



**Alberta Electric System Operator  
Needs Identification Document Application**

**ATCO Electric Ltd.  
Facility Applications**

**Paintearth Wind Project Connection**

**March 24, 2021**

**Alberta Utilities Commission**

Decision 23206-D01-2021: Paintearth Wind Project Connection

Alberta Electric System Operator  
Needs Identification Document Application  
Proceeding 23206  
Application 23206-A001

ATCO Electric Ltd.  
Facility Applications  
Proceeding 23206  
Applications 23206-A002 to 23206-A006

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**Alberta Electric System Operator**  
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**ATCO Electric Ltd.**  
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**Applications 23206-A001 to 23206-A006**

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**1 Decision summary**

1. In this decision, the Alberta Utilities Commission considers whether to approve a needs identification document application from the Alberta Electric System Operator and facility applications from ATCO Electric Ltd. to connect the Paintearth Wind Project to the Alberta Interconnected Electric System. After consideration of the record of the proceeding, and for the reasons outlined in this decision, the Commission finds the Alberta Electric System Operator's assessment of the need to be correct and that approval of the proposed development is in the public interest, having regard to the social, economic, and other effects of the project, including its effect on the environment.

**2 Introduction and background**

2. On June 14, 2017, Paintearth Wind Project LP, by its general partner Paintearth Wind Project Ltd., filed applications with the Commission for approval of the Paintearth Wind Project and the associated Lane Lakes 973S Substation. The applications were considered in Proceeding 22726.

3. The Alberta Electric System Operator (AESO) subsequently filed a needs identification document application pursuant to Section 34 of the *Electric Utilities Act*, seeking approval to connect Paintearth Wind's Lanes Lake 973S Substation to the Alberta Interconnected Electric System (AIES). The application was registered on December 15, 2017, as Application 23206-A001.

4. ATCO Electric Ltd. also filed facility applications for approval to meet the need identified by the AESO (the project). The applications, filed pursuant to sections 14 and 15 of the *Hydro and Electric Energy Act*, were registered on December 15, 2017, as applications 23206-A002 to 23206-A006.

5. Pursuant to Section 15.4 of the *Hydro and Electric Energy Act*, the AESO and ATCO Electric requested that the Commission consider the needs identification document application and the facility applications jointly. The Commission advised the AESO and ATCO Electric that the applications had been combined and were being considered jointly as Proceeding 23206.

6. On December 4, 2018, the Commission granted Paintearth Wind's request to place Proceeding 22726 in abeyance.

7. After issuing information requests to the parties, the Commission ruled on March 8, 2018 that continuing to process the AESO and ATCO Electric connection project applications was premature because no decision had been made on the Paintearth Wind Project applications.<sup>1</sup>

8. The Paintearth Wind Project was approved, with a total generating capability of 151.2 megawatts (MW), in Decision 22726-D01-2020 issued on January 22, 2020.<sup>2</sup>

9. As stated in its January 27, 2020 letter, the Commission resumed consideration of the connection project applications for the Paintearth Wind Project in this proceeding. However, the proceeding was once again put in abeyance on February 7, 2020 at the request of the AESO.<sup>3</sup> The Commission resumed processing the connection project applications following the AESO's filing of an amendment to the needs identification document on December 3, 2020.

10. The Commission issued notice of the applications on January 19, 2021, in accordance with Rule 001: *Rules of Practice*. No submissions were received in response to the notice.

### **3 Discussion**

#### **3.1 Needs Identification document application**

11. The AESO received a system access service request from Paintearth Wind to connect its Paintearth Wind Project to the AIES in the Paintearth area. Paintearth Wind requested a new rate supply transmission service with a contract capacity of 150 MW and a new rate demand transmission service with a contract capacity of 1 MW.

12. The AESO has applied for an in-and-out connection to Transmission Line 9L93, which consists of constructing a new substation, designated as the Pioneer 805S Substation, and altering existing Transmission Line 9L93 to connect it to the substation. In addition, a new 240-kilovolt (kV) transmission line, designated as Transmission Line 9L119, would be constructed to connect the new substation to Paintearth Wind's approved Lanes Lake 973S Substation.

13. The AESO explored other alternatives to meet the need. One alternative was determined to be technically feasible and would require less transmission development thereby reducing the overall cost. For this reason, the AESO determined that this was its preferred alternative. However, Paintearth Wind indicated to the AESO that it did not wish to proceed with the alternative due to scheduling conflicts and that it would assume the additional costs of the applied-for project. The AESO consequently eliminated the preferred alternative from further study.

14. In response to an AUC information request, the AESO clarified that changing to the preferred alternative would delay the connection by six to eight months, which would not meet the business needs of Paintearth Wind.

