Plan "would lower this risk substantially, above and beyond the protection afforded by the REA" is not sufficient, as it neither addresses the prevention of "any additional fatalities" or "small-scale impacts". PCI submits that it is necessary to have baseline data on the current local little brown myotis population in the area, in order to assess the future effectiveness of the Approval Holder's proposed mitigation measures. PCI submits that, without this baseline data, it is impossible for the Tribunal to conclude that, on a balance of probabilities, the Mitigation Plan will prevent the Project from causing serious and irreversible harm to the species.

[60] PCI argues that the Approval Holder has failed to meet its burden of satisfying the Tribunal on the balance of probabilities that its proposed remedy will be effective in addressing the Tribunal's findings in the October 2016 Order that the Project will cause serious and irreversible harm to little brown myotis. It submits that, given the lack of study or data on the presence of little brown myotis in the vicinity of the Project site, the precautionary principle should be applied. It submits that the only appropriate remedy is to revoke the REA.

Analysis and Findings

[61] In a proceeding where the Tribunal determines that engaging in a renewable energy project in accordance with an approval will cause the harm outlined in s. 145.2.1(2) of the *EPA*, the Tribunal, under s. 145.2.1(4), may: (a) revoke the decision of the Director; (b) by order direct the Director to take such action as the Tribunal considers he or she should take in accordance with the *EPA* and the regulations; or (c) alter the decision of the Director and, for that purpose, may substitute its opinion for that of the Director. The Tribunal has broad discretion as to which remedy it orders (see *Ostrander Point GP Inc. v. Prince Edward County Field Naturalists*, [2014] O.J. No. 772 (Div. Ct.) ("*Ostrander*"), at para. 89). In the October 2016 Order, the Tribunal made the determination that the Project will cause serious and irreversible harm to plant life, animal life or the natural environment. Each party now has the onus of demonstrating why its preferred remedy enumerated in s. 145.2.1(4) should be ordered by the Tribunal.

[62] In exercising its discretion under s. 145.2.1(4), the Tribunal must consider the purpose of the applicable legislation, the regulations and relevant policies to determine if a proposed remedy is in the public interest. In *SLWP Opposition Corp. v. Ontario (Ministry of the Environment and Climate Change),* [2016] O.E.R.T.D. No. 42, at para. 13 the Tribunal stated in relation to s. 145.2.1(4):

> …the Tribunal's powers … are informed by the purpose of the *EPA* as a whole at s. 3(1) and the purpose of Part V.0.1 of the Act relating specifically to renewable energy, at s. 47.2. As noted at para. 48 of [*Prince Edward County Field Naturalists v. Ontario (Ministry of the Environment and Climate Change),* [2016] O.E.R.T.D. No. 25], the "policy goals of promoting and streamlining renewable energy projects lose their primacy and become one of many factors to consider within the broader legislative framework and the public interest in energy generation that mitigates harm to the environment."

[63] The Tribunal's findings in the October 2016 Order are final and will not be reconsidered in a remedy hearing. In the October 2016 Order, the Tribunal found that it is unlikely that there is a large resident population of little brown myotis at the Project

site, the level of bat activity there is generally low overall, and the population is vulnerable. It relied on the reasoning of the Divisional Court in *Ostrander* in which the Court found, in regard to Blanding's turtles (which are designated as "threatened" under the *Endangered Species Act, 2007* ("*ESA*")), at para. 35 that:

> Given the fragile status of Blanding's turtle as a species, it would be difficult to characterize any increase in mortality arising from the Project as anything other than serious.

It also relied on the evidence of Dr. Fenton from the main hearing. He stated that the local little brown myotis population "will surely be seriously and irreversibly harmed by the development in the absence of robust amelioration actions". The Tribunal concluded at para. 205 of the October 2016 Order that:

> Given the vulnerability of this species and the likelihood that the Project will cause fatalities, the Tribunal finds that without adequate mitigation measures, the Project will cause serious harm to the local population of little brown myotis.

[64] At paras. 219-220, the Tribunal found that given the vulnerability of the local little brown myotis population, the fatalities resulting from the Project would impact the trajectory of the local population and decrease the population's chances of recovery over the lifespan of the Project. It found that this harm would be irreversible.

