

September 20, 2018

To: Alberta Utilities Commission (“AUC” or “Commission”)

Re: Forwarding Notice – Recommendation to Reject for Adoption North American Electric Reliability Corporation (“NERC”) Reliability Standard, MOD-026-1, *Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions* (“NERC MOD-026-1”)

The Alberta Electric System Operator (“AESO”) recommends that the Commission approve the rejection of the North American Electric Reliability Corporation (“NERC”) reliability standard MOD-026-1, *Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions* (“NERC MOD-026-1”), pursuant to Section 19 of the *Transmission Regulation*.

Background

The purpose of NERC MOD-026-1 is to verify that the generator excitation control system or plant volt/var control function¹ model (including the power system stabilizer model and the impedance compensator model), and the model parameters used in dynamic simulations, accurately represent the generator excitation control system or plant volt/var control function behavior when assessing bulk electric system reliability.

The AESO has determined that, while different methodologies are detailed in NERC MOD-026-1, the following ISO rules collectively fulfil the purpose of NERC MOD-026-1:

- Section 502.5 of the ISO rules, *Generating Unit Technical Requirements* (“Section 502.5”); and
- Section 502.6 of the ISO rules, *Generating Unit Operating Requirements* (“Section 502.6”) and the associated *Generating Unit Functional Document Submission Form with Guide*;

(collectively, “ISO generating unit rules”)

The significant differences between the ISO generating unit rules and NERC MOD-026-1 are as follows:

- the ISO generating unit rules have a broader applicability than NERC MOD-026-1 which applies at the bulk electric system level. Namely, the ISO generating unit rules apply to all generating units connected to the transmission system, and the validation and revalidation testing requirements in subsections 10 and 11 of Section 502.6 of the ISO rules apply to individual generating units greater than 9 MW and aggregated plants greater than 18 MW that are directly connected to the transmission system;
- NERC MOD-026-1 requirement R1 would require the AESO to provide the following information:
 - instructions on how to obtain the list of excitation control system or plant volt/var control function models;
 - instructions on how to obtain the dynamic excitation control system or plant volt/var control function model library block diagrams and/or data sheets; and
 - model data for any specific excitation control system or plant volt/var control.

However, legal owners of a generating unit already have access to such information from the

Western Electricity Coordinating Council, making it unnecessary to require the AESO to provide it.

- Section 502.6 of the ISO rules, subsection 11(1) requires revalidation testing every 5 years which is more stringent than the 10 years required in NERC MOD-026-1, Attachment 1;
- Section 502.6 of the ISO rules is more stringent than NERC MOD-026-1 as the ISO rule requires validation testing of all applicable generating units, whereas NERC MOD-026-1 Attachment 1 permits model verification testing of only one generating unit where equivalent generating units exist at the same physical location;
- requirement R2.1 outlines the models used to verify a generating unit's model. The models used to verify a generating unit's model which are acceptable to the AESO are covered by information document ID #2017-013R *Model Validation and Reactive Power Reporting Guidance*. It is the common practice of legal owners of generating units to use models that are acceptable to the AESO, and it is therefore not necessary to include this as a mandatory provision. Where the legal owner of a generating unit does not use an acceptable model, the AESO will request that the legal owner to change to the acceptable model; and
- a number of timelines for similar requirements are shorter in the ISO rules as compared with MOD-026-1.

Therefore, the AESO is recommending that NERC MOD-026-1 be assessed as not applicable in Alberta and be rejected pursuant to Section 19 of the *Transmission Regulation*.

AESO Consultation

It is the AESO's view that market participants are not likely to be directly affected by the proposed rejection of NERC MOD-026-1. Accordingly, no formal consultation with market participants was undertaken¹.

On September 6, 2018, the AESO posted a notification and an amended notification in the AESO Stakeholder Newsletter informing market participants and other interested parties that it would not be consulting on the proposed rejection of NERC MOD-026-1, and would forward NERC MOD-026-1 to the Commission with its recommendation that the Commission approve the rejection of these reliability standards pursuant to Section 19 of the *Transmission Regulation*.

The AESO submits that its recommendation that the Commission reject NERC MOD-026-1 for adoption in Alberta complies with the requirements of the *Transmission Regulation*, is not technically deficient, and is in the public interest.

Attachments to Forwarding Notice

The following documents are attached to this Forwarding Notice:

1. Copy of NERC MOD-026-1; and
2. September 6, 2018 AESO Stakeholder Newsletter.

If you have any questions, please contact the undersigned.

Sincerely,

¹ Section 19(4) of the *Transmission Regulation* states that, before adopting or making reliability standard, "the ISO must consult with those Market Participants that it considers are likely to be directly affected".

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Attachments