

Information Document

VAR-002-AB-4.1

ID #2019-046

Information Documents are not authoritative. Information Documents are for information purposes only and are intended to provide guidance. In the event of any discrepancy between an Information Document and any Authoritative Document(s)¹ in effect, the Authoritative Document(s) governs.

1 Purpose

This Information Document mainly relates to the following Authoritative Document:

- Alberta reliability standard VAR-002-AB-4.1, *Generator Operation for Maintaining Network Voltages* ("VAR-002-AB-4.1").

The purpose of this Information Document is to provide guidance and information to market participants on contact information, start-up, shut-down and offline modes, reporting status of automatic voltage regulators, voltage regulating systems and power system stabilizers, and capacity changes in reactive capability.

2 Requirement R1 - Exemption notification from the ISO

In accordance with requirement R1, while a generating unit or aggregated generating facility is electrically connected to the transmission system, the automatic voltage regulator or voltage regulating system is expected to be in service and in voltage control mode.

Requirement R1 (a)-(d) of VAR-002-AB-4.1, sets out instances where an operator of a generating unit or the operator of an aggregated generating facility may be exempt from requirement R1. Requirement R1 (a) specifically exempts the operator of a generating unit and the operator of an aggregated generating facility from complying with requirement R1 provided that an exemption has been granted by the AESO. For clarity, the operator of a generating unit or aggregated generating facility who intends to operate contrary to requirement R1 is required to notify the AESO in advance and seek an exemption. Such advance approval is required to be documented in exemption letters and emails.

Requirement R1(b) only requires the operator of a generating unit or operator of an aggregated generating facility to provide voice notification to the AESO of its intention to operate the generating unit or aggregated generating facility contrary to requirement R1.

3 Requirement R2.2 – Explanation of why an instruction cannot be met

Requirement R2.2 of VAR-002-AB-4.1 requires the operator of a generating unit and the operator of an aggregated generating facility to provide an explanation of why an instruction cannot be met. This explanation of why an instruction cannot be met is expected to be communicated to the AESO system controller by phone call and in real time.

4 Requirement R3 - Reporting status change

Requirement R3 of VAR-002-AB-4.1 requires the AESO to be notified of a status change of the automatic voltage regulator, voltage regulating system, alternative voltage controlling device or power system stabilizer. This notification can either be communicated to the AESO system controller by a phone call or by SCADA data sent to the AESO.

¹ "Authoritative Documents" is the general name given by the AESO to categories of documents made by the AESO under the authority of the *Electric Utilities Act* and associated regulations, and that contain binding legal requirements for either market participants or the AESO, or both. AESO Authoritative Documents include: the ISO rules, the Alberta reliability standards, and the ISO tariff.

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A transient status change does not need to be communicated as required in requirement R3 provided that the automatic voltage regulator, voltage regulating system, alternative voltage controlling device or power system stabilizer is returned to service within 30 minutes of the outage.

An automatic voltage regulator, voltage regulating system or power system stabilizer as referred to in requirement R3 is expected to be in continuous operation while the generating unit is on-line, except for when the generating unit is producing less real power than its design limit for effective power system stabilizer operation.

5 Requirement R4 - Reporting change in reactive capability

With respect to reporting changes in the generating unit or aggregated generation facility reactive capability as required in requirement R4, this reporting is required in cases where the reactive capacity of the generating unit or aggregated generating facility is limited, restricted, or restored to the established normal level while the automatic voltage regulator or voltage regulating system is still in service.

The AESO expects to be informed of any event that causes a change to the reactive capability. Changes in the generating unit or aggregated generating facility reactive capability are expected to be communicated to the AESO system controller by phone call and in real time.

6 Explanations regarding, start-up, shut-down or offline modes

6.1 For a generating unit:

- (i) start-up is considered to have ended when the generating unit is ramped up to its minimum continuously sustainable MW level and the generating unit is preparing for continuous operation; and
- (ii) shut-down is considered to begin after the generating unit is ramped down to its minimum continuously sustainable MW level and the generating unit is preparing to go offline.

6.2 For a wind aggregated generating facility, shutdown, and start-up modes do not apply.

6.3 A generating unit or aggregated generating facility is considered to be offline only when the generating unit or aggregated generating facility is electrically disconnected from the transmission system or from a transmission facility within the City of Medicine Hat electric system.

7 ISO Contact Information for VAR-002-AB-4.1

The AESO contact for requirements R2.2, R3 and R4 is the AESO system controller. AESO system controller contact information can be obtained from the following source:

- (a) AESO First Call 1-888-588-AESO(2376).

The AESO contact for requirements R1, R5 and R6 is ARSubmittals@aeso.ca.

Revision History

Posting Date	Description of Changes
2025-06-17	Revised to align with latest standard name; and concise section 5 to increase clarity.
2019-10-30	Initial release of new ID to create further clarity on the expectation of notification to the AESO