[65] In the October 2016 Order, the Tribunal reviewed the adequacy of the Project's mitigation measures under the REA and EEMP and compared them to those in *Amherst Island*, which included requirements for additional post-construction monitoring, precautionary blade rotation cut-out in low wind conditions, and increased curtailment if bat fatalities occur. In making its order, the Tribunal referred to Dr. Fenton's evidence on the importance of undertaking all possible mitigation measures to reduce harm to species at risk bats and that "[f]ailure to mitigate will effectively jeopardize the long-term survival of this species by causing local extirpation". Noting that the REA's mitigation measures were not preventive in nature and only after 10 bat fatalities of any species per turbine were determined would the REA's mitigation measures be triggered, the

Tribunal found at para. 210 that, on the balance of probabilities, the REA's threshold for triggering mitigation measures would not prevent the Project from causing serious harm to the local population of little brown myotis in the vicinity of the Project site.

[66] The Tribunal recognizes Ms. Richardson's work in recording and documenting little brown myotis calls and independently confirming their presence in the vicinity of the Project site. The Tribunal also recognizes that there are differences in landscape topography, bat habitat and little brown myotis presence at Amherst Island and the Project site. However, the Tribunal does not find that these differences make the general preventive features and other attributes of the mitigation measures adopted in *Amherst Island* inappropriate in the present case. The Tribunal notes that a significant feature of the Mitigation Plan is its focus on adaptive management. It includes strict requirements for further curtailment measures, behaviour studies and consultations in the event of any little brown myotis fatalities, which, if necessary, will allow for an evolving plan that addresses site-specific requirements to protect the local little brown myotis population at the Project site and in its vicinity. If there are little brown myotis fatalities at the Project site, the Mitigation Plan has mechanisms to address those issues.

[67] O. Reg. 242/08, adopted under the *ESA*, requires that "reasonable measures" to avoid mortality are mandatory if wind energy generation facilities are likely to affect species at risk bats. It does not specify details or minimum standards for curtailment. Under s. 23.20(11) of the Regulation, if species at risk bats are identified in an *ESA* notice of activity form as likely to be affected by a wind energy facility, actions must be taken to "minimize the adverse effects of the operation" on those bats. These steps include adjusting turbine blades, adjusting cut-in speed, and shutting down operations at high risk times. Further, if the mitigations steps are ineffective, the facility must take further actions to increase the effectiveness of those steps and take other steps to minimize the adverse effects on the species.

[68] The MNRF's *Bats and Bat Habitats: Guidelines for Wind Power Projects (*MNRF,

2011) (“MNRF Guidelines”) recommend raising wind turbine cut-in speeds to 5.5 m/s. In several past Tribunal decisions, the Tribunal has recommended or required the use of curtailment measures. In *Fata v. Ontario (Ministry of the Environment)*, [2014] O.E.R.T.D. No. 42, the Tribunal recommended a cut-in speed of 5.5 m/s for all turbines during peak little brown myotis activity periods until post-construction monitoring was completed and it was concluded that curtailment measures were no longer necessary. In *Amherst Island*, the Tribunal accepted that a mitigation requirement of feathering turbine blades when wind speeds are less than 3.0 m/s would address a significant portion of potential species at risk bat mortality. In *Hirsch*, the Tribunal required curtailment measures setting cut-in speeds at 5.5 m/s.

[69] Ms. Mainguy and Ms. Holroyd have expressed doubts regarding the findings in Gruver 2015 and some of the other literature on curtailment effectiveness, stating that these findings are often not substantiated with complete evidence. The Tribunal notes that some of the studies referred to by Dr. Reynolds appear to rely on incomplete data. However, there is a general finding across the literature that curtailment is effective in at least reducing mortalities by 50%. For example, E.B. Arnett, et al., “Altering Turbine Wind Speed Reduces Bat Fatalities at Wind-energy Facilities”, 9 *Frontiers in Ecology and the Environment* (2011) 209-214, found bat mortality reductions of 44-93% from using curtailment measures compared to controls. In Arnett 2013, the authors reviewed ten operational mitigation studies in North America and found that most reported bat mortality reductions of 50% or more from curtailment measures where cut-in speeds were increased above the manufacturer’s recommended cut-in speed by 1.5 m/s. J.W. Horn et al., “Behavioral Responses of Bats to Operating Wind Turbines”, 72(1) *Journal of Wildlife Management* (2008), 123-132 (“Horn 2008”) found at p. 2 that most of the studies that they reviewed “found at least a 50% reduction in bat fatalities when turbine cut-in speed … was increased by 1.5 m/s above the manufacturer’s cut-in speed”. R.E. Good, et al., *Bat Monitoring Studies at the Fowler Ridge Wind Farm, Benton County, Indiana: April 13 – October 15, 2010* (WEST Inc., January 28, 2011) found bat fatalities reductions of 50% with cut-in speeds of 5 m/s and 78% reductions with cut-in speeds of 6.5 m/s. Furthermore, as noted above, there is reliance on such measures in the *ESA*

