

October 18, 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 Aira Solar Project Connection in the Town of Bow Island area

The Alberta Electric System Operator (AESO) would like to advise you that Aira Wind Power Inc. has applied for transmission system access to connect its proposed Aira Solar Project (proposed Facility) to the Alberta interconnected electric system (AIES) in the AESO South 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 proposed Facility.

Connection Assessment Findings

An engineering connection assessment was carried out by the AESO to assess the transmission system performance following the connection of the proposed Facility.¹ The connection assessment identified the potential for thermal criteria violations on the 240 kV transmission lines 924L and 927L and the potential for voltage criteria violations on the Cassils-Bowmanton-Whitla (CBW) transmission path (240 kV transmission lines 1034L/1035L and 964L/983L) following the connection of the proposed Facility, under credible worse case forecast conditions, with all transmission facilities in service (Category A).

The approved Bowmanton 244S Substation Voltage Support Project² will help to alleviate the voltage criteria violations at the Bowmanton 244S substation under Category A conditions. Furthermore, the AESO has initiated system transmission development projects in the south-east and south-west planning regions that will address system performance issues.³

In addition, thermal, voltage and transient criteria violations were identified when a single transmission facility is out of service (Category B) following the connection of the proposed Facility. To mitigate these potential system performance issues, planned remedial action schemes (RAS), RAS 175 and RAS 197 will be applied for observed Category B constraints. To mitigate voltage and transient criteria violations, planned RAS 164 will be modified by adding the proposed Facility to the RAS logic, which curtails the approved Facility upon activation. The total megawatts tied to RAS 164 exceeds the Maximum Severe Single Contingency (MSSC)

¹ The studies were performed assuming the Rate STS, *Supply Transmission Service*, contract capacity of 450 MW.

² More information about the approved Bowmanton 244S Substation Voltage Support Project is available on the AESO website.

³ More information about these projects was provided at AESO Stakeholder Symposium held on June 27, 2023; symposium materials are available on the AESO website.

limit. Therefore, pre-contingency curtailment of projects assigned to the RAS may be required under the Category A condition, to prevent generation curtailment 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.

If the AESO determines that congestion will arise under Category A conditions before the planned system developments are in place, the AESO will make an application to the Alberta Utilities Commission (AUC) 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 AUC for approval of such an exception.

For Further Information

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

To support the AESO’s consideration of the Aira Solar Power Project Connection under the Abbreviated Needs Approval Process, the engineering connection assessment 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 in the AESO 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 Aira Solar Power Project Connection in the Town of Bow Island area*

Need for the Aira Solar Project Connection in the Town of Bow Island area

Aira Wind Power Inc (Aira) has applied to the AESO for transmission system access to connect its proposed Aira Solar Project (Facility) in the Town of Bow Island area. Aira'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 983L in 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.

ALTALINK

- Is the transmission facility owner in the Town of Bow Island 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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