



## **Garden Plain Wind Power Plant Connection Project**

**Garden Plain Wind Energy I Inc.  
Facility Application**

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

**AltaLink Management Ltd.  
Facility Application**

**ATCO Electric Ltd.  
Facility Applications**

**July 9, 2021**

**Alberta Utilities Commission**

Decision 26439-D01-2021

Alberta Electric System Operator  
Garden Plain Wind Power Plant Connection Project Needs Identification Document  
Application 26439-A001

Garden Plain Wind Energy I Inc.  
Garden Plain Wind Power Plant Connection Project Facility Application  
Application 26439-A002

AltaLink Management Ltd.  
Garden Plain Wind Power Plant Connection Project Facility Application  
Application 26439-A003

ATCO Electric Ltd.  
Garden Plain Wind Power Plant Connection Project Facility Applications  
Applications 26439-A004 to 26439-A006

Proceeding 26439

July 9, 2021

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](mailto:info@auc.ab.ca)

Website: [www.auc.ab.ca](http://www.auc.ab.ca)

The Commission may, within 30 days of the date of this decision and without notice, correct typographical, spelling and calculation errors and other similar types of errors and post the corrected decision on its website.

## Contents

<b>1</b>	<b>Decision summary .....</b>	<b>1</b>
<b>2</b>	<b>The applications .....</b>	<b>1</b>
2.1	Garden Plain Wind Energy I Inc. facility application .....	2
2.2	Alberta Electric System Operator needs identification document application .....	3
2.3	ATCO Electric Ltd. facility applications .....	4
<b>3</b>	<b>AltaLink Management Ltd. facility application.....</b>	<b>6</b>
<b>4</b>	<b>Decision.....</b>	<b>9</b>

## List of figures

<b>Figure 1.</b>	<b>Proposed ATCO transmission facilities .....</b>	<b>5</b>
<b>Figure 2.</b>	<b>Proposed AltaLink fibre optic cable .....</b>	<b>7</b>

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

**Garden Plain Wind Energy I Inc.,  
ATCO Electric Ltd. and AltaLink Management Ltd.  
Garden Plain Wind Power Plant Connection Project  
Facility Applications**

**Decision 26439-D01-2021  
Proceeding 26439  
Applications 26439-A001 to 26439-A006**

---

**1 Decision summary**

1. In this decision, the Alberta Utilities Commission approves a needs identification document application from the Alberta Electric System Operator and facility applications from Garden Plain Wind Energy I Inc., ATCO Electric Ltd. and AltaLink Management Ltd. for the proposed Garden Plain Wind Power Plant Connection Project. For the reasons that follow, the Commission finds that approval of the Garden Plain Wind Energy I Inc., AltaLink Management Ltd. and ATCO Electric Ltd. applications, is in the public interest having regard to the social, economic, and other effects of the proposed facilities, including their effect on the environment.

**2 The applications**

2. Garden Plain Wind Energy I Inc. has approval from the Commission to construct and operate a 130-megawatt (MW) wind power plant, designated as the Garden Plain Wind Power Project in the Sullivan area<sup>1</sup> (the wind project).

3. The applications in this proceeding seek approval of the need for and facilities required to connect the wind project to the Alberta Interconnected Electric System (the grid).

4. Building a new transmission facility in Alberta requires two applications. The first, a needs identification document application (needs application), is filed by the Alberta Electric System Operator (AESO) explaining why a new transmission facility is required. The second, a transmission facility application, is filed by a transmission facility owner proposing equipment to meet the AESO's identified need having regard for factors that include location, detailed design and routing considerations as well as consultation with potentially affected persons. Under Section 15.4 of the *Hydro and Electric Energy Act*, the Commission may consider the needs and facility applications together in a single proceeding, as was done here.

5. In this proceeding, Garden Plain applied to the Commission for approval to construct and operate the Garden Plain 1045S Substation (the proposed substation), which will allow the connection of the wind project to the grid.

6. In advance of its application to the Commission, Garden Plain also requested system access service from the AESO to connect the wind project<sup>2</sup> to the grid. In response to that

---

<sup>1</sup> Power Plant Approval 26499-D02-2021, Proceeding 26499, Application 26499-A001, May 19, 2021.

<sup>2</sup> Power Plant Approval 26499-D02-2021, Proceeding 26499, Application 26499-A001, May 19, 2021.

request, the AESO filed a needs application with the Commission proposing: the construction of a new 240-kilovolt (kV) transmission circuit (line), to connect the proposed substation to the existing 240-kV Transmission Line 9L59 using a T-tap configuration; and, to add or modify other equipment necessary for proper integration of the wind project into the grid.

