

February 9, 2021

To: Market Participants and Other Interested Parties (“Stakeholders”)

Re: **Consultation Letter –**

- a) **Proposed new VAR-002-AB-4.1 — Generator Operation for Maintaining Network Voltages (“new VAR-002-AB-4.1”), and**
- b) **Retirement of existing VAR-002-AB-3, Generator Operation for Maintaining Network Voltages (“existing VAR-002-AB-3”)**

Section 19 of the *Transmission Regulation* requires the Alberta Electric System Operator (“AESO”) to consult with stakeholders likely to be directly affected by the AESO’s adoption or making of Alberta reliability standards, and also requires the AESO to forward the proposed reliability standards to the Alberta Utilities Commission (“Commission”) for review along with the AESO’s recommendation that the Commission approve or reject them.

Accordingly, the AESO is providing notice and seeking comments from Stakeholders on the attached proposed new VAR-002-AB-4.1 and retirement of existing VAR-002-AB-3.

Applicability

The proposed new VAR-002-AB-4.1 is applicable to:

- (a) the legal owner of a generating unit that has a maximum authorized real power greater than or equal to 5 MW and where the generating unit is:
 - (i) connected to a switchyard at which system access service is provided to:
 - (A) the generating unit; or
 - (B) an industrial complex of which the generating unit is a part; or
 - (ii) directly connected to transmission facilities within the City of Medicine Hat;
- (b) the operator of a generating unit that has a maximum authorized real power greater than or equal to 5 MW and where the generating unit is:
 - (i) connected to a switchyard at which system access service is provided to:
 - (A) the generating unit; or
 - (B) an industrial complex of which the generating unit is a part; or
 - (ii) directly connected to transmission facilities within the City of Medicine Hat;
- (c) the legal owner of an aggregated generating facility that has a maximum authorized real power greater than or equal to 5 MW and is:
 - (i) connected to a switchyard at which system access service is provided to:
 - (A) the aggregated generating facility; or
 - (B) an industrial complex of which the aggregated generating facility is a part; or
 - (ii) directly connected to transmission facilities within the City of Medicine Hat; and
- (d) the operator of an aggregated generating facility that has a maximum authorized real power greater than or equal to 5 MW and is:
 - (i) connected to a switchyard at which system access service is provided to:
 - (A) the aggregated generating facility; or
 - (B) an industrial complex of which the aggregated generating facility is a part; or

- (ii) directly connected to transmission facilities within the City of Medicine Hat.

Notwithstanding subsections (c) and (d) above, this reliability standard does not apply to the legal owner of an aggregated generating facility or the operator of an aggregated generating facility that meets the criteria listed in Appendix 1 of VAR-001-AB.

Background

The purpose of proposed new VAR-002-AB-4.1 is to ensure generating units and aggregated generating facilities provide reactive power support and voltage control, within generating facility capabilities, in order to protect equipment and maintain reliable operation of the interconnected electric system. The AESO recognizes that there is a potential issue in requirement R1 of VAR-002-AB-3 where an operator is required to notify the AESO of its intention to change the control mode of an automatic voltage regulator or voltage regulating system. However, this may be impractical when there is a forced outage to either of these systems that results in a change in control mode of an automatic voltage regulator or voltage regulating system. Therefore, the AESO is proposing revised language in VAR-002-AB-4.1 to mitigate this potential issue.

Summary of Proposed Changes

In developing the proposed new VAR-002-AB-4.1, the AESO determined that certain Alberta variances and administrative amendments were required in order to ensure that North American Electric Reliability Corporation (“NERC”) VAR-002-4.1, *Generator Operation for Maintaining Network Voltage Schedules* (“NERC VAR-002”) is capable of being applied in Alberta and does not require a material change in the framework for the market for electric energy. A summary of these Alberta variances and administrative amendments are as follows:

Alberta variances:

- changed from the NERC threshold for applicable generating units and aggregated generating facilities. In addition, the AESO proposes to change the threshold set in VAR-002-AB-3 from a maximum authorized real power rating of 4.5 MW to 5.0 MW;
- amended requirements R1(b) and R3 of VAR-002-AB-4.1 such that a notification is not required to be made to the AESO when the control mode of an automatic voltage regulator, voltage regulating system, or alternative voltage controlling device has been restored within 30 minutes; and
- the AESO did not adopt the revision made by NERC in requirement R4 of VAR-002-4.1 to not report a status or capability change to the individual generating units of dispersed power producing resources, as an outage of an individual synchronous generating unit may have an impact on the reactive power capability of an aggregated generating facility.

