



## Capital Power Generation Services Inc.

Whitla Phase 3 Wind Power Plant

March 18, 2021



**Alberta Utilities Commission**

Decision 25909-D01-2021

Capital Power Generation Services Inc.

Whitla Phase 3 Wind Power Plant

Proceeding 25909

Application 25909-A001

March 18, 2021

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## **1 Decision summary**

1. In this decision, the Alberta Utilities Commission approves an application from Capital Power Generation Services Inc. (Capital Power) to construct and operate the Whitla Phase 3 Wind Power Plant.

## **2 Application**

2. Capital Power has approval to operate the Whitla Phase 1 Wind Power Plant and approval to construct and operate the Whitla Phase 2 Wind Power Plant pursuant to Approval 25780-D02-2020.<sup>1</sup>

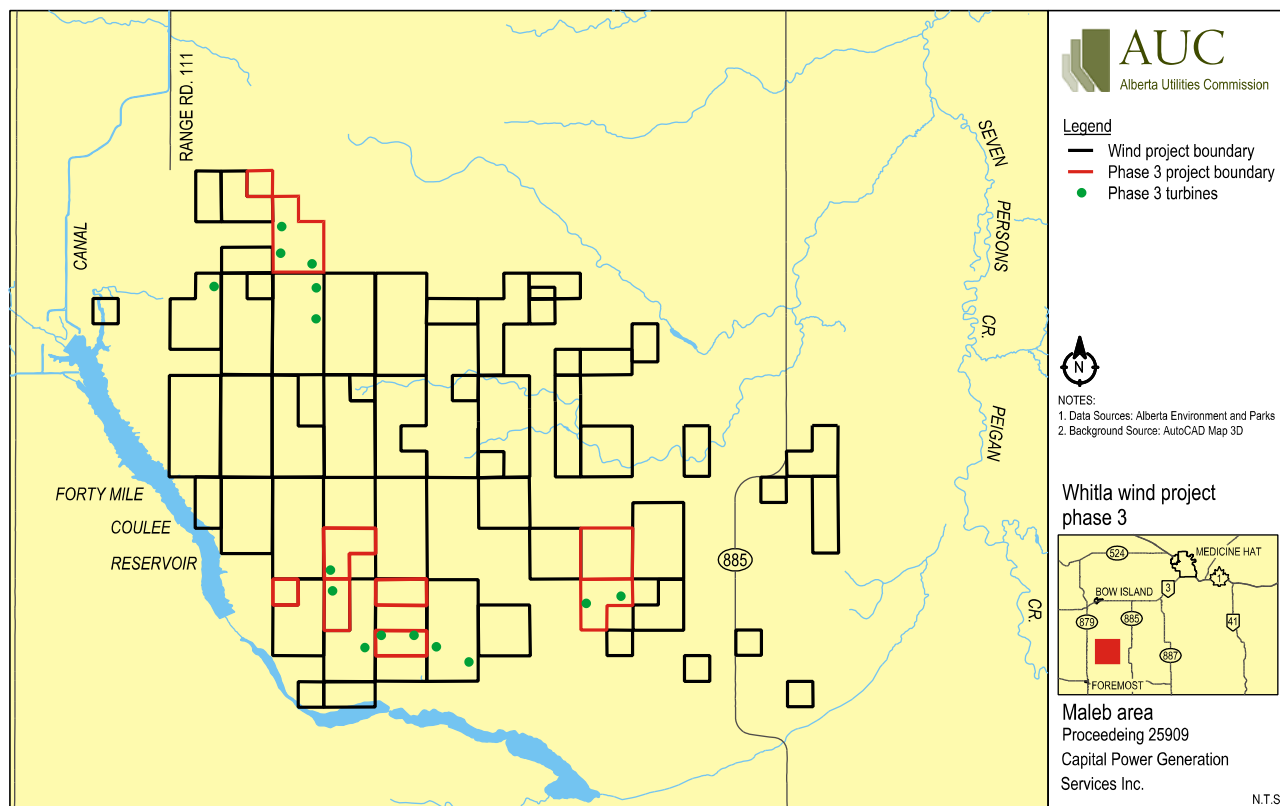
3. The Whitla Phase 1 Wind Power Plant reached commercial operation on December 1, 2019, and construction of the Whitla Phase 2 Wind Power Plant has not yet commenced, but commercial operation is targeted for December 31, 2021.

