

December 13, 2023

Notified Market Participant Corporate Legal Name
Address Line 1.
Address Line 2.
City, Province, Postal Code.

Dear Notified Market Participant Primary Contact:

Re: Need for the Halkirk 2 Wind Power Project Connection in the Halkirk area

The Alberta Electric System Operator (AESO) would like to advise you that Capital Power (Halkirk 2) L.P. (Capital Power) has applied for transmission system access to connect its approved Halkirk 2 Wind Power Project (approved Facility) to the Alberta interconnected electric system (AIES) in the AESO's Central Planning Region.

The purpose of this letter is to advise you that the AESO has identified that, under credible worse case forecast conditions, the **[Effective Generation Facility Name]** (**[Effective Generation Facility Asset ID]**) may be curtailed following the connection of the planned Facility.

Connection Assessment Findings

An engineering connection assessment was carried out by the AESO in order to assess the transmission system performance following the connection of the approved Facility.¹ The connection assessment identified the potential for thermal criteria violations under credible worse case forecast conditions on the following transmission elements, with all transmission facilities in service (Category A):

- the 138 kV/144 kV transmission lines 174L, 701L, 704L, 749L, 7L16, 7L117, 7L50, 7L159, and 7L701;
- the 240 kV transmission lines 912L; 9L16; and 9L20; and
- the transformer at the Nevis 766S substation.

The approved Central East Transfer-Out project (CETO),² will alleviate the thermal criteria violations observed on the 240 kV transmission lines and reduce the overloads on the 144 kV system under Category A conditions. ATCO Electric Ltd., will be upgrading the transformer at the Nevis 766S substation to a higher capacity under its capital maintenance program, which will address the thermal criteria violations at the Nevis 766S substation under Category A conditions. Furthermore, the AESO is developing a system plan to address thermal criteria violations on the 144 kV system in the Hanna and Sheerness areas.³ Should the AESO determine that mitigation is required to address potential thermal criteria violations under Category A

¹ The studies were performed assuming the Rate STS, *Supply Transmission Service*, contract capacity of 150 MW.

² More information about the approved CETO Project is available on the AESO website. Construction is commencing for Stage 1, with an anticipated in-service date of Q2 2026.

³ More information about this plan was provided at the Grid Reliability Update Stakeholder Session held on November 23, 2023; session materials are available on the AESO website.

conditions after Stage 1 of CETO is in service, the AESO may develop operational procedures or other mitigation measures.

In addition, thermal and voltage criteria violations were identified when a single transmission facility is out of service (Category B) following the connection of the approved Facility. To mitigate these potential system performance issues, planned RASs, 199, 200, 201, and 202 will be used. In addition, planned RASs 134, 211 and 215 will be modified by adding the approved Facility to the RAS logic, which will curtail the approved Facility upon activation. The total megawatts tied to RAS 134 exceeds the Maximum Severe Single Contingency (MSSC) limit. Therefore, pre-contingency curtailment of projects assigned to the RAS may be required under the Category A condition, to prevent generation loss above the MSSC limit during Category B conditions.

The AESO may also make use of real-time operational measures to mitigate these potential system performance issues, in accordance with [Section 302.1 of the ISO rules, Real Time Transmission Constraint Management](#) (TCM Rule), which is in effect today. When applied, the TCM Rule could result in the AESO issuing directives for curtailment to source assets that are effective in managing a constraint.

The connection assessment identified source assets, including the [**Effective Generation Facility Asset ID**], which are effective in mitigating the potential transmission constraints.

The AESO will continue to monitor the pace of generation development and will notify market participants if it determines that it is necessary to obtain approval for an “exception” under Section 15(2) of the *Transmission Regulation*. The AESO will notify market participants if and when the AESO determines it is necessary to apply to the Alberta Utilities Commission (AUC) for approval of such an exception.

For Further Information

The AESO Need Overview document, which describe the AESO’s proposed transmission development to connect the approved Facility to the AIES, is attached for your information.

The engineering connection assessment will be included in the AESO’s NID Application for the Halkirk 2 Wind Power Project Connection. Following submission of the NID application to the AUC, the NID application will be posted on the AESO website at: <https://www.aeso.ca/grid/transmission-projects/>. Stakeholders will be notified when this occurs via the AESO website and stakeholder newsletter.

If you have any questions or concerns, please contact the AESO at 1-888-866-2959 or stakeholder.relations@aeso.ca

Attachments:

AESO Need Overview: *Need for the Halkirk 2 Wind Power Project Connection in the Halkirk area*

Need for the Halkirk 2 Wind Power Project Connection in the Halkirk area

Capital Power (Halkirk 2) L.P. (Capital Power) has applied to the AESO for transmission system access to connect its approved Halkirk 2 Wind Power Project (Facility) in the Halkirk area. Capital Power's request can be met by the following solution:

PROPOSED SOLUTION

- Add one 240 kilovolt (kV) transmission line to connect the Facility to the existing 240 kV transmission line 9L16 using a T-tap configuration.
- Add or modify associated equipment as required for the above transmission developments.

NEXT STEPS

- In late 2023, the AESO may consider the need for this project for approval under section 501.3 of the ISO rules, *Abbreviated Needs Approval Process (ANAP Rule)*, or apply to the Alberta Utilities Commission (AUC) for approval of the need.
- The AESO will notify stakeholders via the AESO's website at www.aeso.ca/grid/transmission-projects prior to the project being considered under the ANAP Rule or prior to filing a needs identification document (NID) application with the AUC.

The following organizations have key roles and responsibilities in providing access to the transmission system:

THE AESO

- Must plan the transmission system and enable access to it for generators and other qualified customers.
- Can approve eligible projects through the ANAP Rule and for non-eligible projects, the AESO will prepare and submit a NID to the AUC for approval.

ATCO

- Is the transmission facility owner in the Halkirk area.
- Is responsible for detailed siting and routing, constructing, operating, and maintaining the transmission facilities.
- Is regulated by the AUC and must apply to the AUC for approval of its transmission facilities applications.

WHO IS THE AESO?

The Alberta Electric System Operator (AESO) plans and operates Alberta's electricity grid and wholesale electricity market safely, reliably and in the public interest of all Albertans. We are a not-for-profit organization with no financial interest or investment of any kind in the power industry.

We appreciate your views, both on the need for transmission system development and proposed transmission plans. If you have any questions or comments, please contact us directly.

CONTACT US

Alberta Electric System Operator

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