Administrative amendments:

- revised the purpose section in the proposed new VAR-002-AB-4.1 to reference maintaining the reliable operation of the interconnected electric system rather than the interconnection to align with the AESO’s mandate under the *Electric Utilities Act*; and
- adopted similar language in the applicability section to align with the language used in the new definition of “bulk electric system”.

In addition, the AESO made amendments to ensure consistent use of defined terms as included in the AESO’s [Consolidated Authoritative Document Glossary](#) (“CADG”). Administrative changes, such as formatting and grammatical corrections, have also been made in the proposed new VAR-002-AB-4.1

Defined Terms

When reviewing the attached proposed new VAR-002-AB-4.1 Stakeholders should note that all defined terms appear **bolded**. Stakeholders are encouraged to refer to the AESO's CADG when reviewing proposed reliability standards to ensure they have an accurate understanding of those defined terms.

Implementation of reliability standards

In accordance with Section 19 of the *Transmission Regulation*, the reliability standards that apply in Alberta are those of the Electric Reliability Organization ("ERO") or any other reliability standards, to the extent that such reliability standards are adopted by the AESO after consultation with Stakeholders and after receipt of Commission approval. The NERC was certified as the ERO for the United States by the Federal Energy Regulatory Commission under the US *Energy Policy Act* of 2005. Further, the NERC was recognized as the ERO by the Minister of Energy in Alberta.

Reliability standards and definitions proposed for approval or rejection by the AESO are developed:

- (a) based on the reliability standards and definitions of the NERC; or
- (b) to amend, supplement or replace the NERC reliability standards or definitions.

For more information on the AESO's reliability standards, visit the AESO website at www.aeso.ca and follow the path Rules, Standards and Tariff > Alberta reliability standards.

Request for Comment

Please use the attached *Stakeholder Comment Matrix* when submitting comments to the AESO. Only written comments will be considered in finalizing proposed new VAR-002-AB-4.1 and retirement of existing VAR-002-AB-3. Stakeholders should ensure that comments provided represent all interests within their organization. Please respond to the questions in the attached *Stakeholder Comment Matrix* and provide your specific comments, proposed revisions, and reasons for your position. Providing general comments does not give the AESO any specific issue to consider and address, and results in a general response. The scope of comments is limited to proposed new VAR-002-AB-4.1 and retirement of existing VAR-002-AB-3. Any comments received that are outside of this scope will not be considered by the AESO.

Stakeholders are asked to provide comments no later than **February 26, 2021** to ars_comments@aeso.ca. Adherence to deadlines is essential to the integrity of the comment process, and as such, the AESO may choose not to consider any Stakeholder comments received after the deadline.

The AESO will publish all comments received for industry review in February 2021. The AESO expects to publish replies to the comments with the final proposed new VAR-002-AB-4.1 and retirement of existing VAR-002-AB-3 in March 2021.

If the AESO does not receive comments regarding proposed new VAR-002-AB-4.1 and retirement of existing VAR-002-AB-3 the AESO expects to forward the proposed new VAR-002-AB-4.1 and retirement of existing VAR-002-AB-3 to the Commission in March 2021, along with its recommendation that the Commission approve the proposed new VAR-002-AB-4.1.

Proposed Effective Date

The AESO is requesting that the proposed new VAR-002-AB-4.1 become effective upon approval by the Commission.

Attachments to Consultation Letter

The following documents are attached:

1. [Stakeholder Comment Matrix for proposed new VAR-002-AB-4.1](#);
2. [Copy of proposed new VAR-002-AB-4.1](#);
3. [Stakeholder Comment Matrix for proposed retirement of existing VAR-002-AB-3](#);
4. [Copy of existing VAR-002-AB-3](#); and
5. [Copy of proposed new VAR-002-AB-4.1 Comparison Rationale Matrix](#).

Sincerely,

"Jodi Marshall"

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Attachments