

SENT VIA EMAIL

March 19, 2024

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 Estuary Solar Project Connection in the Hamlet of McNeil area

The Alberta Electric System Operator (AESO) would like to advise you that Greencells Indygen Alberta Ltd. (Greencells) has applied for transmission system access to connect its Estuary Solar Project (approved Facility) to the Alberta interconnected electric system (AIES) in the AESO's 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 approved 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 approved Facility.¹ The connection assessment identified the potential for thermal criteria violations following the connection of the Facility, under credible worse case forecast conditions, with all transmission facilities in service (Category A). Category A thermal criteria violations were observed pre-Project on the 138/144 kV transmission lines 7L159, 7L171, and 240 kV transmission lines 912L, 9L20, 924L, 927L, and 935L and are exacerbated with the addition of the approved Facility. New category A thermal criteria violations were observed following the connection of the approved Facility on the 138/144 kV transmission lines, 7L16, 7L760, and 240 kV transmission line 923L.

The approved Central East Transfer-Out (CETO)² Transmission Development will alleviate the thermal criteria violations observed on the 240 kV transmission lines 912L and 9L20. The AESO is developing system plans to address thermal criteria violations on the 240 kV transmission lines 924L and 927L and the 138/144 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 conditions, the AESO may develop operational procedures or other mitigation measures.

In addition, thermal and voltage criteria violations were also identified when a single transmission facility is out of service (Category B) following the connection of the Facility. To mitigate the potential Category B

¹ The studies were performed assuming the Rate STS, *Supply Transmission Service*, contract capacity of 200 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.

system performance issues, existing and planned remedial action schemes (RAS) will be used. In addition, two new RASs, will be required.

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 needs identification document (NID) application. 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 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 Estuary Solar Project Connection in the Hamlet of McNeil area*

Need for the Estuary Solar Project Connection in the Hamlet of McNeil area

Greencells Indygen Alberta Ltd. (Greencells) has applied to the AESO for transmission system access to connect its proposed Estuary Solar Power Project (Facility) in the Hamlet of McNeil area. Greencells' request can be met by the following solution:

PROPOSED SOLUTION

- Add one 138 kilovolt (kV) transmission line to connect the Facility to the existing Empress 394S substation in a radial configuration.
- Modify the Empress 394S substation, including adding one 138 kV circuit breaker.
- Increase the capacity of the existing 138 kV transmission line 760L from 120 megavoltamperes (MVA) to 240 MVA.
- Add or modify associated equipment as required for the above transmission developments.

NEXT STEPS

- In mid 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 Hamlet of McNeil 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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