4. Capital Power has applied to amend Approval 25780-D02-2020 by adding the 54-megawatt (MW) Whitla Phase 3 Wind Power Plant to the Whitla Wind Project, which is also targeted for commercial operation by December 31, 2021. The project would be located within the same project area as the approved Whitla Phase 1 Wind Power Plant and the Whitla Phase 2 Wind Power Plant project area in the Maleb area. All three phases of the project will be collectively referred to as the Whitla Wind Project, as shown on the map in Figure 1.

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<sup>1</sup> Power Plant Approval 25780-D02-2020, Proceeding 25780, Application 25780-A001, September 3, 2020.

Figure 1. Proposed Whitla Phase 3 Wind Power Plant



5. The Whitla Phase 3 Wind Power Plant would consist of 15 Vestas V136 – 3.6-MW turbines, which is the same turbine model that is used in and was approved for Whitla Phase 1 Wind Power Plant and the Whitla Phase 2 Wind Power Plant. Each turbine would have a rotor diameter of 136 metres and a hub height of 105 metres, and be rated at 3.6 MW. Power generated by the wind turbines would be conveyed to Capital Power’s existing Shamrock 1018S Substation through a 34.5-kilovolt underground collector system and then connected to the Alberta Interconnected Electric System via AltaLink Management Ltd.’s 240-kilovolt transmission system. The project would not require any new transmission infrastructure as it would connect to the single-circuit Transmission Line 1148L that was previously constructed for the Whitla Phase 1 Wind Power Plant and the Whitla Phase 2 Wind Power Plant. As such, an amendment to the existing connection order is not required.

6. Capital Power’s application included:

- An environmental evaluation report<sup>2</sup> for the project that described the environmental components present in the project area, the project’s potential adverse effects on these components, mitigation measures to reduce these environmental effects and monitoring methods that were proposed to evaluate the efficacy of those measures.

<sup>2</sup> Exhibit 25909-X0009, Attachment 6 - Updated Environmental Evaluation Report.

- A renewable energy referral report<sup>3</sup> provided by Alberta Environment and Parks (AEP) that ranked the project as moderate risk overall to wildlife based on high wildlife use within the project area, particularly bats and avian species at risk.
- A shadow flicker assessment by Stantec Consulting Ltd,<sup>4</sup> which predicted that no residence would be affected by shadow flicker for more than 30 hours per year or more than 30 minutes per day.
- A noise impact assessment (NIA) which predicted that the proposed project would be compliant with Rule 012: *Noise Control*.
- A participant involvement program, which followed the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*.
- Confirmation that *Historical Resources Act* approval has been received.

7. In its referral report for the Whitla Phase 3 Wind Power Plant, AEP determined the pre-assessment risk to bat mortality as high based on survey results. It further noted that preliminary raw mortality data from operational wind projects in the area suggests that bat mortality rates are likely to be high in the project area. AEP recommended that Capital Power implement mitigation strategies to limit bat mortality from the date of project commissioning.

8. On December 24, 2020, Capital Power submitted its post-construction monitoring report for the first year of operations for the Whitla Phase 1 Wind Power Plant. The report was posted to the record of Proceeding 25780. Capital Power stated that it would not commit to implementing pre-emptive operational mitigation measures at this time but stated that it would meet with AEP to review the results of the first year of the post-construction mortality monitoring program for the Whitla Phase 1 Wind Power Plant. Capital Power stated that it would consider the results of this discussion in the context of the Whitla Phase 3 Wind Power Plant and, should there be merit, may consider implementing pre-emptive mitigation measures for the Whitla Phase 3 Wind Power Plant.

9. Capital Power conducted an NIA<sup>5</sup> in accordance with Rule 012. The NIA identified 54 dwellings as noise receptors and considered baseline facilities, including existing and approved wind power projects in the study area, when calculating cumulative sound levels at the receptors. In the NIA, cumulative sound levels at receptors R13, R18, R26, R32 and R54 were predicted to slightly exceed the nighttime permissible sound level (PSL) of 40 dBA.<sup>6</sup> In addition, cumulative sound levels at 10 other receptors were predicted to be less than but very close to the nighttime PSL (i.e., predicted margins of compliance<sup>7</sup> at these receptors are less than or equal to 0.5 dBA).

