



BER Hand Hills Wind GP Inc.

Amendment to the Hand Hills Wind Project

December 17, 2020

Alberta Utilities Commission

Decision 22843-D04-2020

BER Hand Hills Wind GP Inc.

Amendment to the Hand Hills Wind Project

Proceeding 22843

Application 22843-A001

December 17, 2020

Published by the:

Alberta Utilities Commission

Eau Claire Tower

1400, 600 Third Avenue S.W.

Calgary, Alberta T2P 0G5

Telephone: 310-4AUC (310-4282) in Alberta

1-833-511-4AUC (1-833-511-4282) outside Alberta

Email: info@auc.ab.ca

Website: www.auc.ab.ca

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1 Decision summary

1. In this decision, the Alberta Utilities Commission approves an application from BER Hand Hills Wind GP Inc. for amendments to a previously approved but not yet constructed wind power project designated as the Hand Hills Wind Project.

2 Application and interveners

2. BER Hand Hills, pursuant to Approval 22843-D02-2018¹ and Permit and Licence 22843-D03-2018,² has approval to construct and operate the Hand Hills Wind Power Plant and the Highland 572S Substation (collectively, the Hand Hills Wind Project or the project) in the Delia, Alberta area.

3. BER Hand Hills applied to the Commission for approval to amend the turbine technology, as well as the number and locations of turbines, used for the project. Specifically, BER Hand Hills seeks to construct 29 Siemens-Gamesa 4.5-145 wind turbines each with a capability of 4.5 megawatts (MW) for a total capability of 130 MW. BER Hand Hills also requested approval to amend certain specifications of the substation.

4. The Commission provided notice of the application in accordance with Rule 001: *Rules of Practice* and received statements of intent to participate from Jo-Lynn Melin and Kelly Fitzpatrick. These individuals were granted standing, and were joined by Doug Greer in co-ordinating their participation in the proceeding as the Hand Hills Landowner Group (HHLG). The HHLG requested that the Commission deny the application or alternatively impose a number of conditions on the amended project.

5. A public hearing to consider the amendment application was held from September 17, 2020, to September 18, 2020, over videoconference.

2.1 Background and amendment application details

6. The Hand Hills Wind Project was originally approved in 2012. Ownership of the project was later transferred from Joss Wind Power Inc. to 1712610 Alberta Ltd. (BluEarth). The power plant was previously approved³ to consist of 34 Siemens SWT-2.3-101, 2.3-MW wind turbines. BluEarth filed an amendment application in 2017 but transferred ownership of the project to

¹ Power Plant Approval 22843-D02-2018, Proceeding 22843, Application 22843-A002, June 21, 2018.

² Substation Permit and Licence 22843-D03-2018, Proceeding 22843, Application 22843-A003, June 21, 2018.

³ Power Plant Approval U2014-187, Proceeding 3188, Application 1610497, May 13, 2014. The power plant was originally approved on August 31, 2012 to be owned by Joss Wind Power Inc. pursuant to Approval U2012-416, Proceeding 302, Application 1605455. Ownership was transferred to 1712610 Alberta Ltd (BluEarth) pursuant to Approval U2013-22, Proceeding 2265, Application 1609057, January 14, 2013.

BER Hand Hills in 2018. BER Hand Hills updated the amendment application on numerous occasions, with the last update being filed in April 2020.

7. BER Hand Hills provided a table that compared the approved project and the proposed amendment:

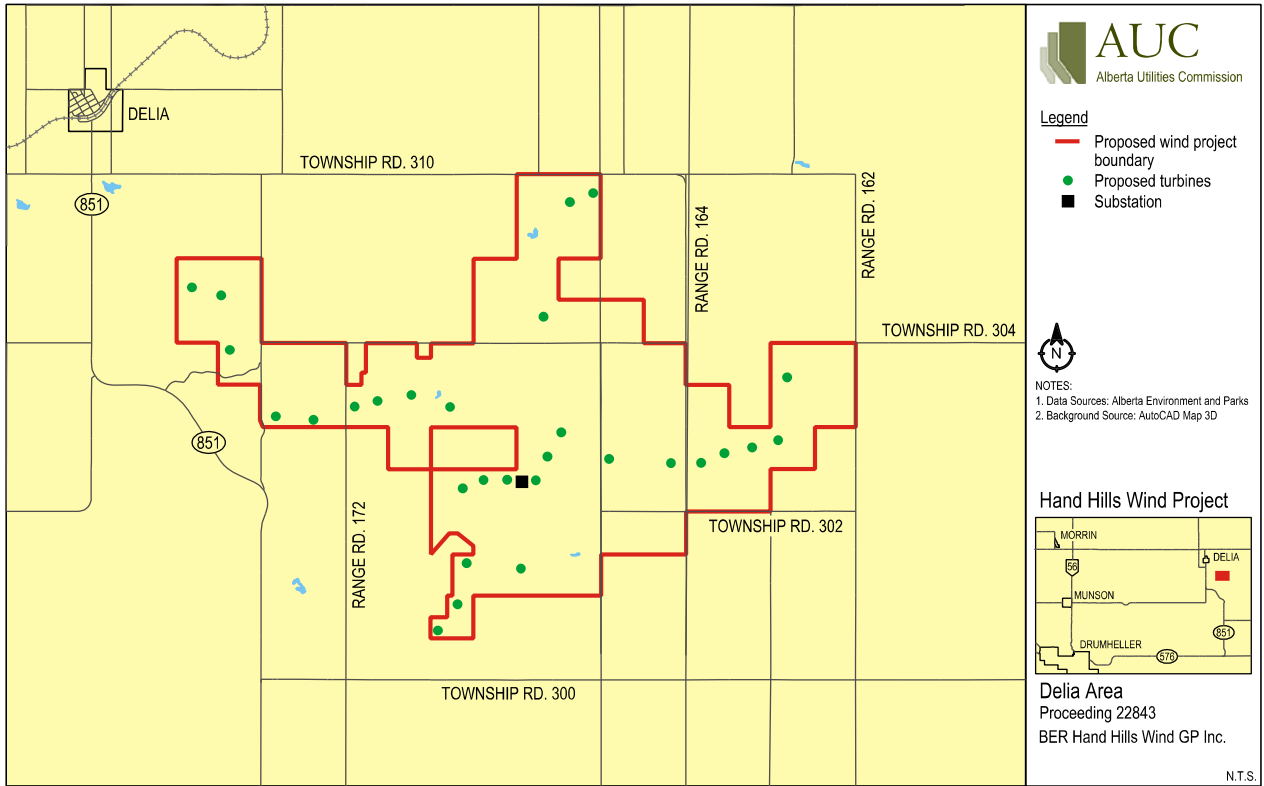
Table 1. Summary of proposed changes⁴

| Project details | Approved project | Amended project |
|--|--|--|
| Number of wind turbines | 34 | 29 |
| Turbine make and model | Siemens SWT 2.3-101 | Siemens-Gamesa 4.5-145 |
| Individual turbine generation capacity | 2.3 MW | 4.5 MW |
| Total power plant generation capacity | 78.2 MW | 130 MW |
| Turbine hub height | 80 metres | 107.5 metres |
| Turbine rotor diameter | 101 metres | 145 metres |
| Total turbine height with blade | 130.5 metres | 180 metres |
| Total length of access roads | 21,131 metres | 19,819 metres |
| Total length of collector system | 33,158 metres | 32,862 metres |
| Project area | ~8,000 acres | ~12,000 acres |
| Type of interconnection | Transmission 34.5 kilovolt (kV) to 240 kV | Transmission 34.5 kV to 144 kV |
| Substation transformer specifications | One 240/34.5-kV, 60/80/100-megavolt ampere (MVA) transformer | One 144/34.5-kV, 100/120/140-MVA transformer |

8. The project would be located on private land in Starland County and Special Areas No. 2 near Delia as shown on the following map.

⁴ Extracted from Table 1 - Summary of Proposed Changes from Exhibit 22843-X0080.01, PDF page 9, April 14, 2020.

Figure 1. Proposed Hand Hills Wind Project turbine locations and boundary



9. BER Hand Hills stated that the majority of the proposed wind turbines are within 50 metres of the approved turbine locations.