regulations and the MNRF Guidelines, and the Tribunal, in previous cases, has accepted that curtailment measures are effective in reducing bat mortality. Therefore, the Tribunal finds that it is more likely than not that curtailment measures can be effective in reducing bat fatalities at wind energy projects.

[70] PCI submits that there is no reasonable basis for ending curtailment measures each night at midnight as envisioned in the Mitigation Plan, relying on the opinions of Ms. Holroyd and Ms. Mainguy in this regard. PCI further emphasizes that the *Amherst Island* mitigation strategy curtails operations from sunset to sunrise. On this point, Dr. Reynolds testified that the curtailment hours set in the Mitigation Plan aim to address the peak activity times of little brown myotis.

[71] Based on the evidence before it, the Tribunal finds that little brown myotis are most active on the landscape in the hours immediately after sunset and are at highest risk of collisions with wind turbines during those hours. However, the evidence also indicates that little brown myotis continue to be active and at risk of colliding with wind turbines until at least sunrise. Both Ms. Holroyd and Ms. Mainguy have expressed their expert opinions that, in light of this duration of bat activity, curtailment measures should be implemented from sunset to sunrise. Dr. Reynolds did not dispute this conclusion. He only testified that the curtailment hours set in the Mitigation Plan aim to address the *peak* activity times of little brown myotis. Consequently, the Tribunal accepts the opinions of Ms. Holroyd and Ms. Mainguy in this regard.

[72] Based on these findings, the Tribunal finds that the preponderance of the evidence indicates that the curtailment measures should be implemented from sunset to sunrise during the bats' active season.

[73] The Tribunal now turns to its consideration of whether the proposed Mitigation Plan will reduce fatalities such that it is in the public interest to amend the REA as proposed by the Approval Holder.

[74] PCI argues that the local little brown myotis population is larger than previously thought and that even with curtailment measures in place, significant numbers of bat mortalities will occur. Ms. Mainguy opined that, without qualitative information on roosting sites, feeding areas, travel routes, other areas of concentration, and population, it is not possible to develop an effective mitigation plan for the Project and the proposed remedy "would not be sufficient to ameliorate a high potential for serious and irreversible harm to local bat populations". She also opined that carcass searches to 60 metres from turbine bases would be inadequate to accurately estimate the true number of mortalities caused by the turbines.

[75] Summarizing his opinion, Dr. Reynolds stated at para. 23 of his affidavit sworn on January 6, 2017:

> Although the Fairview Project site is unremarkable in respect to bat foraging and roosting habitat, it is likely that there are some little brown myotis in the vicinity of the Project site. However, given the small size of the Project, the likely small population size of little brown myotis, and the general lack of myotine bat mortality at wind development sites throughout southern Ontario over the last three years, it is likely that few, if any, little brown myotis would be killed because of the construction or operation of the Project. On top of this low risk, the proposed Mitigation Plan contains preventive curtailment from the outset of operation that would lower this risk substantially, above and beyond the protection afforded by the REA. It is therefore my opinion that, if operated in accordance with the Mitigation Plan, the Fairview Wind Project site would not impact the conservation [or] recovery of the little brown myotis, and therefore would not pose serious or irreversible harm to any of the [species at risk] bat species in Ontario.

[76] Dr. Reynolds testified that his research showed that 21 wind projects in the United States and Canada had documented at least 95% of bat mortality within 50 m of the turbine base, even when searching out to 120 m, and the majority within 40 m. He stated that Bird Studies Canada 2016 reports that 72.4% of the bat carcasses that were found in Canada were within 35 m of turbine bases.