7. Concurrently, ATCO and AltaLink each filed facility applications requesting approval from the Commission for the specific equipment proposed to meet the need identified by the AESO.

8. Details of each application and the Commission's reasons for approving them are addressed in the sections that follow.

## **2.1 Garden Plain Wind Energy I Inc. facility application**

9. Garden Plain's application seeks approval to construct and operate a collector substation for the wind project. A collector substation is a substation where all of the collector lines from each of the Garden Plain wind power plant wind turbines would terminate.

10. The proposed substation would contain the following major equipment:

- one 240/34.5-kV, 78/116/156-megavolt ampere (MVA) transformer
- one 245-kV circuit breaker
- six 38-kV circuit breakers
- one capacitor bank

11. Garden Plain explained that while it had applied for a 20-MVA reactive capacitor bank, the size would not be finalized until further studies are completed.<sup>3</sup> Garden Plain stated that if a different size capacitor bank is required, it would file an amendment application.

12. The Commission is satisfied that the facility application filed by Garden Plain, under sections 14, 15, and 19 of the *Hydro and Electric Energy Act*, complies with the information requirements prescribed in Rule 007: *Applications for Power Plants, Substations, Transmission Lines, Industrial System Designations and Hydro Developments*.

13. The Commission is also satisfied that Garden Plain's participant involvement program meets the requirements of Rule 007. Garden Plain conducted a participant involvement program for the substation, which it submitted was in accordance with the requirements of Rule 007. The record reflects that Garden Plain notified or consulted with landowners, agencies and potentially interested parties. Garden Plain confirmed that there are no outstanding or unresolved stakeholder concerns. Based on the foregoing and the absence of any objections filed in response to the Commission's application notice, the Commission finds that Garden Plain's participant involvement program met the objectives of effective consultation.

14. Garden Plain submitted a noise impact assessment (NIA) which predicted the cumulative sound levels for the wind project and proposed substation. The NIA predicted that cumulative sound levels produced by the wind turbines, the proposed substation and other energy-related

---

<sup>3</sup> Exhibit 26439-X0076, Information request response, PDF page 2.

facilities in the area, combined with the ambient sound level, would be lower than the permissible sound level under the Commission's Rule 012: *Noise Control*. On the basis of the NIA, the Commission accepts that the proposed substation would comply with Rule 012.

15. Garden Plain stated that the proposed substation was assessed as part of the environmental evaluation conducted for the wind project in Proceeding 23651 and the location and size of the proposed substation remains the same as that reviewed by Alberta Environment and Parks (AEP) at that time. Garden Plain highlighted that in an April 11, 2018 renewable energy referral report for the combined wind project and substation, AEP concluded that the risk to habitat loss and destruction would be considered low, as the substation footprint and project infrastructure (e.g., turbines, access roads, collector lines) avoid native habitats and would be primarily sited on pre-disturbed lands. Garden Plain confirmed its commitment to uphold all environmental mitigation measures applicable to the proposed substation that were committed to in the environmental evaluation for Proceeding 23651.

16. In Proceeding 23651, the Commission found that any potentially adverse effects from construction and operation of the wind project (including the anticipated, but not then applied-for substation) could be adequately mitigated with diligent application of the mitigation measures outlined in the wind project's renewable energy referral report. As there has been no change to the location or size of the proposed substation since that determination, the Commission remains of the view that the potential environmental effects associated with the proposed substation can be adequately mitigated through Garden Plain's adherence to and diligent application of the mitigation measures outlined in the renewable energy referral report for the wind project. The Commission accordingly expects Garden Plain to follow all of the environmental mitigation measures outlined in that report.

17. The April 11, 2018 renewable energy referral report for the combined wind project and substation is valid until April 11, 2023. In the event that the substation construction has not commenced by the expiry date of the referral report, the Commission expects that an updated referral report will be obtained and submitted to the Commission.

18. Based on the above findings, the Commission considers the proposed substation to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act* and it approves Garden Plain's application.

## **2.2 Alberta Electric System Operator needs identification document application**

19. Under Section 34 of the *Electric Utilities Act*, the AESO is required to submit a needs application when it determines that an expansion of the transmission system is required and to file that application with the Commission for approval. Under Subsection 34(1)(c), the AESO must file a needs application in response to a request for system access service from a market participant. In this case, the AESO's needs application was filed in response to Garden Plain's request for system access service to connect the wind project to the grid.