10. BER Hand Hills' amendment application included:

- A noise impact assessment conducted by RWDI in accordance with Rule 012: *Noise Control*
- A shadow flicker analysis conducted by Green Cat Renewables Canada Corporation
- An environmental evaluation of change prepared by Hemmera Envirochem Inc.
- A renewable energy referral report from Alberta Environment and Parks (AEP) Wildlife Management
- A letter of non-objection from NAV Canada

11. BER Hand Hills also requested that the equipment specified in the substation permit and licence be altered as the Alberta Electric System Operator (AESO) had confirmed that the interconnection would be at 144 kV instead of the previously planned 240 kV.

12. BER Hand Hills requested that the Commission approve the following major substation equipment although it noted that the design was contingent on studies being conducted by the AESO:

- one 144/34.5-kV, 100/120/140-MVA transformer
- one 144-kV circuit breaker
- eight 34.5-kV circuit breakers
- capacitor banks (sizing to be updated per latest design)
- an enclosure surrounded by a chain-link fence and other substation equipment

13. During the hearing, Gordon Verok of BER Hand Hills indicated that the interconnection was presently in Stage 2 of the AESO's interconnection process and that it was anticipated that the Commission would receive the interconnection application in mid-2021.

14. BER Hand Hills requested that the Commission approve a December 31, 2022, construction completion date for the project with an anticipated construction commencement date of April 1, 2022.

15. Given the various iterations of the amendment application, BER Hand Hills conducted multiple participant involvement programs which most recently included providing all occupants, residents and landowners within 2,000 metres of the project site boundary with a project update letter during January of 2020 and ongoing consultation with stakeholders up until February 2020.

2.2 Interveners

16. The HHLG consists of Jo-Lynn Melin as well as Kelly Fitzpatrick and Doug Greer, each of whom owns land and resides in proximity to the project. Their land locations are as follows:

Table 2. HHLG members land locations

| Intervener | Legal land description |
|----------------------------------|---|
| Jo-Lynn Melin | Northeast quarter of Section 23, Township 30, Range 17, west of the Fourth Meridian |
| Kelly Fitzpatrick and Doug Greer | Southeast quarter of Section 3, Township 31, Range 17, west of the Fourth Meridian North half of Section 6, Township 31, Range 16, west of the Fourth Meridian South half of Section 12, Township 31, Range 17, west of the Fourth Meridian |

17. The HHLG submitted that the amendment is not in the public interest when assessed against the adverse impacts. The HHLG identified the following impacts of the project:

- residential and social impacts
- noise sound and vibration impacts
- human and animal health impacts
- environmental impacts
- project construction, operation and reclamation impacts
- property value impacts

18. In addition to landowner submissions provided by its members, the HHLG also provided the following evidence:

- an ambient sound survey prepared by FDI Acoustics Inc.
- a noise impact assessment review conducted by FDI Acoustics Inc.
- an assessment of potential environmental effects prepared by Cottonwood Consultants Ltd.

3 Commission's consideration of the application

19. In accordance with Section 17 of the *Alberta Utilities Commission Act*, the Commission must assess the social, economic, environmental and other effects of the project, as amended, when deciding if its approval is in the public interest.

20. In applications such as this one, where the applicant seeks to amend its previously approved project, the Commission's public interest consideration focuses on the incremental effects associated with the proposed amendments. An amendment application does not re-open consideration of the project as a whole. Accordingly, in this proceeding, the Commission must consider any incremental effects resulting from the change in turbine model and locations, and corresponding changes to the project layout, collector system and access roads, as well as changes to the substation.

21. The Commission considers that the public interest will be largely met if an application complies with existing regulatory standards, and the project's public benefits outweigh its negative impacts.⁵ The Commission must take into account the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act*⁶ and determine whether an applicant has met the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments* and Rule 012: *Noise Control*. In

⁵ EUB Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation 490-MW Coal-Fired Power Plant, Application No. 2001173, December 21, 2001, page 4.

⁶ *Hydro and Electric Energy Act*, RSA 2000 c H-16, ss 2, 3.

addition, an applicant must obtain all approvals required by other applicable provincial or federal legislation.

22. Based on the concerns expressed by the interveners and the Commission's review of the proceeding record, the Commission considers the material issues raised in this proceeding to be:

- environmental impacts
- noise impacts
- visual impacts, including shadow flicker and lighting
- property impacts
- health impacts

23. Each of the above issues is addressed in a separate section of the decision.

24. Additional issues raised in the proceeding include cultural and heritage impacts, and project construction, operation and reclamation impacts. The Commission addresses these issues in the section titled additional issues.

3.1 Environmental impacts

25. In support of its application, BER Hand Hills provided an environmental evaluation of change document prepared by Michael Sveen and reviewed by Mike Peckford of Hemmera Envirochem Inc. that assessed the potential environmental effects of the proposed amendments including the change in turbine technology. Mr. Peckford also provided an expert report as part of BER Hand Hills' reply evidence.

26. BER Hand Hills' environmental evidence noted that of the 29 proposed turbines, 23 locations remain within 50 metres of the previously approved 34 locations. Six turbine locations that were previously permitted on native grassland have been reduced to three as a result of the reduction of turbines.

27. BER Hand Hills also submitted a renewable energy referral report by AEP Wildlife Management (AEP). The referral report indicated that the project poses a moderate overall risk to wildlife and wildlife habitat based on project siting, wildlife use in the area, the presence of sensitive and at-risk species and the commitments made by BER Hand Hills to mitigate and monitor wildlife impacts. However, given the abundance of sensitive wildlife features being impacted, the risk to wildlife features was assessed as moderate to high by AEP.

28. BER Hand Hills committed to keeping wildlife surveys current by completing site-specific wildlife surveys every two years until the project is commissioned as per Standard 100.2.3 of the *Wildlife Directive for Alberta Wind Energy Projects (Directive)*. If additional nests or wildlife features are identified during these surveys, a mitigation plan would be developed in consultation with AEP to meet the requirements outlined in the *Directive*.

29. BER Hand Hills sited all infrastructure at least 1,000 metres from all large water bodies and the project has been sited to avoid all intermittent, small and large permanent watercourses.

Project infrastructure including turbines, laydown yards and temporary workspaces would be sited to avoid impacts to wetlands with the exception of two wetland disturbances where collector lines and access roads would be within the minimum setback. To reduce the disturbance to these wetlands, BER Hand Hills committed to conducting construction under dry or frozen ground conditions, the use of low ground pressure equipment, rig matting and the implementation of erosion and sediment control.

30. BER Hand Hills submitted that a qualified wildlife biologist would be on site if construction activities occur within 100 metres of Class 3 to 5 wetlands. If sensitive amphibians are found prior to or during construction, work would be stopped and BER Hand Hills would implement mitigation measures in consultation with AEP. With the implementation of the proposed mitigations, AEP stated that the project would adequately protect wildlife using these wetlands and that the project aligns with the *Directive*.

31. Fall acoustic bat migration surveys were conducted following AEP survey protocols and requirements within AEP policy. An average of 3.35 bat passes per detector night and 2.92 migratory bat passes per detector night were identified during the surveys. AEP determined that bat mortality risk was high based on an average activity level of more than two migratory bat passes per detector night. AEP noted that BER Hand Hills has committed to implementing the required mitigations to reduce the overall risk of bat mortality to moderate including committing to three years of post-construction monitoring which is consistent with the *Directive*.

32. To reduce disturbance to breeding birds, AEP requires that construction on native grassland occur outside of the restricted activity period (April 1st to July 15th). If construction activities are scheduled within the breeding bird period, AEP submitted that it must be consulted with to determine appropriate alternative mitigation measures.

33. Two active avian wildlife features with associated setbacks were found within the project area. These included a barn swallow colony and a horned grebe breeding pond. All project infrastructure would be sited outside of the 100-metre setback of the barn swallow colony, however, an underground collector line would be sited within the 1,000-metre setback of the breeding pond. To reduce impacts to the nesting grebes, BER Hand Hills stated that project activities within the setback would be scheduled outside of the breeding bird period and a qualified wildlife biologist would confirm if the horned grebe nest was active prior to construction. BER Hand Hills committed to the use of markers on guy wires of permanent communication or meteorological towers to reduce the potential for bird collisions.

34. Seven active raptor nests were found during surveys. These included one ferruginous hawk nest, three red-tailed hawk nests, one great horned owl nest, and two Swainson's hawk nests. Project infrastructure was sited outside of all setbacks with the exception of one red-tailed hawk nest which would have an underground collector line and access road sited within 34 metres of the nest. To mitigate potential effects, BER Hand Hills committed to conducting construction activities within 100 metres of the nest outside of the restricted activity period and to have a qualified wildlife biologist confirm whether the nest is active prior to the start of construction.