15. The AESO explained that ATCO Electric had determined that there would be minimal reduction in land impacts between the project as proposed and the preferred alternative; that while both alternatives would require the addition of similar lengths of lines, the preferred

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<sup>1</sup> Exhibit 23206-X0044, AUC letter Re: Proceeding abeyance, March 8, 2018.

<sup>2</sup> Decision 22726-D01-2020: Paintearth Wind Project LP, by its general partner Paintearth Wind Project Ltd., – Paintearth Wind Project, Proceeding 22726, Applications 22726-A001 to 22726-A003, January 22, 2020.

<sup>3</sup> Exhibit 23206-X0051, AUC letter - Request to keep Proceeding 23206 in abeyance, February 7, 2020.

alternative would require less equipment and therefore have a reduced footprint. The AESO stated that because no stakeholders had raised concerns with the applied-for development, the potential minor reduction in stakeholder impacts from a reduced footprint did not offset the schedule and cost implications to the market participant of proceeding with the preferred alternative.<sup>4</sup>

16. The AESO completed engineering studies to assess the impact of the applied-for development on the performance of the AIES. Although the AESO did identify potential pre-connection system performance issues, it found in its engineering connection assessment that the applied-for development was technically viable, and concluded that:

At this time, the identified Category A thermal criteria violations are not expected to result in congestion under Category A conditions. However, closer to the [in-service date], if the AESO determines that congestion will arise under Category A conditions, the AESO will make an application to the AUC to obtain approval for an “exception” under Section 15(2) of the *Transmission Regulation*.

The connection assessment also identified a number of Category B pre-Project and post-Project system performance issues. These issues can be mitigated through the modification of planned RASs 134, 138 and 139 and real-time operational practices, alone or in combination, as appropriate. With implementation of these mitigation measures, connecting the project with Alternative 2 does not adversely affect the performance of the AIES.<sup>5</sup>

17. The AESO directed ATCO Electric to file facility applications to meet the need identified and to assist the AESO in conducting a participant involvement program for its needs identification document application.

### **3.2 Facility applications**

18. In its facility applications, ATCO Electric proposed to:

- Construct a 240-kV switching station designated as Pioneer 805S Substation in Legal Subdivision 12, Section 23, Township 38, Range 15, west of the Fourth Meridian.
- Construct approximately 12 kilometres of single-circuit 240-kV transmission line, designated as 9L119, connecting the proposed Pioneer 805S Substation to Paintearth Wind’s Lanes Lake 973S Substation.
- Construct approximately 100 metres of two new 240-kV single-circuit transmission lines, designated as 9L175 and 9L93, connecting the proposed Pioneer 805S Substation to the AIES.
- Redesignate a portion of single-circuit 240-kV Transmission Line 9L93 between the existing Tinchebray 972S Substation and the proposed Pioneer 805S Substation to Transmission Line 9L175.
- Construct a temporary bypass on existing Transmission Line 9L93.

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<sup>4</sup> Exhibit 23206-X0079, AESO-AUC-2021FEB11-001, PDF page 2.

<sup>5</sup> Exhibit 23206-X0059, Appendix A - Connection Assessment Part 1 of 6, PDF Page 38.

19. ATCO Electric conducted a participant involvement program, which it submitted was in accordance with the requirements of Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*. It notified or consulted with project stakeholders including landowners, government agencies and industry stakeholders.
20. ATCO Electric stated that structures or right-of-way placement may be shifted within 15 metres of the proposed centreline in response to specific environmental features, landholder discussions, or the location of buried facilities. Where shifts are necessary, ATCO Electric stated it would work with affected landowners to ensure issues or concerns are addressed.
21. ATCO Electric identified temporary workspace areas and access trails that would be necessary to construct the project. Workspace areas would be located outside of the 26-metre right-of-way and would be required for structure assembly, turn around and conductor stringing activities. Landholders affected by the temporary workspace areas were sent project notification packages entitled “Paintearth Transmission Project Temporary Bypass and Workspace Information Packages.” ATCO Electric stated that although its notification package included an opportunity to return a reply form with concerns or to request a meeting, no requests or concerns were raised.
22. ATCO Electric indicated that the County of Paintearth No. 18 Municipal Development Plan (MDP) lists agriculture as the most important land use in the rural area, and states that utility lines should be located in a manner to minimize impacts on agricultural operations. ATCO Electric stated that the proposed project supports the MPD by routing along existing disturbances, minimizing impacts to farming and avoiding unnecessary fragmentation.
23. The proposed transmission line route and substation site would be located outside of any inter-municipal development plan, area structure plans, conservation areas or potential recreation and tourism areas defined in the MDP.
24. ATCO Electric retained Matrix Solutions Inc. to prepare an environmental evaluation of the project. In its evaluation, Matrix Solutions concluded that the project is not expected to materially affect environmental features. In support of its conclusion, Matrix Solutions indicated that it would be developed on private land, the majority of which has been cultivated, and that all identified residual effects were insignificant.
25. ATCO Electric stated that it does not anticipate that construction or operation would result in loss of or permanent impacts to wetlands. It would take steps to mitigate all construction activities in, or adjacent to, wetlands by following all techniques listed in its project environmental protection plan, the *Water Act* code of practice, and industry best practices.
26. ATCO Electric contacted Albert Environment and Parks (AEP) in February 2017. In August 2017, it received support for the proposed routing from the AEP wildlife biologist, who agreed with ATCO Electric’s plan to conduct sharp-tailed grouse and amphibian surveys and recommended additional sensitive raptor surveys, to which ATCO Electric agreed.
27. ATCO Electric stated it would implement appropriate setbacks/timing restriction following consultation with AEP if key wildlife features (e.g., amphibian breeding wetlands) were detected during supplemental wildlife surveys.