20. When considering whether to approve a needs application, the Commission must determine if the application has met the requirements of the *Electric Utilities Act*, the *Transmission Regulation*, and Rule 007. If the Commission determines the requirements have been met, then the Commission must consider the needs application in accordance with Subsection 38(e) of the *Transmission Regulation*.

21. The Commission finds that the AESO's needs application contains all of the information required by the *Electric Utilities Act*, the *Transmission Regulation* and Rule 007. The Commission has also reviewed the joint participant involvement program undertaken by the AESO, ATCO and AltaLink (the joint participant involvement program) and finds that it meets the requirements of Rule 007.

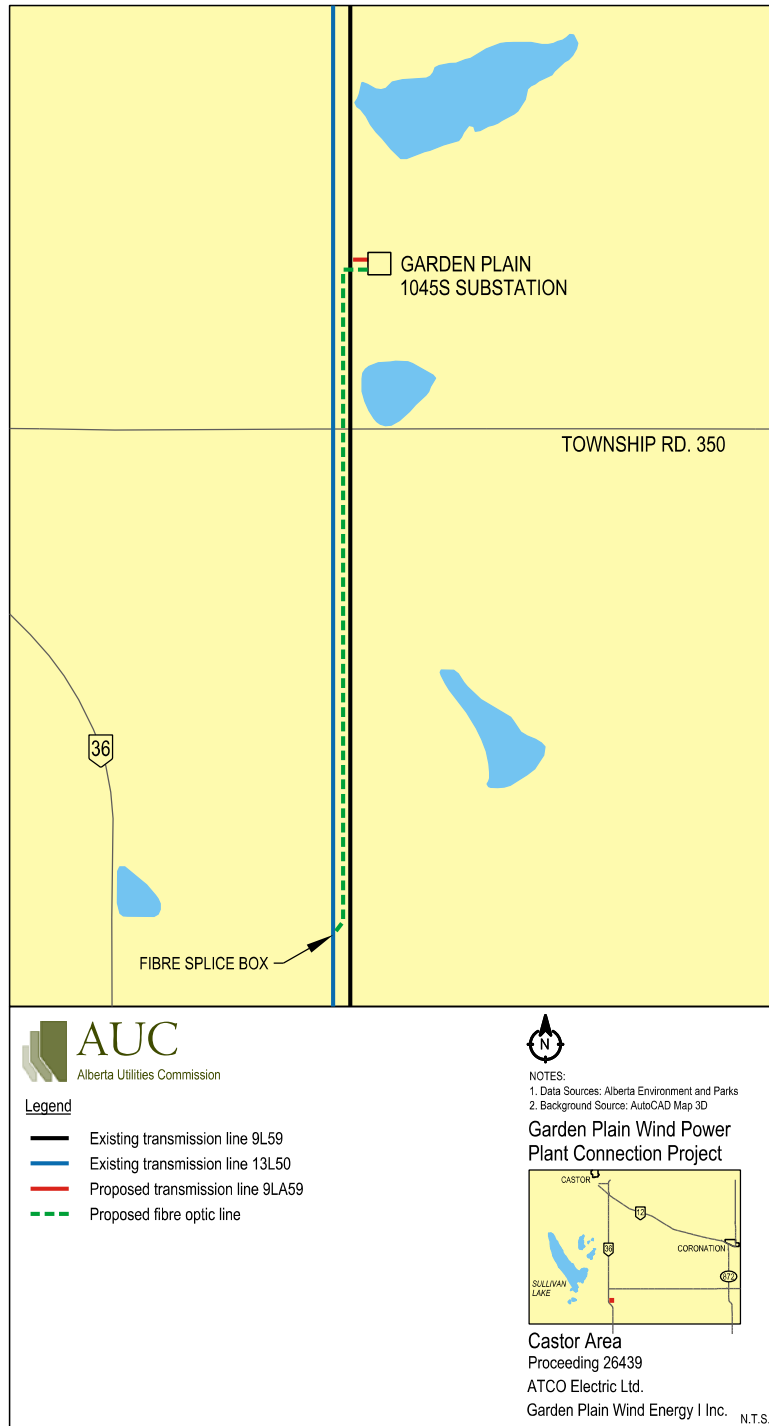
22. Having made the above findings, Subsection 38(e) of the *Transmission Regulation* requires the Commission to consider the AESO's assessment of the need to be correct unless an interested person satisfies it that the AESO's assessment of the need is technically deficient, or approval of the application is not in the public interest. In this case, no person intervened in the proceeding to dispute the AESO's assessment of the need. The Commission therefore considers that the AESO's assessment of the need is correct and approves the AESO's needs application.