[77] Based on the evidence before it, the Tribunal finds that, over the life of the Project, the Mitigation Plan's proposed cut-in speed of 5.5 m/s is likely to significantly

reduce little brown myotis mortality compared with turbines where curtailment measures are not in place. The Tribunal finds that the Mitigation Plan's proposed search and response measures and adaptive management strategies will reduce the likelihood of serious harm to the species and there was no evidence produced that the measures in the Mitigation Plan will likely lead to adverse environmental impacts that were unanticipated and that require further study or review. However, as noted above, the Tribunal finds that the evidence does not support a conclusion that curtailment measures should be ceased at midnight.

[78] Based on the above analysis and findings, the Tribunal finds that the evidence demonstrates, on a balance of probabilities, that implementation of the Mitigation Plan, if amended to require the period of curtailment measures to be from sunset to sunrise during the bats' active season, is likely to significantly reduce little brown myotis mortality over the life of the Project. Therefore, it would be in the public interest to alter the REA to include the Mitigation Plan with an amendment requiring the period of curtailment measures to be from sunset to sunrise during the bats' active season.

[79] However, as the Tribunal has found, in regard to harm to human health, that the REA should be revoked, the Tribunal finds that an amendment to the REA to include the Mitigation Plan is rendered unnecessary.

DECISION

[80] Pursuant to s. 145.2.1(4)(a) of the *EPA*, the Tribunal revokes Renewable Energy Approval No. 3948-9RDLRF.

Renewable Energy Approval Revoked

"Dirk VanderBent"

DIRK VANDERBENT
VICE-CHAIR

"Hugh S. Wilkins"

HUGH S. WILKINS
MEMBER

Appendix 1 – Appellant List
Appendix 2 – Rulings on Admissibility of Evidence

If there is an attachment referred to in this document,
please visit www.elto.gov.on.ca to view the attachment in PDF format.

Appendix 1

Appellant List

Appellant Name	File No.
John Wiggins	16-036
Gail Elwood	16-037
Kevin Elwood	16-038
The Corporation of the County of Simcoe	16-039
Preserve Clearview Inc.	16-040
The Corporation of the Township of Clearview	16-041
The Town of Collingwood	16-042

Appendix 2

Rulings on Admissibility of Evidence

Admissibility of Ms. Mainguy's Evidence

In its written submissions made after the oral hearing of evidence, the Approval Holder submits that much of Ms. Mainguy's evidence is invalid and improper, arguing that it fails to comply with the Tribunal's scoping Orders dated December 12, 2016 and February 10, 2017 and includes new evidence. It argues that Ms. Mainguy's evidence on remedy, concerning the size of the local little brown myotis population in the vicinity of the Project site, challenges the Tribunal's findings in the October 2016 Order that, more likely than not, the local population is small. It argues that the Tribunal should strike as improper her testimony in this regard and her related testimony on the quality and availability of little brown myotis habitat in the vicinity of the Project site and on the level of bat activity at the Project site. The Approval Holder argues that PCI was obligated to seek the Tribunal's consent under Rule 233 of the Tribunal's *Rules of Practice* to introduce this new evidence before the issuance of the October 2016 Order and that it is now too late for such evidence to be admitted. In the alternative, the Approval Holder submits that if PCI did not exceed the time in which to raise new evidence, the evidence does not meet the requirements for admitting new evidence under Rule 234. It argues that new evidence must be material to the issues; must be credible and could affect the result of the hearing; and either was not in existence at the time of the hearing or, for reasons beyond the party's control, was not obtainable at the time of the hearing. It argues that PCI has not met these requirements. Further, it submits that PCI had an ongoing obligation to disclose all materials in its possession, power and control that may be relevant to an issue before the Tribunal, which, the Approval Holder alleges, PCI did not do.