35. Sharp-tailed grouse surveys conducted in 2019 identified five active sharp-tailed grouse leks with three of these leks having project infrastructure sited within the leks' 500-metre

setback. To mitigate the potential effects to sharp-tailed grouse leks, the AEP referral report stated that BER Hand Hills committed to implementing the following mitigation measures:

- Construction activities within 500 metres of active leks would be scheduled outside of the sharp-tailed grouse lekking period (one hour before sunrise to three hours after sunrise) and during lekking season (i.e., March 15th to May 15th).
- Prior to commencement of construction, a qualified wildlife biologist would confirm if the leks are active.
- All poles of the overhead collector line within 500 metres would be installed with perch deterrents to prevent raptor perching.

36. The referral report indicated that the project siting would not align with the *Directive* given the number of leks being impacted. AEP considered the risk to sharp-tailed grouse to be high given the amount of disturbance within the three lek setbacks and the mitigation measures proposed by BER Hand Hills.

37. In response to information requests regarding the risk to sharp-tailed grouse, BER Hand Hills stated that it would implement the following additional mitigation measures:

- The monitoring of sharp-tailed grouse leks, as proposed during the first three years of operation, would also be completed during the construction.
- When construction activities occur within 500 metres of sharp-tailed grouse leks between three hours after sunrise and sunset during the lekking season (i.e., March 15th to May 15th), a qualified and experienced wildlife biologist would monitor the leks. The experienced wildlife biologist would have the authority to stop work if the leks were found to be active and their behaviour appears to be impacted by construction.
- Unless required for emergency or safety reasons, operational activities would not occur within 500 metres of the leks between one hour before sunrise and 10 a.m. during the lekking period (i.e., March 15th to May 15th).
- Where possible, locked gates would be in place to restrict public access to permanent infrastructure (i.e., roads and turbines) within 500 metres of the sharp-tailed grouse leks.

38. BER Hand Hills indicated that a memo outlining these additional mitigation measures to reduce the potential impacts to sharp-tailed grouse was submitted to AEP for review on June 26, 2020. In response to the memo, AEP stated that while it is supportive of the additional mitigation measures, the risk to sharp-tailed grouse would remain high.⁷

⁷ Exhibit 22843-X0113.01, Email from AEP re update on Hand Hills Wind Project and sharp-tailed grouse.

39. BER Hand Hills also clarified to AEP its commitment made regarding construction activities between March 15th and to May 15th:

- From one hour before sunrise to three hours after sunrise no work would occur within the 500-metre setback. (original mitigation)
- From three hours after sunrise until sunset, if any work occurs within the setback there would be a monitor on site with stop work authority. (additional mitigation)⁸

40. These commitments were different than the commitments that BER Hand Hills made in an earlier environmental report for a previous iteration of the project with respect to leks:

As the Project infrastructure placement has been approved (AUC 2012), HHWLP is proposing to construct within 500 [metres] of LEK4 (plus blade length) and LEK2 only outside of the sharp-tailed grouse lekking season (March 15 to May 15)⁹

41. The HHLG retained Cliff Wallis of Cottonwood Consultants Ltd., a professional biologist, to provide evidence regarding the environmental and biodiversity impacts of the project. Mr. Wallis noted that the project is located in the Northern Fescue Natural Subregion of the Grassland Natural Region in the Northern Great Plains that is considered endangered due to loss of much of the native habitat in the subregion. He stated that some portions of the project area are environmentally sensitive areas at a provincial and regional significance level including endangered northern fescue grassland. Mr. Wallis emphasized the importance of native grassland to wildlife especially wildlife and endangered bird species that rely on the habitat provided by the native grassland for their sustenance.

42. Mr. Wallis explained that though the project's footprint would be reduced with the proposed amendment, the impact on species such as birds and bats using native grasslands and riparian habitats would increase as a result of new project components sited within prescribed setbacks or in proximity to wetlands, valley and coulee breaks. Mr. Wallis argued that siting turbines and associated infrastructure adjacent to native grasslands and within prescribed setbacks or within proximity to wetlands and coulee/valley breaks would be ineffective in reducing disturbances to wildlife which use native grasslands as habitat.

43. The HHLG argued that the increased height of the turbines combined with their proximity to biologically important native habitats and environmentally sensitive areas, native fescue grassland and along valley edges contravenes the spirit and the letter of the guidance from the AEP's standards and best management practices.

44. The parties disagreed regarding the degree to which the amended project would infringe on coulee habitat. Mr. Peckford referred to AEP's definition of a coulee, as set out in the *Directive*, which states that a coulee is "a dry stream valley, especially a long steep-sided ravine, that once carried melt water from a glacier." The HHLG submitted that BER Hand Hills' interpretation of this definition was too restrictive and would not comply with the principles of statutory interpretation. The HHLG argued that Mr. Peckford erred by focusing his identification

⁸ Exhibit 22843-X0109, Attachment 1 – Email correspondence with AEP RE update on Hand Hills Wind, last dated June 26, 2020.

⁹ Exhibit 22843-X0068, Attachment 3 - Hand Hills Preconstruction Environmental Report_May2018, PDF page 86, February 8, 2019.

of a coulee habitat on areas having a “long steep-sided ravine” instead of including areas that contain “a dry stream valley.”

45. The HHLG submitted that, in considering whether any of the new turbines fall within the setback distance of 172.5 metres for coulees, a broader interpretation of the AEP definition must be used. It submitted that a more appropriate interpretation of a coulee includes a dry stream valley and a long steep-sided ravine and that focusing only on the long steep-sided ravine component of the definition is restrictive, and discounts habitat that should have been avoided. This discounting resulted in the minimization or mischaracterization of impacts, which limited the review done by AEP in providing the referral report.¹⁰

46. The HHLG argued that the project’s impacts on sharp-tailed grouse are not acceptable given the proposed mitigation by BER Hand Hills. Mr. Wallis indicated in his evidence and in oral testimony, that the *Directive* established standards in relation to wildlife conservation requirements that must be adhered to and noted that “Standards” which are preceded by “100” must be met in the planning and development of a wind energy facility. Standard 100.2.9 states that wind turbines and associated infrastructure must not be constructed within the identified setback of a species at risk or sensitive species. In his evidence, Mr. Wallis submitted that BER Hand Hills’ commitment regarding construction within active lek setbacks during lekking season appeared to be less stringent than the requirements set out in the referral report.¹¹ The HHLG submitted that non-compliance with the *Directive* standards is grounds for denial of the project. If the setbacks are not honoured, and the project approved, the HHLG requested the following environmental conditions of approval:

- New turbines should be relocated to avoid coulee/valley breaks and avoid new intrusion into native grassland.
- The Commission should not approve the new turbines D4 and D6 given their locations on valley breaks (Bullpound Creek) as well as the access road and underground collector that will be required within the prescribed wetland setback across native grassland and within a defined environmentally significant area of regional significance (Bullpound Creek).
- Project facilities that lie in native habitat in areas ranked as “high risk” in the wildlife habitat sensitivity mapping or as environmentally significant at regional or provincial levels of significance should not be approved, including new underground collector and access road north of Turbine D5 towards new Turbine D6.
- New Turbine B2 and associated new access roads to turbines B1 and B2 should not be part of the approval--both the new Turbine B2 and portions of the associated new access roads to the new Turbine B2 as well as to the previously approved Turbine B1 do not comply with the mandatory minimum 500-metre setback requirement for sharp-tailed grouse.
- If mandatory setbacks are not honoured, a condition of the project should be that, within the prescribed 500-metre setback for sharp-tailed grouse, construction activity must not

¹⁰ Exhibit 22843-X0176, 2020 09 24 HHLG Written Argument, pdf page 28, September 24, 2020.

¹¹ Exhibit 22843-X0138, E - Evidence of Cliff Wallis, pdf page 49, August 14, 2020.

occur during the peak lekking season and grassland bird breeding season from March 15th to July 15th. During other times of the year, when grouse may be lekking in the fall, construction activity can only occur outside of the peak daily lekking period (one hour before sunrise to three hours after sunrise).