10. Capital Power concluded that noise from the project would be in compliance with Rule 012, because the NIA used conservative approaches. Capital Power submitted that the

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<sup>3</sup> Exhibit 25909-X0027, AEP-FWS Renewable Energy Report for the Whitla Phase 3 Wind Project.

<sup>4</sup> Exhibit 25909-X0014, Attachment 9 - Shadow Flicker Assessment.

<sup>5</sup> Exhibit 25909-X0012, Attachment 7 - Updated Noise Impact Assessment Report.

<sup>6</sup> dBA: A-weighted decibel.

<sup>7</sup> Margin of compliance is permissible sound level minus cumulative sound level.

conservative approaches in the NIA included the use of a ground attenuation factor of 0.5, all wind turbines assumed to be operating at 100 per cent at all times, and each receptor being downwind of all wind turbines.

11. Capital Power stated that it plans to construct the Whitla Phase 2 Wind Power Plant and the Whitla Phase 3 Wind Power Plant concurrently. Construction is expected to commence in May 2021 and be completed by December 31, 2021.

### **3 Statement of intent to participate**

12. The Commission issued a notice of application for the proposed project in accordance with Section 7 of Rule 001: *Rules of Practice*. On December 15, 2020, the Commission received a statement of intent to participate from the Stoney Nakoda Nations (Stoney Nakoda) that expressed general concerns about potential impacts the project could have on its members.

13. On December 17, 2020, the Commission issued a letter to the Stoney Nakoda requesting additional information regarding the Stoney Nakoda's concerns, in particular information about whether its members were actively using lands within or near to the project. On January 15, 2021, the Stoney Nakoda filed additional information about its concerns with the project.

14. On February 3, 2021, the Commission issued a standing ruling<sup>8</sup> in which it found that the Stoney Nakoda had not demonstrated that its members were present in the project area or that the Stoney Nakoda's legal rights may be directly and adversely affected by the Commission's decision on the project application. The Commission therefore denied standing to the Stoney Nakoda, however, the Commission provided the Stoney Nakoda two weeks to file any additional information that might demonstrate how the proposed project could impact its members. The Stoney Nakoda did not provide any additional information and so the Commission did not reconsider its standing decision.

15. No other outstanding concerns regarding the proposed project were raised with the Commission.

### **4 Findings**

16. The Commission is considering this application under sections 11 and 19 of the *Hydro and Electric Energy Act*. In accordance with Section 17 of the *Alberta Utilities Commission Act*, the Commission must assess whether the project is in the public interest, having regard to its social, economic and environmental effects.

17. 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.<sup>9</sup> The Commission must take into account the purposes of the *Hydro and Electric Energy Act* and the *Electric Utilities Act*,<sup>10</sup> and cannot consider the need for the project

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<sup>8</sup> Exhibit 25909-X0044, AUC ruling on standing.

<sup>9</sup> EUB Decision 2001-111: EPCOR Generation Inc. and EPCOR Power Development Corporation 490-MW Coal-Fired Power Plant, Application 2001173, December 21, 2001, page 4.

<sup>10</sup> *Hydro and Electric Energy Act*, RSA 2000 c H-16, sections 2 and 3.

or whether it is the subject of a renewable electricity support agreement under the *Renewable Electricity Act*. The Commission must also determine whether an applicant has met the requirements of Rule 007 and Rule 012. An applicant must also obtain all approvals required by other applicable provincial or federal legislation.

18. For the reasons outlined below, the Commission finds that approval of the project is in the public interest having regard to the social, economic, and other effects of the project, including its effect on the environment.

19. The Commission has reviewed the application and has determined that the information requirements specified in Rule 007 have been met. Additionally, the Commission finds that Capital Power's participant involvement program satisfied the requirements of Rule 007.