The Approval Holder also argues that, by disclosing the results of Ms. Richardson's acoustic surveys at the remedy stage of the hearing, PCI is attempting to split its case. Referring to the Supreme Court of Canada's ruling in *R. v. Krause*, [1986] 2 S.C.R. 466,

the Approval Holder argues that PCI had an obligation to produce and enter all the clearly relevant evidence that it has or needs to rely on to establish its case during the main phase of the hearing. It argues that this ruling aims to ensure that a party fully discloses all of its information so that the responding parties have an opportunity to present full responses. It argues that PCI disclosed the acoustic survey evidence as an attempt to catch the Approval Holder and Director off guard. It argues that this is an improper and unjust tactic. It argues that, as a result, all references to the acoustic surveys in the evidence before the Tribunal should be struck. It submits that the results of the acoustic surveys could not have been made in response to Approval Holder's proposed remedies as the surveys were concluded prior to the October 2016 Order.

The Director supports the Approval Holder's arguments that Ms. Mainguy put forward new evidence on the size of the local little brown myotis population without meeting the requirements of Rule 233 or 234.

PCI argues that Ms. Mainguy's evidence is in response to the evidence produced by the Approval Holder and the Director and that it is not new evidence. PCI also argues that Ms. Mainguy's evidence does not challenge the findings of the Tribunal in the October 2016 Order. PCI argues that the Approval Holder and Director have had opportunities to reply to this evidence and there is no procedural unfairness or prejudice caused by its admission. It refers to the Tribunal's finding in *Hirsch v. Ontario*, [2016] O.E.R.T.D. No. 29 ("*Hirsch 2016*"), at para. 23, in which the Tribunal stated that "considering and ruling on matters relevant to an appropriate remedy do not amount to re-litigation of its findings". It argues that this does not constitute case-splitting as the Approval Holder had an opportunity to respond. It also argues that Ms. Mainguy's evidence conforms to the Tribunal's scoping orders in this proceeding, noting that the parties have been given an opportunity to produce evidence and make submissions on the appropriate remedy and are not solely restricted to responding to the Approval Holder's proposals on remedy. It argues that its evidence on habitat, population, and areas of little brown myotis population concentrations are directed at the issues of mitigation and remedy, distinguishing the present case from that in *Amherst Island*, and emphasizing the need

for baseline studies to determine whether there will be serious and irreversible harm. It submits that its evidence does not challenge the Tribunal's findings in the October 2016 Order.

Analysis and Findings on Admissibility of Ms. Mainguy's Evidence

The Tribunal notes that its findings in the October 2016 Order are final and that issues that were determined in that Order are not open to argument in the remedy hearing. However, as noted in *Hirsch 2016*, matters relevant to an appropriate remedy do not amount to re-litigation of the Tribunal's findings from the main phase of a hearing. When determining a remedy under s. 145.2.1(4), the Tribunal must determine whether an approval holder's proposed mitigation measures reduce the harm found by the Tribunal. This exercise requires the Tribunal to consider the effects of the proposed mitigation measures on the subject matter of the harm. Evidence brought before the Tribunal addressing how the proposed mitigation measures will impact the subject of the harm is generally relevant to an appropriate remedy. In most cases, it neither addresses an issue that has already been determined by the Tribunal nor constitutes new evidence.

The Tribunal finds that, in the present case, while there has been some overlap with the testimony she gave at the earlier hearing, Ms. Mainguy's evidence is in response to the Mitigation Plan and has not been interpreted by the Tribunal as challenging the Tribunal's earlier findings. Consequently, the Tribunal does not accept the Approval Holder's submission that Ms. Mainguy's evidence is invalid and improper.

Dr. Reynolds' Qualifications

COPA and the Elwoods submit that Dr. Reynolds breached his duties as an expert by exhibiting bias, demonstrating partiality, acting as an advocate and giving opinions on matters beyond his expertise. They argue that he should be disqualified as an expert witness and that his evidence should either be deemed inadmissible or given little or no

weight. They raise concerns regarding the following evidence found at paras. 8 and 9 of Dr. Reynolds' affidavit, sworn on January 6, 2017:

> … Since then, we have become more aware of the negative impacts of road (Russell et al., 2009), aircraft (Biondi et al., 2013), physical exclusions (Neilson and Fenton, 1994), and climate change (Frick, et al., 2010) on little brown myotis. Interestingly, data from the Federal Aviation Administration in the United States identified little brown myotis as the second most commonly killed bat species by private aircraft, with most incidents occurring during approach and takeoff, in close proximity to airfields (Biondi et al., 2013).
>
> Although individual little brown myotis are killed by wind turbines, roads and planes, entire colonies and regional subpopulations can be eliminated in a single action by a pest control operator or vandalism and disturbance in a hibernaculum….