### **2.3 ATCO Electric Ltd. facility applications**

23. ATCO applied for approval to: construct and operate approximately 160 metres of 240-kV transmission line, designated as Transmission Line 9LA59, which would connect the proposed substation to a tap point on the existing Transmission Line 9L59; modify the existing Transmission Line 9L59 by adding one structure (377A) and a T-tap configuration; and, install approximately two kilometres of telecommunications fibre optic cable along Transmission Line 9LA59 and on the east side of the Transmission Line 13L50 right-of-way (collectively, the ATCO project). ATCO also applied for a connection order to connect Transmission Line 9LA59 to the proposed substation.

24. ATCO stated that it selected the proposed route for the new Transmission Line 9LA59 because it is the most direct route between the existing Transmission Line 9L59 and the proposed substation and it avoids conflict with the wind power plant design surrounding the substation. It further explained that the alterations and T-tap connection to the existing Transmission Line 9L59 would be sited within the line's existing right-of-way. The routing of Transmission Line 9LA59 is shown in Figure 1.

Figure 1. Proposed ATCO transmission facilities



25. ATCO’s proposed route for the underground telecommunications fibre optic cable would also be located in an existing right-of-way. The fibre optic cable would run between the proposed substation and an existing telecommunications splice box on Transmission Line 13L50 as shown in Figure 1.



26. ATCO stated that its project is not expected to have adverse environmental effects; but, any residual effects will be insignificant due to the limited size of the project footprint and siting within areas with pre-existing disturbances.<sup>4</sup> It committed to comply with the environmental protection plan for the ATCO project and with any direction provided by AEP.
27. The Commission finds that the facility applications filed by ATCO under 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 application and the requirements of the AESO functional specification.
28. As stated, the Commission is satisfied that the joint participant involvement program meets the requirements of Rule 007. ATCO has confirmed that there were no objections to its project and no objections to the ATCO project were received in response to the Commission's notice of applications. Based on the foregoing, the Commission considers ATCO's consultation program met the goal of effective consultation.
29. Based on the environmental evaluation, the Commission is also satisfied that the potential for adverse environmental effects from the ATCO project is limited due to the size of the project footprint and siting within areas with pre-existing disturbances. Further, the Commission considers that any potential adverse effects can be reasonably mitigated through ATCO's diligent implementation of and adherence to the mitigation measures set out in its environmental protection plan. The Commission accordingly expects ATCO to follow all of the environmental mitigation measures set out in that plan.<sup>5</sup>
30. Based on the above findings, the Commission considers approval of ATCO's applications, to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

### 3 AltaLink Management Ltd. facility application

31. AltaLink filed an application for approval to construct and operate a four-kilometre underground fibre optic cable to support the connection of the wind project to the grid. This cable would connect AltaLink's telecommunications network to ATCO's telecommunications network. These networks are part of the transmission system and transfer telecommunication signals to enable active monitoring of the grid, ensuring safe and reliable operation. The route of the cable would be from an existing splice box on Structure 391 of ATCO's Eastern Alberta Transmission Line (Transmission Line 13L50) to AltaLink's existing North Holden 395S Substation, as shown by the red dashed line in Figure 2. AltaLink also applied to modify existing and install new protection and control, supervisory control and data acquisition (SCADA) and telecommunications equipment at the North Holden 395S, Buffalo Creek 526S, and Jarrow 252S substations, and to install new telecommunications equipment inside the existing control building at ATCO's Oakland 946S Substation. The need for this equipment was outlined in the needs application and the AESO's functional specification set out the protection and control; SCADA;