- All mortalities must be reported annually, and high mortality rates must be reported immediately.
- Mortality reporting must be made public by filing it with the Commission and AEP's and publishing it on BER Hand Hills' website.
- Environmental monitoring and reporting should continue for the lifespan of the project.

47. In reply, BER Hand Hills stated that the *Directive* specifically contemplates and offers a process for situations where a proposed project does not meet a standard as outlined by AEP. In those cases, an applicant must identify the compliance issue, provide a justifying site specific constraint and propose alternative mitigation to AEP. AEP would then consider the issue and the proposed mitigation and issue its opinion in the referral report. BER Hand Hills stated that this process had been followed for the project as amended.

48. BER Hand Hills noted that the Commission has previously approved projects that did not meet compliance with environmental standards:

This process of justification and mitigation of non-compliance with environmental standards, especially setbacks, has also been accepted by the Commission as serving the public interest. In Decision 22546-D01-2019, the Commission approved project infrastructure in the Stirling Wind Project that failed to comply with the 100 m setback for wetlands created by Standard 100.2.7 in the Wildlife Directive. In doing so, the Commission considered that the infringement was "acceptable to AEP, given the project's proposed alternative mitigation and overall avoidance of wetlands" as well as the comprehensive evidence submitted by the project proponent "in respect of the project's effects on wetlands and the mitigation measures proposed."¹²

49. With respect to the definition of coulees, BER Hand Hills submitted that many of the coulee or valley breaks identified by Mr. Wallis do not actually merit setbacks according to the *Directive* and other applicable provincial guidance, acts, and regulations. BER Hand Hills noted that as per the *Directive*, coulee and valley break setbacks are set from the break in topography, not the edge of the habitat (i.e., ground cover), and that Mr. Peckford and his team undertook a rigorous examination of topography to determine where the breaks in topography are and what infrastructure is within setbacks applied to those breaks. BER Hand Hills stated that one cause of disagreement over which project infrastructure would fall within a setback is that the HHLG continues to refer to habitat edge as requiring a setback, when it is the break in topography which requires the setback.

50. BER Hand Hills noted that all of the project's turbines that were not within 50 metres of an originally approved location would be located on cultivated cropland or tame pasture. As a result, where there are coulees or valleys near the proposed turbine locations, these coulees and

¹² Exhibit 22843-X0180, BER Hand Hills Wind GP Inc. Reply Argument, PDF page 6, paragraph 14, October 1, 2020.

valleys are already subject to disturbances from agricultural activities. BER Hand Hills submitted that the incremental turbines would not increase the overall level of potential environmental impacts on any coulees or valleys near the proposed turbines.

51. During the hearing, Commission counsel asked both panels for BER Hand Hills and the HHLG to quantify or explain the difference in environmental impacts between the existing approval compared to the proposed amendment. Mr. Peckford referred to the reduction in native grassland impacts while also noting that new sharp-tailed grouse leks had been identified since the issuance of the existing approval. Mr. Wallis stated that “I’m not sure I could say one is preferable, but I think you’ve traded one set of impacts by moving from those native grasslands into areas that are potentially good summer resident bat habitat.”¹³

3.1.1 Commission findings

52. As a preliminary matter, the Commission notes that the parties expressed differing views about which linear project infrastructure, including collector lines and access roads, should be considered by the Commission in determining whether the project, as amended, is in the public interest. BER Hand Hills submitted that only those pieces of amended project infrastructure, or changes to approved project infrastructure, which result in increased negative impacts should be considered by the Commission in making a determination on the amendment application.

53. BER Hand Hills noted that the original project approval required the applicant to further delineate and minimize disturbance of native grassland during construction and operation of the project. Accordingly, BER Hand Hills submitted that changes to linear infrastructure which minimize impacts to native grassland should not be considered in the determination of this amendment application. Similarly, BER Hand Hills submitted that changes to the approved project that align with the *Directive* direction to locate activities within existing clearings should not be treated as incremental changes falling within the scope of an amendment proceeding.

54. The HHLG disagreed, arguing that any assessment of the incremental impacts of the amended project must take into consideration the overall impacts of relocated infrastructure in its new location.

55. The Commission maintains its view that an amendment application is not an opportunity to re-visit an existing approval. However, where an applicant pursues changes to a project that require an amendment application to be filed, the Commission must assess the amended project, in its entirety, to determine how its impacts compare to those of the approved project. In any electric facility project, infrastructure siting choices are made to balance a variety of competing interests. The fact that approved infrastructure is relocated in a manner that reduces or minimizes its impacts to native grassland does not exempt the relocated infrastructure from a fulsome consideration of its impacts on other components of the environment. Accordingly, the Commission has not excluded any project infrastructure from its consideration of this application.

56. The Commission agrees with Mr. Wallis’ statement that “Standards” of the *Directive* that are preceded by “100” are intended to be met. However, the Commission accepts that the *Directive* allows for deviations in limited circumstances, in consultation with AEP. In this case, AEP was aware of the setbacks for sharp-tailed grouse leks and specific wetlands being infringed

¹³ Transcript Volume 2, page 9, lines 12-16.

upon and was presented with additional mitigation measures. The Commission puts significant weight on AEP's overall assessment of the amended project which was considered moderate. As such, the Commission is not persuaded that the amendment application should be denied outright on the basis of non-adherence to *Directive* standards, as long as the reasons for non-compliance are justified and the resulting impacts to the environment can be mitigated to an acceptable degree.

57. The Commission accepts that BER Hand Hills has endeavoured to site infrastructure to minimize environmental impacts to the greatest extent possible. Nevertheless, the Commission notes that the amended project poses a high risk to sharp-tailed grouse given the amount of disturbance within three active lek setbacks. The Commission accepts the evidence of Mr. Wallis that lek attendance is not necessarily limited to lekking season or specific hours. The Commission considers that, given the outstanding high risk to sharp-tailed grouse, it is reasonable to require mitigation beyond what BER Hand Hills has proposed. Consequently, the Commission imposes the following condition of approval, in addition to the commitments made by BER Hand Hills with respect to leks:

- a) BER Hand Hills Wind GP Inc. shall not construct within 500 metres of active leks during the sharp-tailed grouse lekking season (March 15th to May 15th). Outside of these dates, construction activity within 500 metres setback of active leks must occur outside of the lekking period (one hour before sunrise to three hours after sunrise).

58. The above condition does not modify or derogate from any of the other commitments discussed in the referral report, including that BER Hand Hills must have a qualified and experienced wildlife biologist present to confirm if the lek is active prior to construction.

59. With respect to coulee setbacks, the Commission accepts that BER Hand Hills appropriately identified coulee and valley break setbacks with reference to the break in topography, as required by the *Directive*. The Commission does not consider that BER Hand Hills' treatment of coulee and valley breaks resulted in a mischaracterization or minimization of project impacts. The purpose of the coulee and valley break setbacks, as described by AEP,¹⁴ is to limit impacts to native habitat often found within these features, and to limit impacts to wildlife that use these areas as native habitat. While the amended project layout results in some new disturbance to native grassland by an access road and collector line, the Commission finds that the overall project activities, including the number of turbines, in native grassland have been reduced, and that the amendment application will result in lessened impacts to native wildlife habitat.

60. Condition 5 of Approval 22843-D02-2018 states that:

[BER Hand Hills Wind GP Inc.] shall further delineate and minimize disturbance of native grassland during construction and operation of the project. Where disturbed, [BER Hand Hills Wind GP Inc.] shall promptly reclaim native grasslands and restore associated wildlife habitat to a state equivalent to pre-disturbance conditions as much and as quickly as possible. The Commission expects [BER Hand Hills Wind GP Inc.], at the end of the project's lifetime, to decommission all project components promptly, and to reclaim and restore all disturbed areas. When providing notice of facility decommissioning to the

¹⁴ Exhibit 22843-X00157, Expert Reports, PDF page 126, September 11, 2020.

Commission, the applicant must fully describe the decommissioning, reclamation and restoration work conducted.

61. Although the amendment reduced the number of turbines proposed on native grassland, the Commission expects BER Hand Hills to continue to look for opportunities to further minimize impacts during construction and operation. This requirement extends to the construction and operation of infrastructure near native grassland where incidental impacts to native grassland could be anticipated. However, the latter part of the existing condition will be met by BER Hand Hills following the *Conservation and Reclamation Regulation* discussed in the additional issues section of this document. As such the condition has been amended to:

- b) BER Hand Hills Wind GP Inc. shall further delineate and minimize disturbance of native grassland during construction and operation of the project. Where disturbed, BER Hand Hills Wind GP Inc. shall promptly reclaim native grasslands and restore associated wildlife habitat to a state equivalent to pre-disturbance conditions as much and as quickly as possible.