They argue that these paragraphs demonstrate that Dr. Reynolds was giving expert evidence that little brown myotis are frequently killed by "private aircraft" operating near "airfields", which are the types of aircraft that use the aerodromes near the Project site. They submit that K.M. Biondi, et al., "Bat Incidents with U.S. Civil Aircraft", 15:1 *Acta Chiropterologica* (2013), 185-192 ("Biondi 2013"), which was cited by Dr. Reynolds, does not state that private aircraft operating from airfields are responsible for little brown myotis mortalities, but rather states that most bat incidents occur at certified airports. COPA and the Elwoods argue that Dr. Reynolds has tailored his evidence to further the Approval Holder's position and thereby acted as an advocate. They further argue that in addressing aviation issues, Dr. Reynolds provided expert evidence beyond his area of expertise.

The Approval Holder argues that the interpretation of Dr. Reynolds' witness statement by COPA and the Elwoods is taken out of context and that, although they had an opportunity to cross-examine Dr. Reynolds on these issues, they did not. The Approval Holder argues that, in any event, Dr. Reynolds explained the basis for these statements, stressing that they were not a comment on the fact that there are aerodromes in the vicinity of the Project site. The Approval Holder refers to Dr. Reynolds' statement under cross-examination in which he stated that "[m]y intent was to identify and make sure

that everyone was aware that this is not the only, and it's not the largest risk factor for this species". The Approval Holder further submits that it was open to COPA and the Elwoods to file responding evidence based on the scientific literature, but they did not do so. It argues that the attack by COPA and the Elwoods on Dr. Reynolds' credibility violates the rule in *Browne v. Dunn* (1893), 6 R. 67 (H.L.) that counsel must give notice and an opportunity to respond to those witnesses that they wish to impeach. The Approval Holder argues that the submissions of COPA and the Elwoods regarding Dr. Reynolds' credibility should be disregarded.

The Director supports the Approval Holder's position. He argues that the allegations impugning Dr. Reynolds' impartiality and competence are without foundation and do not meet the tests in *White Burgess Langille Inman v. Abbott and Haliburton Co.*, 2015 SCC 23, which states, at para. 36 (quoting *Mouvement laique Québécois v. Saguenay (City)*, [2015] 2 S.C.R. 3, at para. 106), that "[f]or expert testimony to be inadmissible, more than a simple appearance of bias is necessary". The Director argues that the expert's lack of independence must make him or her unable to provide an impartial opinion in the specific circumstances of the case. He argues that there is no evidence of bias on the part of Dr. Reynolds and that his references to "private aircrafts" and "airfields" were used by him not to imply that it is small aircraft at aerodromes that are killing most bats, but to emphasize that wind turbines are not the only or largest risk factor for little brown myotis.

The Director also submits that the Approval Holder was neither given proper notice of these allegations nor permitted an opportunity for Dr. Reynolds to respond. He argues that the approach taken by COPA and the Elwoods offends the rule in *Browne v. Dunn*.

The Director argues that Dr. Reynolds did not testify outside his area of expertise by citing the Biondi 2013 study on bats killed by aircraft. He argues that Dr. Reynolds is a bat expert and is in a position to given opinion evidence on the threats facing bats. He submits that if Dr. Reynolds improperly used aeronautics terminology, it does not mean that he moved outside his area of expertise. He further submits that these remarks are,

in any event, incidental and not pertinent to the Tribunal's consideration of the effectiveness of the Mitigation Plan.

Analysis and Findings on Dr. Reynolds' Qualifications

The Tribunal finds that Dr. Reynold's comments were made in the context of describing the causes of little brown myotis mortality other than from wind turbines. Moreover, this aspect of Dr. Reynold's evidence is only of limited relevance in this proceeding, as the substantive issue before the Tribunal is the potential for bat mortalities caused by exposure to wind turbines, not aircraft. As such, it is weighed accordingly. The Tribunal finds that this evidence does not indicate an appearance of bias. Therefore, the Tribunal denies COPA's and the Elwoods' request that Dr. Reynolds should be disqualified as an expert witness and that his evidence should deemed inadmissible.