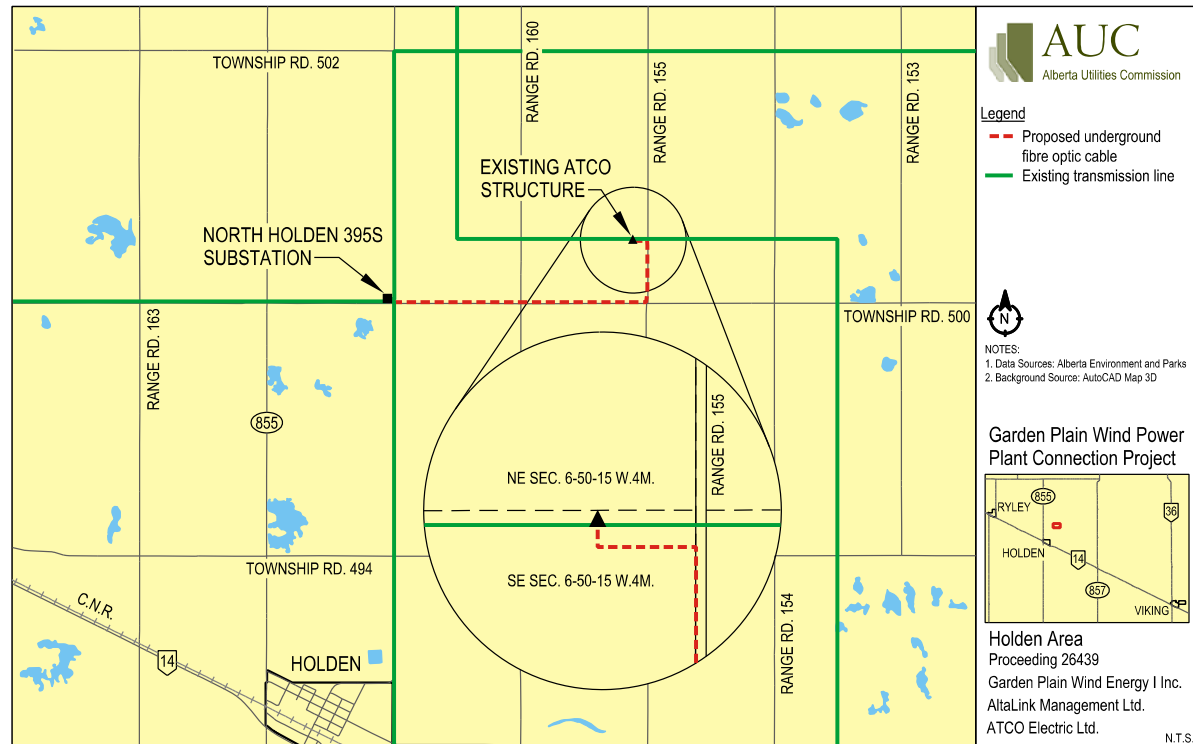
---

<sup>4</sup> Exhibit 26439-X0048, Environmental Evaluation, PDF page 34.

<sup>5</sup> Exhibit 26439-X0056, Environmental Protection Plan.

and telecommunications requirements. Collectively, the proposed fibre optic cable and related facilities are referred to as the AltaLink project.

Figure 2. Proposed AltaLink fibre optic cable



32. The Commission finds that the facility application filed by AltaLink under sections 14, 15, 18, 19 and 21 of the *Hydro and Electric Energy Act*, complies with the information requirements prescribed in Rule 007 and is consistent with the need identified in the AESO's needs application as well as the requirements of the AESO functional specification.

33. As stated, the joint participant involvement program satisfies the requirements of Rule 007. The record reflects that AltaLink responded to stakeholder concerns where raised, and the Commission received no objections to the AltaLink project in response to its application notice. The Commission is therefore satisfied that AltaLink's consultation program met the goal of effective consultation.

34. For the reasons that follow, the Commission also finds the AltaLink project to be in the public interest in accordance with Section 17 of the *Alberta Utilities Commission Act*.

35. AltaLink's evidence identifies that the route for the fibre optic cable was determined based on the consideration that Eastern Alberta Transmission Line Structure 391 is the closest ATCO structure to the North Holden 395S Substation. The Commission further notes that almost the entire length of the proposed fibre optic cable is located within a road allowance, requiring no additional right-of-way on private land. For that 230-metre section that is not located in the road allowance, where an additional five-metre right-of-way is required, the fibre optic cable will be located on private land that is within ATCO's existing right-of-way for Transmission

Line 13L50. The Commission considers that locating the proposed fiber optic cable within existing road allowances and rights-of-way minimizes the potential for adverse effects on adjacent landowners and it notes that AltaLink has stated that landowners will continue to have full use of that area after construction is completed.

36. The Commission considers that the proposed routing's alignment with existing linear disturbances also lessens any potential environmental effects associated with the AltaLink project. Further, the Commission accepts AltaLink's environmental evaluation, which concluded that no adverse environmental effects are anticipated from the AltaLink project if the mitigation measures identified in the Project Specific Environmental Requirements document are implemented.<sup>6</sup> On the basis of that document and the environmental evaluation, the Commission is satisfied that with implementation of the proposed mitigation measures, the AltaLink project is unlikely to result in significant adverse environmental effects. The Commission accordingly, expects AltaLink to follow all of the environmental mitigation measures set out in the Project Specific Environmental Requirements document.