62. BER Hand Hills identified a number of post-construction mitigation techniques that could be implemented if required by AEP. Post-construction monitoring requirements will help ensure that BER Hand Hills implements the appropriate additional mitigation measures should initial monitoring assess the mortality to birds and bats as high, as assessed by AEP.

63. Conditions 7 and 8 relate to post-construction monitoring. Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants* came into force on July 1, 2019, and applies to all wind projects approved after September 1, 2019. Accordingly, BER Hand Hills must comply with the requirements of Rule 033. Subsection 3(3) of Rule 033 requires approval holders to submit annual post-construction monitoring survey reports to AEP and the Commission. Consequently, the Commission would impose the following as a condition of the project's approval instead of conditions 7 and 8:

- c) BER Hand Hills shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the Commission within 13 months of the project becoming operational, and on or before the same date every subsequent year for which AEP requires surveys pursuant to Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.

3.2 Noise impacts

64. A noise impact assessment (NIA) prepared by Teresa Drew of RWDI was submitted as part of the amendment application. The NIA was prepared prior to BER Hand Hills finalizing its amended project layout and includes three additional spare turbines which were subsequently removed from the project.

65. Operating under normal operation mode, each turbine is expected to have an overall sound power output of 107.8 A-weighted decibels (dBA). This value was used in the NIA along with other noise contributing facilities in the area including the approved but not yet constructed Suncor Wind Power Project and third party oil and gas facilities.

66. The NIA identified two turbines as having been selected to operate under noise reduction modes. Turbine F3 would operate under NR-1 mode full-time. Operating under NR-1 results in a

maximum sound power output of 105.7 dBA and a maximum electrical output of 4.0 MW. As explained in the NIA, Turbine F3 is not required to operate at this level to achieve permissible sound levels (PSL) but rather to reduce the maximum name-plate capability of the project to 130 MW. The second turbine identified in the NIA as operating with sound mitigation was a spare turbine no longer being applied for.

67. The NIA indicated that the applicable PSLs, determined in accordance with Rule 012, were 40 dBA L_{eq} nighttime and 50 dBA L_{eq} daytime for all receptors. The nearest turbine to a receptor was 782 metres. Ms. Melin's residence, identified as Receptor R08 in the NIA, would be located 828 metres from the nearest turbine, Turbine B05.

68. The NIA model, using a ground attenuation factor of 0.7, indicated a 37.8 dBA project contribution at Receptor R08. The predicted cumulative sound level for Receptor R08 was expected to be 46 dBA daytime and 40 dBA nighttime assuming an ambient sound level of 45 dBA and 35 dBA, respectively.

69. James Farquharson of FDI Acoustics Inc. was retained by the HHLG to review the NIA and other noise information provided by BER Hand Hills. FDI completed a visit to the project area on July 30, 2020.

70. FDI used Brüel & Kjær Sound & Vibration Measurement Predictor™ 7810 environmental noise propagation modelling to verify the NIA. Using a ground attenuation factor of 0.7, the results indicated a project contribution of 37.8 dBA value at Receptor R08, which aligns with the results of the applicant's NIA. However, using a ground attenuation factor of 0.5, the modelling predicted a project contribution that would cause the project to be non-compliant with nighttime PSLs.

71. FDI also completed an ambient sound survey at R08. The results indicated a quiet environment during nighttime hours where the measured sound level was, at times, less than 25 dBA when meteorological conditions were acceptable for monitoring.

72. FDI stated that the results of the ambient sound survey could be used to support the application of a Class A2 adjustment to lower the PSL for locations where the measured ambient sound level is different from the assumed ambient sound levels.

73. The HHLG requested that the Commission not approve the application until a revised NIA indicates that the noise impact at the Melin residence, R08, is predicted to be within acceptable PSL values that take into consideration the quiet nature of the rural surroundings or, in the alternative, that the Commission deny the proposed location for turbine B05.

74. Rule 012 states that:

Ambient monitoring adjustment is applicable if the measured ambient sound level is not representative of the assumed ambient sound environment. The ambient sound levels may be measured in areas considered to be pristine as defined in Appendix 1 or areas that have non-energy industrial activity that would impact the ambient sound levels.

75. Appendix 1 of Rule 012 defines a pristine area as "a natural area that might have a dwelling but no industrial presence, including energy, agricultural, forestry, manufacturing, recreational or other industries that affect the noise environment."

76. During the hearing, Mr. Farquharson acknowledged that the project area did not match the definition precisely but noted that:

this [area] holds a bit more of a unique situation than maybe some others. Is it pristine? No, it wouldn't be pristine. Is it representative of other areas where we use a 40 dBA permissible sound level? There's probably a lot less activity here. So does it warrant some different consideration? It most likely does.¹⁵

77. In response to FDI's submissions, BER Hand Hills argued that 0.7 ground attenuation factor was a conservative choice given the ground conditions of the project area and the low percentage of noise reflective surfaces such as wetlands and roads which make up three per cent of the project area. BER Hand Hills stated that other projects that had been modelled using a 0.5 ground attenuation factor were located in areas that had much more reflective surfaces.

78. BER Hand Hills noted that a 0.7 ground attenuation factor was recently approved for the Lanfine Wind Project in Decision 22736-D01-2020:¹⁶

The Commission also finds that an overall ground attenuation factor of 0.7 is acceptable to characterize ground attenuation in the project area, based on RWDI's evidence that reflective surfaces make up a relatively small percentage of the project area (i.e., 6.3 per cent); or, stated another way, a ground attenuation factor of 0.7 accounts for a higher percentage of reflective surfaces (i.e., 30 per cent) than is actually found in the project area. On that basis the Commission agrees with [the applicant] that a ground attenuation factor of 0.7 is an appropriate and conservative representation. Accordingly, for this project, the Commission accepts the predicted results based on the noise model that uses a ground factor of 0.7.

79. BER Hand Hills submitted that it was aware that regardless of which modelling parameters are used in the NIA, the constructed project must achieve compliance with the applicable PSLs. As such, BER Hand Hills committed during the hearing to conduct noise monitoring at Receptor R08.¹⁷ BER Hand Hills stated that Receptor R08 was a good candidate for post-construction noise monitoring as it has few contributions from other energy facilities.

80. BER Hand Hills indicated that in the event that compliance with PSLs was not achieved, there were mitigation options available, including operating nearby turbines in noise-reduced modes and adding post-purchase noise reduction technology.

81. BER Hand Hills submitted in reply argument that the Class A2 adjustment request is flawed and Receptor R08 should not qualify for a downward Class A2 adjustment, as experts for both BER Hand Hills and the HHLG agreed that the area does not meet the definition of "pristine" as set out in Appendix 1 of Rule 012.

3.2.1 Commission findings

82. The Commission notes that in Decision 22736-D01-2020 for the Lanfine Wind Project, the Commission accepted a ground attenuation factor of 0.7 for a project area that had a relatively small per cent of the project area classified as reflective surfaces (6.3 per cent). The

¹⁵ Transcript Volume 1, page 181, lines 18-24.

¹⁶ Decision 22736-D01-2020: Pattern Development Lanfine Wind ULC – Lanfine Wind Power Project, Proceeding 22736, Applications 22736-A001 to 22736-A005, January 27, 2020.

¹⁷ Transcript, Volume 1, page 151, line 3.

Commission accepts BER Hand Hills' evidence indicating that, in the current proceeding, an even smaller per cent of the project area is comprised of reflective surfaces (three per cent). Accordingly, for this project, the Commission accepts the predicted results based on noise modelling using a ground attenuation factor of 0.7. The Commission stresses that regardless of modelling parameters used, including the choice of ground attenuation factor, the post-construction monitoring must show actual compliance with the PSLs.

83. The Commission notes that the current approval stipulates that BER Hand Hills must conduct post-construction comprehensive noise studies at receptors R05 and R23.¹⁸

84. The Commission agrees with BER Hand Hills that Receptor R08, that is Ms. Melin's residence, is a strong candidate for post-construction monitoring and accordingly implements the following condition:

- d) Within one year of connecting the power plant to the Alberta Interconnected Electric System and becoming operational, BER Hand Hills Wind GP Inc. shall conduct post-construction comprehensive noise studies at receptors R05, R08 and R23¹⁹ under representative operating conditions, in accordance with Rule 012: *Noise Control*. BER Hand Hills Wind GP Inc. shall file all studies and reports relating to the post-construction noise survey and the post-construction monitoring program with the Commission.