20. With regard to the environmental effects of the project, the Commission notes that the project has been sited to avoid certain wildlife features including the house, nest, den and lek of species of management concern. AEP determined that the overall project risk would be moderate based on high wildlife use within the project area, particularly bats and avian species at risk. The Commission considers that siting the project entirely on cultivated land and outside of the setback for the Forty Mile Coulee reduces the impacts to wildlife and wildlife habitat in the project area, and notes that this finding is in alignment with AEP's conclusion.

21. In its referral report, AEP identified that preliminary raw mortality data from operational wind projects in the area suggests that bat mortality would be high and, as a result, it anticipated that future operational mitigation would likely be required for the project. AEP also found that the project's bat mortality risk during operation would be high based on survey results, but the risk could be reduced to moderate if Capital Power would commit to pre-emptive operational mitigation measures as described in the referral report.

22. Capital Power stated that it would not commit to implementing pre-emptive operational mitigation measures at this point in time but committed to meet with AEP to discuss the results of the first year of the post-construction mortality monitoring program for Whitla Phase 1 Wind Power Plant. Capital Power submitted that following a review and discussion of the results of the Whitla Phase 1 Wind Power Plant post-construction monitoring report with AEP, it would be in a better position to assess the merits of implementing pre-emptive operational mitigation measures for the Whitla Phase 3 Wind Power Plant.

23. The Commission agrees with Capital Power that the potential need for and type of pre-emptive operational mitigation measures would be better informed by reviewing the results of the Whitla Phase 1 Wind Power Plant post-construction monitoring report and discussing the findings with AEP. As such, the Commission includes the following as a condition of approval:

- a) Capital Power shall submit a summary of the results of the discussion held with Alberta Environment and Parks, including a description of any pre-emptive operational mitigation measures that Capital Power has agreed to implement. If new mitigation measures were agreed to, Capital Power must submit an updated construction and operation mitigation plan that incorporates the additional mitigation measures at least 60 days prior to the start of construction of the Whitla Phase 3 Wind Power Plant turbines.



24. A condition of the approval for the Whitla Phase 1 Wind Power Plant and the Whitla Phase 2 Wind Power Plant (Approval 25780-D02-2020) is that Capital Power must conduct post-construction monitoring following standards outlined in the *Wildlife Directive for Alberta Wind Energy Projects*. The same condition of approval will apply to the Whitla Phase 3 Wind Power Plant, as reproduced below.

25. 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, Capital Power must comply with the requirements of Rule 033. Subsection 3(3) of Rule 033 requires approval holders to submit to AEP and the AUC annual post-construction monitoring survey reports. Consequently, the Commission would also impose the following as a condition of approval to the Whitla Wind Project:

- b) Capital Power shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the AUC for all three phases of the Whitla Wind Project, within 13 months of each wind power plant 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*.

26. The Commission is satisfied that Capital Power's post-construction monitoring plan will adequately address the potential environmental impacts of the project and its ongoing discussions with AEP and the implementation of any additional mitigation measures directed by AEP, will ensure that the Whitla Phase 3 Wind Power Plant will be aligned with AEP's post-construction wildlife requirements.

27. The Commission finds that with diligent application of Capital Power's mitigation measures, construction and post-construction monitoring, and implementation of any additional mitigation measures as directed by AEP, the potential adverse environmental effects of the project, including those on wildlife and wildlife habitat, can be adequately mitigated.

28. The Commission recognizes that the noise study area for the project contains a significant number of energy-related facilities that potentially influence cumulative sound levels at affected receptors. The Commission finds that Capital Power reasonably identified baseline facilities with the potential to influence cumulative sound levels at affected receptors and established reasonable sound power levels to calculate the contribution of baseline facilities to cumulative sound levels at affected receptors.

29. The Commission finds that cumulative sound levels at five receptors: R13, R18, R26, R32, and R54 were predicted to exceed the nighttime PSL by no more than 0.4 dBA. Section 2.7(6) of Rule 012 allows the predicted cumulative sound level to be rounded to the nearest whole number before comparing to the applicable PSL. Accordingly, the predicted cumulative sound levels at these five receptors are considered to comply with the nighttime PSL of 40 dBA, when they are rounded to the nearest whole number. In addition, the Commission acknowledges that the NIA used conservative approaches when predicting sound levels from the project at receptors. For these reasons, the Commission accepts that the project will likely comply with Rule 012.

