5 Feb. 2026

British Columbia Energy Regulator
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Re: Comments on the Draft Proposal: Interim Guidance for Renewable Energy Permit Applications, and broader recommendations for sustaining migratory bat populations in the context of wind energy development

To whom it may concern:

We write as Wildlife Conservation Society (WCS) Canada bat conservation scientists with a combined 40 years of experience studying bat populations in western Canada. This letter is in follow-up to our January 8th meeting with representatives from BCER and the Ministry of Energy and Climate Solutions. It seeks to outline our core recommendations for the BCER and Ministry to consider in its regulatory policies and associated guidance. We focus specifically on the *Draft Proposal: Interim Guidance for Renewable Energy Permit Applications* ("interim guidance"). Our letter also comes on the back of a January 29th meeting of members of the BC Bat Action Team special wind energy working group to discuss proposed wind energy and bat guidance and reflects the outcomes of that discussion.

We are in the process of communicating to the Ministry of Water, Land and Resource Stewardship our concerns with the latest Best Management Practices for bats and wind energy (the BMP). While some reference is made to the BMP in the interim guidance, there is opportunity to ensure the final permit application guidance avoids the same problems as the BMP and supports appropriate measures for bats. It is with the goal of robust guidance for permitting of wind facilities under the BCER that we herein list our key recommendations, all of which were discussed in the 29 January BCBAT discussion.

RECOMMENDATIONS

Please see descriptions of each recommendation below this summary table.

Issue	Summarized Recommendations
Curtailment	1. Blanket curtailment of 8 m/s at night for the duration of the high bat risk period determined on a site-by-site basis. *Or in lieu of blanket curtailment:* 2. Wind energy facilities should be encouraged to use acoustically-informed (real-time bat detection) smart

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Issue	Summarized Recommendations
	curtailment to increase energy production while reducing bat fatalities.
Post-construction monitoring	3. High level of oversight is needed for fatality monitoring post-construction. 4. Immediate mitigation (increased curtailment) is required in response to fatalities, especially for *any* species-at-risk. 5. Continued acoustic monitoring is needed to inform population trend models. 6. Genetic identification of carcasses needs to be required on all permits.
Appropriately qualified bat professionals	7. Qualified Professionals working on wind energy monitoring/mitigation plans require appropriate bat-related expertise and this should be explicitly stated in te BCER guidance. 8. Some aspects of planning/mitigation should not be over-ruled by QP discretion.
Data-sharing	9. Standardized data collection is required and submission of all data for wide accessibility.

DETAILS OF RECOMMENDATIONS

<u>Curtailment</u>

10. *Recommendation 1:* Blanket curtailment of 8 m/s during high-risk periods determined on a site-by-site basis – *a conservation approach is needed for long-lived slow-reproducing mammals.*

Explanation:

In our 8 Jan. meeting with BCER representatives we discussed the recommendations of Michael Sullivan (AB Gov.) who modelled Alberta bat data to determine that curtailment of 12 m/s would be needed to recover hoary bat populations in Alberta. Multiple published sources indicate that 6 m/s still kills bats, reducing fatalities by 50-70%. If BC adopts 6 m/s as a recommended curtailment cut-in speed, there is the inherent expectation that bats will be killed, and that if particular species are killed in excess, that curtailment speeds will need to rise. We do not support this approach of killing bats as part of the process to refine site-specific curtailment speeds.

A conservation approach would have the curtailment speeds set higher to start of ~8 m/s as outlined by M. Sullivan for Alberta. Although this is based on Alberta data and not BC, it is our observation that Alberta has more robust population trend data upon which to base their models, compared to BC to date. We expect over time, BC models will be stronger for informing

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wind turbine siting and operations in the province anticipating that: more wind turbines will be built in different habitats and within different bat species ranges; permit criteria will strengthen to require more standardized data collection and submission of all forms of bat-related data (see below); oversight will strengthen to ensure post-construction monitoring is robust (see our Post-construction Monitoring recommendations below). While the expectation is that curtailment should start high (8 m/s), there will be incentive and allowance to quickly lower the cut-in speeds after the first season in response few nor no fatalities (especially of SAR species).

By taking this 8 m/s conservation approach, one is committing to killing few bats in the process of determining a suitable cut-in speed during high-risk periods. In our BCBAT team meeting (which includes members from eastern Canada, and those specializing in wind energy and migratory bats), we discussed that Alberta would not be in a position requiring 12 m/s curtailment speed to recover hoary bats, had they required basic curtailment over the past decade. High hoary bat fatalities have led to a significant population decline of hoary bats in BC (M. Sullivan, unpubl. data). We would like BC to learn from the Alberta experience, and realize that keeping bat fatalities low *now* ensures better energy generation into the future, and possibly high curtailment speeds may never be needed in BC if wind development facilities are properly regulated from the start.

To find site-specific sustainable operational cut-in thresholds while killing a minimal number of bats, a conservation approach needs to be taken, and postconstruction fatality monitoring and immediate mitigation response needs to be robust (see Postconstruction Fatality monitoring recommendations below).