85. With respect to the requested Class A2 adjustment, the Commission denies the request. The Commission finds that the project area does not meet the definition of "pristine" as defined in Appendix 1 of Rule 012, and that there is not sufficient measured data nor compelling reasons to warrant a deviation from the use of assumed values in the project area. In particular, the Commission notes that the project area already hosts third-party energy facilities.

3.3 Visual impacts

86. Both Ms. Melin and Ms. Fitzpatrick expressed concerns about the turbines having a negative visual impact on the otherwise serene rural landscape. Ms. Melin described the view from her residence as "incredibly beautiful" and expressed concern about the impact of the turbines on the recreational and tourism potential of her land. Ms. Fitzpatrick similarly described the area around the project as pristine and characterized by an abundance of wildlife and scenery.

87. The HHLG requested that BER Hand Hills provide photomontages to show the number of turbines that would be visible from the homes of its members. BER Hand Hills submitted photomontages created by Green Cat Renewables.²⁰

88. The HHLG asserted that the photomontages demonstrated the intrusive nature of the turbines and noted that Ms. Fitzpatrick would be able to see as many as 10 turbines from her property. Ms. Fitzpatrick disputed that the photomontages accurately captured the visual impact

¹⁸ R05 and R23 were previously identified as R34 and R17 in Exhibit 0104.00.JOSSWIND-302 in Proceeding302.

¹⁹ As defined in the February 20, 2020, noise impact assessment (submitted in Proceeding 22843 as Exhibit 22843-X0088).

²⁰ Exhibit 22843-X0126, Hand Hills Viewpoint Package, July 29, 2020

of the turbines especially as the still images do not show the visual impacts that the turbines would have when in motion.²¹

89. The HHLG also expressed concern with the visual impacts from shadow flicker and the flickering lights located on the nose of the turbine towers. In addition to potential health impacts, described in greater detail below in the health section of this decision, the HHLG submitted that the visual impact of shadow flicker and turbine lighting would negatively affect its members use and enjoyment of their properties.

90. A shadow flicker study submitted by BER Hand Hills and conducted by Green Cat Renewables indicated that Ms. Melin's residence may be subjected to approximately 11 minutes per day and 10 and a half hours per year of shadow flicker. The HHLG requested that BER Hand Hills proactively engage with Ms. Melin about shadow flicker mitigation.

91. During the hearing, BER Hand Hills committed to report any shadow flicker complaints to the Commission and to work with local stakeholders throughout the life cycle of the project to address any concerns as they arise including shadow flicker. If warranted, BER Hand Hills would implement shadow flicker mitigation that may include screenings such as trees or shrubbery, the installation of window shades, shutters or awnings, and turbine curtailment during climate conditions that result in shadow flicker.

92. BER Hand Hills submitted that proactive engagement with Ms. Melin would not be appropriate given the very low level of shadow flicker expected to occur at her residence.

93. The HHLG also requested that approval of the amendment be conditional on the turbines meeting the minimum lighting requirements as required by Transport Canada. BER Hand Hills stated that it does not intend to install more than the minimum required number of aviation lights or employ more than the minimum required flash frequency and duration for that lighting.

3.3.1 Commission findings

94. The Commission accepts the HHLG argument that the taller turbines would individually have a greater visual impact than the previously approved shorter turbines and that the HHLG may be negatively impacted by the change. However, the Commission does not find the incremental visual impact to be reason enough to deny the amendment. The Commission does note that the reduction in number of turbines would be expected to decrease visual impacts where turbine locations have been removed.

95. Given the relatively minor duration of shadow flicker expected at Ms. Melin's residence, as well as BER Hand Hills' commitments to engage with stakeholders and submit any shadow flicker complaints, the Commission agrees with BER Hand Hills that engaging with Ms. Melin to mitigate shadow flicker at this time would be premature. The Commission expects that BER Hand Hills will implement shadow flicker mitigation as necessary on a case-by-case basis.

96. The Commission notes that the authority for determining turbine lighting requirements lies with Transport Canada and not the Commission. The Commission accepts that BER Hand Hills is aware of intervenor concerns regarding the visual impacts of turbine lighting,

²¹ Transcript Volume 2, PDF page 144, lines 1-6.

and does not intend to install turbine lighting beyond what is required by Transport Canada to ensure aircraft safety.

3.4 Property impacts

97. The HHLG was concerned about the impacts of the project construction and operation on its members' water wells and the potential for water contamination. The HHLG argued that BER Hand Hills was unable to confirm if the vibration from the wind turbines could affect the water table.

98. The HHLG stated that BER Hand Hills does not have a contingency plan for dealing with water impacts should they occur. The HHLG submitted that, at the very least, BER Hand Hills should be required to develop a contingency plan to ensure it is adequately prepared to deal with any groundwater impacts that may arise within the project area. The HHLG requested that, if the project were approved, to have it conditional on a contingency plan being developed and shared with the Commission and any resident of the project area that requests it.

99. BER Hand Hills acknowledged that the environmental evaluation of change for the project stated that there was some potential for project activities to affect groundwater quality and quantity. However, since the environmental evaluation of change was conducted, BER Hand Hills had refined the project design by selecting a different type of foundation, a raft foundation, to be used for the turbines. BER Hand Hills noted that the depth to groundwater throughout the project area varies from eight metres to 18 metres, while the raft foundations would have a maximum depth of five metres. BER Hand Hills explained that groundwater impacts from raft foundations only occur where the foundation depth intercepts the water table, which, in this case, nearly eliminates any risk of groundwater impacts from the project.

100. BER Hand Hills also contended that any potential for vibration that would be relevant to the design of the foundation would have been considered by the professionally licensed engineer who designed the foundation.

101. Ms. Melin was concerned that the project will impact the intended use of her property. She explained that she had purchased her property after the Hand Hills Wind Project had originally been approved but was not aware of the project. She stated that the property appeared to be a perfect place to build a "bed, bale and breakfast" business that would provide income during her retirement. She noted that she had 20 acres of land used by her horses that could be used for recreational riding. Had she known about the project, she says she would not have purchased the property. She stated that no one would want to embark on a recreational horse ride around wind turbines that destroy the serenity of the area.

102. The HHLG also expressed concerns about the project's impact on its members' property values. Ms. Melin stated that she believes the project would decrease her chances of selling her property and recouping her investment while Ms. Fitzpatrick and Mr. Greer asserted that the project would lower their property value.

3.4.1 Commission findings

103. The raft foundations selected for the project would have a maximum depth of five metres and would not reach the depth of the groundwater at eight metres. The Commission accepts BER Hand Hills' argument that the raft foundations were designed by a licensed engineer and informed by site-specific geotechnical information. The Commission agrees with

BER Hand Hills that the potential for the turbine foundations to intercept the water table is negligible. There is no evidence to substantiate the assertion that vibrations from the turbines might otherwise impact water quality in the project area. Accordingly, the Commission finds that the project's potential risk to groundwater and wells is low.

104. The Commission expects that if construction and operation of the turbines does cause impacts to water wells, that BER Hand Hills would work with stakeholders to identify the cause and alleviate the impact.

105. The Commission notes that no evidence was provided by the HHLG regarding the impacts of a wind project on property values. The Commission has consistently held that property valuation is a complex and technical issue that requires specialized knowledge and expertise, and that in the absence of supporting evidence, the Commission cannot place any weight on personal views on property value impact. The Commission is therefore not persuaded there would be negative impacts to property values associated with the proposed amendment that warrant the application being conditioned or denied.

3.5 Health impacts

106. The HHLG expressed concerns about potential negative health impacts caused by shadow flicker and flickering turbine lighting.

107. In particular, Ms. Melin expressed that she suffers from several health conditions and an extreme sensitivity to light. Ms. Fitzpatrick submitted that the shadow flicker will exacerbate her existing health conditions.

108. In addition to the health concerns due to the shadow flicker and turbine lighting, the HHLG also had general concerns related to the project's impacts on health.