28. ATCO Electric did not file a noise impact assessment because the proposed equipment for the Pioneer 805S Substation is not expected to be noise-producing.

29. ATCO Electric estimated the cost of the project to be \$28.0 million (plus 20 per cent/minus 10 per cent), with all costs allocated to Paintearth Wind. The target in-service date for the project is April 1, 2023.

#### **4 Findings**

30. The Commission is satisfied that the needs identification document application filed by the AESO contains all the information required by the *Electric Utilities Act*, the *Transmission Regulation* and Rule 007.

31. While the applied-for development is not the AESO's preferred alternative, Paintearth Wind requested that the project be constructed as proposed and is prepared to pay the additional costs. Because the other differences between the project's footprint and the AESO's preferred alternative are minimal, the Commission finds that it was reasonable for the AESO to apply for the development favoured by the market participant.

32. No interested party demonstrated that the AESO's assessment of the need to connect the Paintearth Wind Project is technically deficient or that approval of the needs identification document application is not in the public interest. Therefore, the Commission considers the AESO's assessment of the need to be correct, in accordance with Subsection 38(e) of the *Transmission Regulation*, and approves the AESO's needs identification document application.

33. The Commission finds that the facility applications, filed by ATCO Electric pursuant to sections 14, 15, 18 and 19 of the *Hydro and Electric Energy Act*, comply with the information requirements prescribed in Rule 007. The facility applications are also consistent with the need identified in the AESO's needs identification document application.

34. The Commission is satisfied that the joint participant involvement program undertaken by the AESO and ATCO Electric meets the requirements of Rule 007.

35. The Commission is also satisfied that environmental impacts would not be significant as the project footprint is mostly on cultivated and private land and ATCO Electric does not anticipate any impacts to wetlands. The Commission expects that ATCO Electric will continue to engage with AEP, as required, should sensitive species or wildlife features be identified in supplemental wildlife surveys.

36. Given the considerations discussed above, the Commission finds the proposed project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

#### **5 Decision**

37. Pursuant to Section 34 of the *Electric Utilities Act*, the Commission approves the need outlined in Application 23206-A001 and grants the Alberta Electric System Operator the approval set out in Appendix 1 – Needs Identification Document Approval 23206-D02-2021 – March 24, 2021.

38. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 23206-A002 and grants ATCO Electric Ltd. the approval set out in Appendix 2 – Permit and Licence 23206-D03-2021 – March 24, 2021, to construct and operate the Pioneer 805S Substation.

39. Pursuant to sections 14, 15 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 23206-A003 and grants ATCO Electric Ltd. the approval set out in Appendix 3 – Permit and Licence 23206-D04-2021 – March 24, 2021, to construct and operate Transmission Line 9L119.

40. Pursuant to sections 14, 15, 19 and 21 of the *Hydro and Electric Energy Act*, the Commission approves Application 23206-A004 and grants ATCO Electric Ltd. the approval set out in Appendix 4 – Permit and Licence 23206-D05-2021 – March 24, 2021, to alter, operate and redesignate a portion of Transmission Line 9L93 as Transmission Line 9L175 and to construct and operate a temporary bypass of the transmission line.

41. Pursuant to sections 14, 15, 19 and 21 of the *Hydro and Electric Energy Act*, the Commission approves Application 23206-A005 and grants ATCO Electric Ltd. the approval set out in Appendix 5 – Permit and Licence 23206-D06-2021 – March 24, 2021, to alter and operate Transmission Line 9L93.

42. Pursuant to sections 14, 15, 18 and 19 of the *Hydro and Electric Energy Act*, the Commission approves Application 23206-A006 and grants ATCO Electric Ltd. the approval set out in Appendix 5 – Connection Order 23206-D07-2021 – March 24, 2021, to connect Transmission Line 9L119 to Lanes Lake 973S Substation.

43. The appendices will be distributed separately.

Dated on March 24, 2021.

### **Alberta Utilities Commission**

*(original signed by)*

Anne Michaud  
Vice-Chair