



**Stakeholder Comment and Rationale Form**

**AESO AUTHORITATIVE DOCUMENT PROCESS**

**Stakeholder Consultation Draft  
2010-06-11**

**Alberta Reliability Standard – VAR-002-AB-1.1b Generator Operation for Maintaining Network Voltages**

*NOTE: The AESO is asking market participants to give an initial indication of their support for, or opposition to, the specific Alberta Reliability Standard variances to the NERC requirements referenced below. Such an initial indication assists in the AESO's practical understanding of the receptivity of the industry to the proposed changes, and in that regard the AESO thanks, in advance, all market participants who choose to respond. With regard to the specific standard changes and their implications, such responses are without prejudice to the rights of market participants under the Act, any regulations, or related decisions of the Commission.*

Date of Request for Comment [yyyy/mm/dd]: <u>2010-06-11</u> Period of Consultation [yyyy/mm/dd]: <u>2010-06-11</u> through <u>2010-07-09</u> Comments From: <u>Nexen Inc.</u> Date [yyyy/mm/dd]: <u>2010/07/08</u>	Contact: <u>Jerry Mossing</u> Phone: <u>403-539-2496</u> E-mail: <u><a href="mailto:ars_comments@ieso.ca">ars_comments@ieso.ca</a></u>
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*Listed below is the summary of changes for the proposed new, removed or amended sections of the standard. Please refer back to the Letter of Notice under the "Attachments to Letter of Notice" section to view the proposed content changes to the standard. Please double-click on the check box for either "Support" or "Oppose" and/or place your comments / reasons for position underneath (if any).*

1. Definitions	Comments	Rationale and/or Alternate Proposal
<b>(a) New</b> <b>"aggregated generating facilities"</b> means an aggregation of generating units, including any reactive power resources, which are: (i) designated by the ISO; and (ii) situated in the same proximate location at one or more point of connections.	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose  <i>Insert Comments / Reason for Position (if any)</i>	



1. Definitions	Comments	Rationale and/or Alternate Proposal
<p><b>“voltage regulating system”</b> means the equipment that automatically controls the reactive power resources to regulate the voltage level at any collector bus.</p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose  <i>Insert Comments / Reason for Position (if any)</i>	
<p><b>(b) Removals</b></p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose  <i>Insert Comments / Reason for Position (if any)</i>	
<p><b>(c) Amendments</b></p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose  <i>Insert Comments / Reason for Position (if any)</i>	
2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<p><b>(a) New Alberta Variances</b></p> <p>The provisions within the proposed Alberta Reliability Standard <i>VAR-002-AB-1.1b Generator Operation for Maintaining Network Voltages</i>, are derived from <i>NERC VAR-002-1.1b</i> with suitable revisions for the responsible entities within Alberta. An Alberta variance is a change from the NERC Reliability Standard that the AESO has determined is material. Specifically, the following provisions have are deemed as Alberta variances and have been added, replacing existing NERC VAR-002-1.1b requirements.</p>		
<p><b>R1.</b> Each operator of a generating unit, subject to requirement R3 and the ISO’s consent to operate otherwise, must operate such generating unit with the automatic voltage regulator in service and in voltage control mode and must not operate in any other mode including without limitation,</p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input checked="" type="checkbox"/> Oppose	



2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<ul style="list-style-type: none"> <li>• power factor control mode</li> <li>• VAR control mode</li> </ul>	<p>It is unclear to Nexen why the AESO felt there was a need to split NERC's original requirement into two separate requirements; one for generating unit and the other for a wind aggregated generating facility. Can the AESO provide details as to why this was necessary? Nexen is concerned this unnecessarily increases the number of requirements in which a market participant could be found to be non-compliant.</p>	
<p><b>R2.</b> Each operator of a wind aggregated generating facility, subject to requirement R3 and the ISO's consent to operate otherwise, must operate such wind aggregated generating facility with the voltage regulating system in service and in voltage control mode and must not operate in any other mode including without limitation,</p> <ul style="list-style-type: none"> <li>• power factor control mode</li> <li>• VAR control mode</li> </ul>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input checked="" type="checkbox"/> Oppose         </p> <p>Please see the comments provided in Requirement R1 above.</p>	
<p><b>R3.</b> Each operator of a generating unit or wind aggregated generating facility must notify the ISO as soon as practical when the automatic voltage regulator or voltage regulating system is out of service.</p>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input checked="" type="checkbox"/> Oppose         </p> <p>To the best of Nexen's knowledge, the AESO currently receives information on the operational status of the automatic voltage regulator or voltage regulating system on a real-time basis. Why is there an additional need to notify the AESO? Are there other parties in which the AESO would want the market participant to contact? And if so in what form of communication and evidence would be considered satisfactory by the AESO?</p>	<p>Nexen would submit this requirement is redundant and should be removed from the standard.</p>