109. Ms. Melin indicated that she believes that the change in energy in the air from the turbines would negatively affect her sleep, which would exacerbate her existing health conditions. She also noted concerns about migraines, dizziness, and increased physical pain and mental anguish due to the turbines.

110. Ms. Fitzpatrick stated that she was concerned that the project would negatively impact her health including heightening stress and anxiety levels. The HHLG also stated that Mr. Greer has concerns that the project would impact his existing health condition.

111. Ms. Melin was also concerned about the potential impacts of the project on animal health, including that the turbines would cause her horses to abort their pregnancies or have stillborn foals.

3.5.1 Commission findings

112. The Commission has carefully considered the testimony of HHLG members concerning the project's potential to cause negative health impacts, exacerbate existing health conditions, and result in stress which could negatively impact health. The Commission understands that the HHLG members have unique health considerations and place considerable value on the tranquility and quietness of their residences to the benefit of their health and wellbeing. The Commission accepts that their concerns about the potential health impacts of the project are sincerely-held.

113. However, specialized expertise and evidence is required for the Commission to conclude that a project will have an adverse effect on human health. No such evidence was presented in this proceeding and accordingly, the Commission is unable to make any finding related to this potential impact.

3.6 Additional issues

114. The HHLG, in particular Ms. Fitzpatrick, expressed concerns that the project could have negative cultural and heritage impacts. In her statement of intent to participate, Ms. Fitzpatrick noted that her family has been in the project area for over 100 years.

115. BER Hand Hills's amendment application indicated that it received a *Historical Resources Act* clearance letter in 2009 for the project and stated that all conditions of the clearance letter would be adhered to including the requirement that a paleontological consultant would be on site during initial excavations of bedrock to monitor for paleontological resources that could be impacted. BER Hand Hills indicated that, after consultation with Alberta Culture, Multiculturalism and Status of Women, a new *Historical Resources Act* approval was required for the project.

116. During the hearing, Mr. Peckford, for BER Hand Hills, indicated that initial field studies took place in mid-August 2020 and that a report was being prepared to be provided to Alberta Culture, Multiculturalism and Status of Women. In response to a question by Commission counsel, BER Hand Hills was unable to provide a timeline for acquiring the *Historical Resources Act* approval but noted that Alberta Culture, Multiculturalism and Status of Women would stipulate conditions for the project if necessary.

117. The HHLG also expressed concerns with construction, operation and maintenance impacts such as increased noise, traffic, access restrictions, dust and littering. The HHLG noted that an access road was approximately 200 feet from the property of one of its members. If approved, the HHLG requested that the project have the following condition of approval:

The proposed access road that is 200 feet from Ms. Melin's residence be denied. Alternatively, the Commission include as a condition of approval that BER must adopt appropriate dust control measures to reduce dust on the access road near Ms. Melin's residence and to work with members of the HHLG to address any dust related or security issues that arise during the construction, operation, decommissioning or reclamation of the project.

118. BER Hand Hills made a number commitments to help reduce the impacts of construction on stakeholders in the area. These commitments included:

- Limiting construction hours to between 7 a.m. and 10 p.m. as much as practical.
- Ensuring good communication with stakeholders on when particularly noisy activities may occur (such as arrival of multiple vehicles in a short period, upgrading and maintenance of the road itself).
- Setting strict requirements that all contractors must have well maintained mufflers on their vehicles.
- Setting a 30-kilometre/hour speed limit in the entire project area.

- Banning the use of engine compression brakes in the project area.

119. BER Hand Hills also committed to ensuring sufficient dust control efforts specifically at the roads nearest to Ms. Melin's residence. BER Hand Hills stated that it would continue to work with all landowners, including the HHLG members, to ensure that construction impacts are minimized to the greatest extent possible.

120. The HHLG indicated that the project was first approved in 2012 and that BER Hand Hills has requested a December 31, 2022, construction completion date. Considering the length of time that has passed, the HHLG argued that a date of December 31, 2021, would be more appropriate or alternatively that, if approved, the applicant's requested date should be final and not subject to further extension.

121. During the hearing, Commission counsel asked the BER Hand Hills panel if it would be willing to commit to a firm construction date given that approval of future time extensions should not be assumed. Mr. Verok stated that "it's hard to pin down an exact date that we'd be unable to change....So I think put a date down and say that, you know, if it's not met, the permit and licence would ultimately be pulled, you know, in our opinion, would be a little heavy-handed."²² In argument, BER Hand Hills also indicated that factors outside of its control, such as the ongoing connection process with the AESO, technology availability and future wildlife surveys could cause delays.

122. In response to concerns expressed by the HHLG related to safety such as fires, BER Hand Hills committed to providing the operation and construction, health, safety and environment plans to all landowners including the members of the HHLG.

123. Lastly, the HHLG expressed concerns with the end-of-life project reclamation. The HHLG argued that the application does not fall within the 'grandfathering' provisions of AEP's *Conservation and Reclamation Directive for Renewable Energy Operations* (C&R Directive) due to the date that the final amendment application was filed. As such, the HHLG submitted that BER Hand Hills should file with the Commission an initial conservation and reclamation plan (C&R plan) at least six months before the commencement of construction. The HHLG also requested that the project, if approved, be conditional on the following:

BER Hand Hills must file with the Commission as part of its post construction filing update the financial commitment or a confirmation of the financial commitment that it has made to secure the performance of its reclamation obligation.²³

124. In its argument, BER Hand Hills stated that it was committed to fully complying with the C&R Directive. BER Hand Hills submitted that due to the complicated history of the amendment application, which was initially submitted to the Commission in 2017, the project fell under the grandfather clause in the C&R Directive meaning that an initial C&R plan was not required to be submitted to the Commission with the application. Nonetheless, BER Hand Hills recognized that the application has changed significantly since the original filing and requested that it be allowed to submit an initial C&R plan to the Commission and AEP prior to the commencement of construction rather than six months before as requested by the HHLG. BER Hand Hills noted

²² Transcript Volume 1, PDF pages 170-171, lines 21-11.

²³ Exhibit 22843-X0176, the HHLG Written Argument, PDF page 7, condition "o", September 24, 2020.

that such a commitment was made by BHE Canada Rattlesnake G.P. Inc. and accepted by the Commission in Decision 25018-D01-2020.²⁴

3.6.1 Commission findings

125. To ensure that cultural and heritage impacts are effectively mitigated the Commission will require BER Hand Hills to provide confirmation that it has obtained a *Historical Resources Act* approval prior to construction. As such, the project approval is subject to the following condition:

- e) BER Hand Hills Wind GP Inc. must file a copy of the *Historical Resources Act* approval for the amended project prior to commencing construction.

126. Unless otherwise indicated by the *Historical Resources Act* approval, Condition 10 of the existing approval remains unchanged:

- f) BER Hand Hills Wind GP Inc. shall conduct on-site paleontological monitoring for all excavation activity in sections 12, 22 and 28 of Township 30, Range 17, west of the Fourth Meridian, and the southwest quarter of Section 7, Township 30, Range 16, west of the Fourth Meridian.

In other areas, should bedrock be encountered during excavation, excavation shall cease until monitoring of paleontological resources is implemented and, where needed, mitigation is utilized.

127. Due to the close proximity of certain access roads to Ms. Melin's residence, the Commission agrees that construction activities could impact Ms. Melin if not properly mitigated. Given BER Hand Hills' commitment to ensure sufficient dust control, the Commission is not persuaded that the access road nearest to Ms. Melin's residence should be denied but does agree that BER Hand Hills will need to work with Ms. Melin and other members of the HHLG to ensure impacts from construction activities are mitigated. As such, the project approval is subject to the following condition:

- g) BER Hand Hills Wind GP Inc. must adopt appropriate dust control measures to reduce dust on the access road nearest Jo-Lynn Melin's residence and to work with members of the Hand Hills Landowner Group and other area stakeholders to address any dust related or security issues that arise during the construction, operation, decommissioning or reclamation of the project.

128. The Commission expects that BER Hand Hills would schedule construction activities, especially those that could cause disturbances to stakeholders, within the hours of 7 a.m. and 10 p.m. as reasonably practical. When activities are required outside of these hours, the Commission expects that BER Hand Hills would try to mitigate impacts to stakeholders as much as reasonably possible.

²⁴ Decision 25018-D01-2020: BHE Canada Rattlesnake G.P. Inc. Facility Applications, Alberta Electric System Operator Needs Identification Document Application and AltaLink Management Ltd. Facility Applications – Rattlesnake Ridge Wind Power Project, Proceeding 25018, Applications 25018-A001 to 25018-A008, September 9, 2020.