- *Recommendation 2:* Wind energy companies should be encouraged to use acoustically-informed (real-time bat detection) smart curtailment to increase energy production while reducing bat fatalities.

Explanation:

The wind energy industry in BC is fortunate to be ramping up at a time when technologies such as SMART curtailment are available. If BCER was to require that wind energy companies use acoustically-informed (real-time bat detection) smart curtailment, it is likely that BC wind energy facilities could produce more energy and save just as many bats.

It is our understanding from our BCBAT discussion that the main barriers to widespread implementation of acoustic-driven smart curtailment are voiding of turbine warranties (manufacturers have no incentive to install these sensors as a standard turbine sensor so bat detectors are after-market installations) and frequent failure of the technology.

We believe that if enough jurisdictions required bat detectors for smart curtailment of turbines, these issues would be resolved, and more energy would be produced while saving bats. We also believe that if BC Hydro were to favour RFPs that proposed smart-curtailment, that may encourage manufacturers to include the ability to mount a bat detector as part of the initial build.

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Post-construction monitoring

- *Recommendation 3:* High level of oversight needed for fatality monitoring post-construction.

Explanation:

We cannot emphasize enough that monitoring is the key to ensuring bats are not killed excessively by wind turbines. As such, robust fatality search regimes are crucial. As an organization responsible for permitting, we wanted to ensure you are aware of the need for oversight regarding the fatality search process in BC – we were informed during our BCBAT meeting of observations indicating that this on-the-ground process is not always conducted/reported rigorously.

- *Recommendation 4:* Immediate mitigation (increased curtailment) required in response to fatalities, especially for *any* species-at-risk.

Explanation:

All provincially red- and blue-listed species are of concern – a species that is listed as a conservation concern is one that is unlikely to sustain continuous additional sources of mortality. As such, there needs to be additional mitigation at a wind energy facility that is killing SAR species. We strongly recommend that provincially red- and blue-listed species be included in the list of species that may require immediate mitigation action if killed. That these were not included in the draft guidance is surprising given the definition of High Priority Wildlife under the Environmental Protection and Management Guideline. While the Order in Council 585 seems to have changed this protection for bats, it is not completely clear what if any protection red- and blue-listed bats have at wind energy facilities under the interim guidance. We encourage this to be explicitly stated and suggest there should be indication that red- and blue- listed bat species are afforded protection (see our suggested tracked changes in the attached .doc).

If curtailment speeds are set on the low end of the continuum (ie. 6 m/s), fatality searches must be done as close to daily as possible during the main migration period, and adjustments to curtailment must be made immediately. Because many bats can die in the 3-year period outlined in the BMP, we strongly recommend that a different approach be required in permits. Curtailment adjustments need to be made immediately (this would most easily happen if acoustically-informed smart curtailment were to be implemented). Fatality thresholds need to be applicable annually, not a rolling average over 3 years.

- *Recommendation 5:* Continued acoustic monitoring is needed to inform population trend models.

Explanation:

Michael Sullivan has shown that regular acoustic monitoring paired with fatality rates, enables bat population sizes to be estimated and thus tracked. The longer post-construction monitoring is conducted, the more data that can be obtained that will benefit provincial management of wind energy to ensure we have both wind energy *and* bats into the future. We believe it is

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important to require each wind facility to continue this relatively low investment of monitoring *annually for the life of the facility*. Continuous acoustic monitoring data will be invaluable for population trend modelling over time, a necessary component of assessing cumulative impacts.

- *Recommendation 6:* Genetic identification of carcasses needs to be required on all permits.

Explanation:

Genetic identification of carcasses. This is critical, is easy and inexpensive. Because bats are not easily identified to species using morphological traits alone, permits need to require all carcasses be identified to species genetically. This is easily done through submission of a small tissue sample of each carcass – numerous labs offer genetic services specific to bat identification. A genetic test to determine sex would also be important for population modelling and determining cumulative effects: for example, most adult hoary bats in Canada are thought to be females, raising young (Cryan 2003). Ideally there would also be the carcass heads submitted to the Royal Alberta Museum, the bat tissue repository for Western Canada, as heads can also be used to establish age, and tissues can be archived for valuable research to advance scientific knowledge (see recommendation 9 below). This leaves bodies of carcasses for required scavenger and searcher efficiency trials.

Appropriately Qualified Professionals with Bat Experience

- *Recommendation 7:* Qualified Professionals working on wind energy monitoring/mitigation plans require appropriate bat-related expertise and this should be explicitly stated in the BCER guidance.

  Explanation:

  The background knowledge that is needed to make decisions for pre- and post-construction monitoring, turbine operations (e.g. smart-curtailment thresholds/algorithm values), habitat buffers, etc. requires someone with more than just an RPBio status. We had a brief discussion about this in our BCBAT meeting and many voiced a similar opinion. On the 4 Feb. 2026 monthly BCBAT meeting, an official working group was convened to develop guidance on this issue. This group has been tasked with developing guidance as to what defines 'bat expertise' to provide to appropriate other groups (e.g., College of Applied Biologists).

  In the interim, we believe it is important for the BCER final guidance to explicitly state that QPs are appropriately qualified (see tracked change suggestions in the attached Draft Guidance.doc).