30. The Commission considers that the project's compliance with Rule 012 requires additional scrutiny, given that the predicted cumulative sound levels at receptors R13, R18, R26, R32, and R54 exceed the 40 dBA nighttime PSL and there is a relatively small margin of compliance at 10 other receptors. The Commission considers it reasonable to require Capital Power to conduct a post-construction comprehensive sound level (CSL) survey to confirm compliance with Rule 012. When selecting potential monitoring locations for a post-construction CSL survey, the Commission has focused on the five receptors whose predicted cumulative sound levels exceed the nighttime PSL. Prediction results from the NIA suggests that the project will be a major noise contributor at receptors R13 and R26. As such, these two receptors are suitable locations for a post-construction CSL survey to verify project compliance with Rule 012. Therefore, the Commission imposes the following condition of approval for the project:

- c) Capital Power shall conduct a post-construction comprehensive sound level survey, including an evaluation of low frequency noise, at receptors R13 and R26 in Application 25909-A001. The post-construction comprehensive sound level survey must be conducted under representative operating conditions and in accordance with Rule 012: *Noise Control*. Capital Power shall file a report summarizing measurements and results of the post-construction comprehensive sound level survey with the Commission within one year of the Whitla Phase 3 Wind Power Plant turbines commencing operations.

31. The Commission has reviewed the conditions of approval in Approval 25780-D02-2020 for the Whitla Phase 1 Wind Power Plant and Whitla Phase 2 Wind Power Plant and has implemented the following changes for the Whitla Wind Project:

- conditions 1-3 and 5 have been updated to include the specifications of the Whitla Phase 3 Wind Power Plant
- conditions 4, 6 and 7 remain valid and have been updated for clarification
- conditions 8-18 remain valid and will remain conditions of approval for the Whitla Wind Project including the Whitla Phase 3 Wind Power Plant

32. There are currently no public safety standards or regulations in place associated with shadow flicker. The Commission accepts Stantec Consulting Ltd.'s conclusion that no residence would be affected by more than 30 hours per year or more than 30 minutes per day of shadow flicker. The Commission is satisfied that the shadow flicker effects of the wind power plant will be minimal.

33. For the reasons described above, the Commission considers approval of the application to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

## 5 Decision

34. Pursuant to sections 11 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 25909-A001 and grants Capital Power Generation Services Inc. the approval set out in Appendix 1 – Power Plant Approval 25909-D02-2021 – March 18, 2021, to alter and operate the Whitla Wind Project.

35. The appendix will be distributed separately.

Dated on March 18, 2021.

### **Alberta Utilities Commission**

*(original signed by)*

Neil Jamieson  
Panel Chair

*(original signed by)*

Cairns Price  
Commission Member

## Appendix A – Summary of Commission conditions of approval in the decision

This section is intended to provide a summary of all conditions of approval specified in the decision for the convenience of readers. Conditions that require subsequent filings with the Commission will be tracked as directions in the AUC's eFiling System. In the event of any difference between the 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 25909-D01-2021 that requires a subsequent filing with the Commission and will be included as a condition of Power Plant Approval 25909-D02-2021:

- Capital Power shall submit a summary of the results of the discussion held with Alberta Environment and Parks, including a description of any pre-emptive operational mitigation measures that Capital Power has agreed to implement. If new mitigation measures were agreed to, Capital Power must submit an updated construction and operation mitigation plan that incorporates the additional mitigation measures at least 60 days prior to the start of construction of the Whitla Phase 3 Wind Power Plant turbines.
- Capital Power shall submit an annual post-construction monitoring survey report to Alberta Environment and Parks (AEP) and the AUC for all three phases of the Whitla Wind Project, within 13 months of each wind power plant 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*.
- Capital Power shall conduct a post-construction comprehensive sound level survey, including an evaluation of low frequency noise, at receptors R13 and R26 in Application 25909-A001. The post-construction comprehensive sound level survey must be conducted under representative operating conditions and in accordance with Rule 012: *Noise Control*. Capital Power shall file a report summarizing measurements and results of the post-construction comprehensive sound level survey with the Commission within one year of the Whitla Phase 3 Wind Power Plant turbines commencing operations.