129. Pursuant to the *Conservation and Reclamation Regulation*, the project is subject to the reclamation obligations set out in Section 137 of the *Environmental Protection and Enhancement Act* and BER Hand Hills must obtain a reclamation certificate at the project's end of life. The reclamation process is managed by AEP pursuant to the C&R Directive, which provides more detailed information on conservation and reclamation planning and reclamation certificate requirements for renewable energy operators in Alberta. The Commission notes that BER Hand Hills has committed to fully comply with the C&R Directive.

130. The Commission accepts BER Hand Hills' commitment to provide a C&R plan prior to construction as reasonable in light of the history of the amendment application. Consequently, the project approval is subject to the following condition:

- h) BER Hand Hills Wind GP Inc. must provide written confirmation with the Commission that a project-specific conservation and reclamation plan meeting the requirements of AEP's *Conservation and Reclamation Directive for Renewable Energy Operations* has been created and filed with the AEP prior to commencing construction.

131. The Commission acknowledges the HHLG's argument that the project was originally approved many years ago. The Commission recognizes that continual amendments and time extensions create uncertainty for stakeholders in the area, such as the case of Ms. Melin buying her property without knowledge of the project. Further, extensive project delays contribute to regulatory inefficiency, as applications must be updated to address current regulatory requirements. At the same time, the Commission realizes that some factors are outside of an applicant's control and can result in unanticipated delays. The Commission emphasizes the need for BER Hand Hills to keep stakeholders informed of project timelines and delays.

132. In this case, the Commission will grant the applicant a construction completion date of December 31, 2023. The extended construction date is intended to accommodate certain unanticipated delays, and takes into consideration the condition of approval stipulating that no construction can take place within 500 metres of active leks during the sharp-tailed grouse lekking season, as stipulated above. However, the Commission stresses the importance of completion by that date. If a subsequent time extension for construction is required, the Commission will scrutinize the request with the understanding that the project was originally approved over a decade earlier.

4 Conclusion

133. The Commission has considered the amendment application having regard to the applicable legislative and regulatory framework described earlier. The Commission reiterates that in assessing an amendment application, it focuses on the incremental impacts of the amended project compared to what was previously approved. For the reasons detailed above, and subject to the specified conditions, the Commission finds that approval of the proposed amendments is in the public interest having regard to the social, economic, and other effects of the amended project, including its effect on the environment.

134. The Commission has determined that the technical, noise, siting and environmental aspects of the amendment application have been met. The Commission finds that the noise impact assessment fulfills the requirements of Rule 012. With respect to BER Hand Hill's participant involvement program, the Commission notes that the purpose of a participant

involvement program is to allow affected parties to understand the nature of a proposed project and afford them a reasonable opportunity to express concerns and engage in meaningful discussions with the applicant with the goal of eliminating, or mitigating to an acceptable degree, the affected party's concerns about the project. While it is clear that BER Hand Hills was unable to alleviate all concerns, based on the evidence submitted by the applicant, the Commission is satisfied that BER Hand Hills conducted participant involvement programs which met the requirements of Rule 007.

135. Based on the evidence in this proceeding, and in consideration of the mitigation techniques and commitments²⁵ submitted by BER Hand Hills along with the conditions stipulated above,²⁶ the Commission finds that the amended project's overall incremental impacts can be mitigated to an acceptable degree. The Commission is satisfied that the mitigation measures and conditions set out in this decision are sufficient to adequately address the potential adverse impacts resulting from approval of the amendment application.

5 Decision

136. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves the application and grants BER Hand Hills Wind GP Inc. the approval set out in Appendix 1 – Power Plant Approval 22843-D05-2020 – December 17, 2020, to construct and operate the Hand Hills Wind Project (Appendix 1 will be distributed separately).

137. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission grants BER Hand Hills Wind GP Inc. the approval set out in Appendix 2 – Substation Permit and Licence 22843-D06-2020 – December 17, 2020, to construct and operate the Highland 572S Substation (Appendix 2 will be distributed separately).

Dated on December 17, 2020.

Alberta Utilities Commission

(original signed by)

Neil Jamieson
Commission Member

²⁵ A full list of commitments made by BER Hand Hills are listed in Exhibit 22843-X0171.

²⁶ A summary of Commission conditions of approval are provided as Appendix C of this decision.

Appendix A – Proceeding participants

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| Name of organization (abbreviation) Company name of counsel or representative |
| BER Hand Hills Wind GP Inc. T. Oleniuk S. Birse |
| Hand Hills Landowner Group R. Secord I. Okoye |

| |
|--|
| Alberta Utilities Commission |
| Commission panel N. Jamieson |
| Commission staff M. Anderson (Commission counsel) T. McCusker L. Fukuda |

Appendix B – Virtual hearing – registered appearances

| Name of organization (abbreviation) Name of counsel or representative | Witnesses |
|--|---|
| BER Hand Hills Wind GP Inc. T. Oleniuk S. Birse | G. McDonald G. Verok P. Ashtiani T. Drew M. Peckford S. Wood |
| The Hand Hills Landowner Group (HHLG) R. Secord I. Okoye | J. Farquharson C. Wallis K. Fitzpatrick J. Melin |

Appendix C – Summary of Commission conditions of approval

This section is intended to provide a summary of all conditions of approval for the convenience of readers. In the event of any difference between the directions and conditions in this section and those in the main body of the decision, the wording in the main body of the decision shall prevail.

The following are conditions of Decision 22843-D04-2020 that require follow-up with the Commission, and will be tracked as conditions of Power Plant Approval 22843-D05-2020 using the AUC's eFiling System:

- BER Hand Hills Wind GP Inc. shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the Commission within 13 months of the project becoming operational, and on or before the same date every subsequent year for which AEP requires surveys pursuant to Subsection 3(3) of Rule 033: *Post-approval Monitoring Requirements for Wind and Solar Power Plants*.
- Within one year of connecting the power plant to the Alberta Interconnected Electric System and becoming operational, BER Hand Hills Wind GP Inc. shall conduct post-construction comprehensive noise studies at receptors R05, R08 and R23²⁷ under representative operating conditions, in accordance with Rule 012: *Noise Control*. BER Hand Hills Wind GP Inc. shall file all studies and reports relating to the post-construction noise survey and the post-construction monitoring program with the Commission.
- BER Hand Hills Wind GP Inc. must file a copy of the *Historical Resources Act* approval for the amended project prior to commencing construction.
- BER Hand Hills Wind GP Inc. must provide written confirmation with the Commission that a project-specific conservation and reclamation plan meeting the requirements of AEP's *Conservation and Reclamation Directive for Renewable Energy Operations* has been created and filed with the AEP prior to commencing construction.

The following are conditions of Decision 22843-D04-2020 that do not require follow-up with the Commission:

- BER Hand Hills Wind GP Inc. shall not construct within 500 metres of active leks during the sharp-tailed grouse lekking season (March 15th to May 15th). Outside of these dates, construction activity within 500 metres setback of active leks must occur outside of the lekking period (one hour before sunrise to three hours after sunrise).
- BER Hand Hills Wind GP Inc. shall further delineate and minimize disturbance of native grassland during construction and operation of the project. Where disturbed, BER Hand Hills Wind GP Inc shall promptly reclaim native grasslands and restore associated

²⁷ As defined in the February 20, 2020, noise impact assessment (submitted in Proceeding 22843 as Exhibit 22843-X0088).

wildlife habitat to a state equivalent to pre-disturbance conditions as much and as quickly as possible.

- BER Hand Hills Wind GP Inc. shall conduct on-site paleontological monitoring for all excavation activity in sections 12, 22 and 28 of Township 30, Range 17, west of the Fourth Meridian, and the southwest quarter of Section 7, Township 30, Range 16, west of the Fourth Meridian.

In other areas, should bedrock be encountered during excavation, excavation shall cease until monitoring of paleontological resources is implemented and, where needed, mitigation is utilized.

- BER Hand Hills Wind GP Inc. must adopt appropriate dust control measures to reduce dust on the access road nearest Jo-Lynn Melin's residence and to work with members of the Hand Hills Landowner Group and other area stakeholders to address any dust related or security issues that arise during the construction, operation, decommissioning or reclamation of the project.