37. AltaLink noted in its application that the fibre optic cable is not considered major equipment and it therefore was applying for approval under Section 19 of the *Hydro and Electric Energy Act*. However, should the Commission consider it necessary to issue a permit and licence for its project, AltaLink also applied, in the alternative, under sections 14 and 15, for a permit and licence to construct the facilities. While the Commission agrees that generally it is unnecessary to issue a separate permit and licence to construct and operate fibre optic cable telecommunications facilities, in this case the facilities are being proposed as a stand-alone project, geographically separated from the transmission facilities being proposed by ATCO. As a result, in this particular situation, the Commission considers it appropriate to issue a permit and licence for AltaLink's applied-for fibre optic cable.

38. The Commission also notes that the proposed fibre optic cable will connect AltaLink's telecommunications network to ATCO's telecommunications network. The Commission considers that a connection order is necessary under Section 18 of the *Hydro and Electric Energy Act*, which requires that an order be given for the owner of a transmission line to connect its transmission line to any other transmission line. This applies to the fibre optic cable given that the *Hydro and Electric Energy Act* defines a transmission line to be inclusive of operational and control devices and all property used in connection with operation of the transmission line.

39. The facilities identified as the AltaLink project have also been applied for by AltaLink in Proceeding 26176, in relation to the Lanfine North Wind Power Plant Connection Project. AltaLink stated that the proposed facilities will only be built once but that it filed two applications for the same scope of work so that if either the Garden Plain or Lanfine project is delayed or cancelled, the other project can still proceed. The Commission will issue the permit and licence and connection order for the fibre optic cable in this proceeding only.

---

<sup>6</sup> Exhibit 26176-X0022, Appendix F Environmental Supporting Documents.

## 4 Decision

40. The Commission approves Application 26439-A002, under sections 14, 15, and 19 of the *Hydro and Electric Energy Act*, and grants Garden Plain Wind Energy I Inc. the following approval set out in an appendix to this decision:

- Substation Permit and Licence 26439-D02-2021 – July 9, 2021, to construct and operate the Garden Plain 1045S Substation for the Garden Plain Wind Power Project (Appendix 1).

41. The Commission approves the needs identification document application, under Section 34 of the *Electric Utilities Act*, and grants the Alberta Electric System Operator the following approval set out in an appendix to this decision:

- Needs Identification Document Approval 26439-D03-2021 – July 9, 2021 (Appendix 2).

42. The Commission approves applications 26439-A004 to 26439-A006, under sections 14, 15, 18 and 19 of the *Hydro and Electric Energy Act*, and grants ATCO Electric Ltd. the following approvals set out in appendices to this decision:

- Transmission Line Permit and Licence 26439-D04-2021 – July 9, 2021, to alter Transmission Line 9L59 (Appendix 3).
- Transmission Line Permit and Licence 26439-D05-2021 – July 9, 2021, to construct and operate Transmission Line 9LA59 (Appendix 4).
- Connection Order 26439-D06-2021 – July 9, 2021, to connect Transmission Line 9LA59 to the Garden Plain 1045S Substation (Appendix 5).

43. The Commission approves Application 26439-A003, under sections 14, 15, 18, 19 and 21 of the *Hydro and Electric Energy Act*, and grants AltaLink Management Ltd. the following approvals set out in appendices to this decision:

- Transmission Line Permit and Licence 26439-D07-2021 – July 9, 2021, to construct and operate a fibre optic cable (Appendix 6).
- Connection Order 26439-D08-2021 – July 9, 2021, to connect the fibre optic cable to ATCO Electric Ltd.'s Eastern Alberta Transmission Line (Appendix 7).

44. The appendices will be distributed separately.

45. As noted above, AltaLink applied for the same scope of work in Proceeding 26176. Should the AltaLink facilities approved in this decision be cancelled or delayed, the Permit and Licence 26439-D07-2021 and Connection Order 26439-D08-2021 will not be automatically cancelled or delayed. Instead, the impact on Permit and Licence 26439-D07-2021 and Connection Order 26439-D08-2021 must be considered in conjunction with the status of the Lanfine North Wind Power Connection Project in Proceeding 26176.

Dated on July 9, 2021.

**Alberta Utilities Commission**

*(original signed by)*

Carolyn Hutniak  
Commission Member