- *Recommendation 8*: Some aspects of planning/mitigation should not be over-ruled by QP discretion.

  Explanation:

  Some aspects of planning and mitigation for wind energy facilities should required and not left to the discretion of a QP. Specifically, QPs should not be able to override requirements to: do acoustic monitoring preconstruction (minimum of one full year); monitor at least 1 km outside the proposed footprint; do acoustic monitoring post-construction, coinciding with fatality monitoring for at least 3 years; conduct post-construction fatality monitoring during high risk

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periods, based on when bats are active on a site-by-site basis; submit all carcass samples for genetic confirmation; lower cut-in speeds if there are SAR bat fatalities; negotiate/plan offsets solely (must engage other bat experts).

With regards to the latter point, there are situations where more than one QP is required to proceed: we believe this is the case with determining offsets. There is precedence in BC (e.g., Site C compensation for bats) for offsets being determined for bats by a team of bat experts, and this should be upheld.

Standardized and Required Data Sharing

- *Recommendation 9:* Standardized data collection is required and submission of all data for wide accessibility.

  Explanation:

  As mentioned in earlier correspondence, and confirmed by BCBAT as a crucial component of permitting in BC, is the need to have robust and accessible data to fill knowledge gaps about bat populations in BC. Management of bat populations depends on data to underpin estimates and thresholds. These data currently do not exist, and in part explain discrepancies in the BMP thresholds versus what others think is appropriate.

  As migratory bats are COSEWIC-assessed as endangered, and elsewhere there are data to support the decline of these species, it is important that BC permitting require of permittees to submit their data to enable science-based management of these SAR. These data include, but are not limited to, all raw and summarized acoustics data, and genetically-confirmed (species and sex) fatality records.

  At minimum, submission should be as follows: raw and analyzed acoustics data to the North by Northwest North American Bat Monitoring Hub; summarized acoustics data to BC's Species Inventory database ("SPI"); carcasses and genetic samples (heads/tissues of each carcass) to Royal Alberta Museum (bat tissue repository for western Canada); capture data and genetic confirmation of carcasses and captures to BC's Species Inventory database ("SPI"). Permits should require that standards are followed as outlined in BC's Inventory Methods for Bats.

COMMENDATIONS

We'd like to commend the BCER on some progressive points in the interim guidance that provision conservation for bats. These points to retain are outlined in the table below, in some cases with our suggestions for how to further strengthen.

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Interim Guidance – Effective element to retain	**Commendation and *<u>further suggested improvements</u>***
1. Minimum 1-year pre-construction bat monitoring	Pre-construction acoustic monitoring will be critical for identifying the 'active periods' for bats at each site, and obtaining baseline data needed for trend assessments post-construction. Pre-construction monitoring can inform siting of turbines and has tremendous value for informing population trend models, facilitating impact assessments, and refining fatality thresholds. One-year is a ***minimum*** amount of monitoring, knowing that bat activity patterns can vary annually. <u>It is to the benefit of the wind energy company, and sustainable renewable electricity in BC, to conduct as much pre-construction monitoring</u> (in and outside the proposed footprint) as possible. Although some active periods are identified in the Bats and Wind BMP, we hope that the BCER will recognize that this can vary *widely* by site, and <u>pre-construction acoustic monitoring will be critical for identifying the 'active periods' for bats at each site.</u> For example, there is now ample evidence to show that several species of bats, including the COSEWIC-Endangered Silver-haired Bat, are active *year-round* in many regions of BC.
2. Immediate notification in the event of a fatality or injury of a SARA Schedule 1 listed species	Endangered species are unlikely to support an allowable take if population recovery is the goal (e.g., Frick et al. 2026).
3. Inclusion of Hoary Bats specifically in the 'Post-Permit Monitoring Measures' list	Requiring notification to BCER when a hoary bat is killed is important as this species is COSEWIC-assessed as Endangered, but is currently not yet officially SARA-listed, and this designation make take time.
4. Inclusion of locally-significant species the 'Post-Permit Monitoring Measures' list	This provision provides the opportunity to include other COSEWIC-endangered bats such as the silver-haired bat, which is active year-round in many places of southern and coastal BC. We strongly recommend that High Priority Species (Provincially red- and blue-listed species) also be included in the 'Post-Permit Monitoring Measures' list.

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CLOSING REMARKS

We thank BCER and the Ministry of Energy and Climate Solutions for engaging in discussions about bat conservation, and we appreciate this opportunity to advise on how wind energy can operate in BC in a way that will sustain the industry *and* bats.

In addition to the above comments, we have also enclosed a 'tracked changes' version of the Draft Guidance, that may assist in making some of the changes we recommend, and comments within clarify or provide context for some of our suggested edits. Last month we also submitted our 8 Jan. slide-deck directly to BCER representatives who were in attendance our meeting, as a resource for recommendations that we made verbally during that call. We hope that these three resources will be helpful in finalizing guidance and regulations for renewable energy permit applications.

We look forward to assisting further in this process, and welcome the opportunity to participate in a potential Bat Research Consortium.

Sincerely,

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