2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<p><b>R4.</b> The operator of a generating unit or wind aggregated generating facility unless exempted by the ISO must comply with directives from the ISO that specify the following:</p> <ul style="list-style-type: none"> <li>a) voltage level on the high voltage side of the transformer(s) at the point of connection between each generating unit or wind aggregated generating facility and the TFO's facilities; or</li> <li>b) the reactive power to be achieved by the generating unit or wind aggregated generating facility.</li> </ul> <p><b>R4.1</b> Each operator of a generating unit or wind aggregated generating facility pursuant to requirement R4 must comply by adjusting the:</p> <ul style="list-style-type: none"> <li>a) set point of the automatic voltage regulator or voltage regulation system; or</li> <li>b) on-load tap changer.</li> </ul> <p><b>R4.2</b> The operator of a generating unit or wind aggregated generating facility, subsequent to complying pursuant to requirement R4, must not adjust either of the following:</p> <ul style="list-style-type: none"> <li>a) set point of the automatic voltage regulator or voltage regulating system; or</li> <li>b) on-load tap changer.</li> </ul>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input checked="" type="checkbox"/> Oppose         </p> <p>As noted in Nexen's comments for VAR-001, the definition for TFO is too broad creating confusion and may conflict with the efficient operation of certain facilities.</p> <p>Legislation notes that consideration must be paid to energy produced and consumed onsite, especially within an industrial system. Depending upon the configuration of that industrial system and where the generation is located, directions from the AESO (on power flow or voltage levels to facilities deep with an industrial process – beyond the point of interconnection) could have serious operational and economic impacts on an industrial process. Nexen submits entity definitions must take into consideration legislative considerations along with the unique interconnection and operational characteristics of its market participants to ensure equitable treatment and reduce unreasonable amounts of interference on a participant's facilities or operations.</p> <p>Also as noted in the comments provided in R1 above, it is not clear why there is a need to split NERC's original requirement into two separate requirements. If the goal was clarity, sub points underneath the one requirement could achieve the same goal.</p>	



2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<p><b>R5</b> Each operator of a generating unit or wind aggregated generating facility must use an alternative method to control voltage and reactive power output to meet the voltage level directive, or reactive power level directive issued by the ISO when the automatic voltage regulator or voltage regulating system is out of service.</p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose  <i>Insert Comments / Reason for Position (if any)</i>	
<p><b>R6.</b> Each operator of a generating unit or wind aggregated generating facilities who cannot comply with a directive pursuant to requirement R5 must notify the ISO with its explanation for not complying with a voltage level directive within 30 minutes.</p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input type="checkbox"/> Oppose	
<p><b>R7.</b> Each operator of a generating unit or wind aggregated generating facility must notify the ISO as soon as practical, but within 30 minutes of any of the following:</p> <p><b>R7.1.</b> A status or capability change on any generating unit or wind aggregated generating facility reactive power resource in excess of 2.5 MVar or 1% (which ever is greater) of its reactive power obligation, including the status of each automatic voltage regulator, voltage regulating system and power system stabilizer, and the expected duration of the change in status or capability.</p> <p><b>R7.2</b> A status or capability change on any other reactive power resource in excess of 2.5 MVar or 1% (which ever is greater) of the reactive power obligation under the control of each operator of a generating unit or operator of a wind aggregated generating facility , and the expected duration of the change in status or capability.</p> <p><b>R7.3</b> A status or capability change of the reactive power resource of an unknown value. Once the value is known then operator of generating unit must report the value to the ISO as soon as practical, but within 30 minutes.</p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input checked="" type="checkbox"/> Oppose  <p>Similar to the comments provided for Requirement No. 3 above, the AESO currently receives information on the operational status of the automatic voltage regulator or voltage regulating system on a real-time basis. Why is there an additional need to notify the AESO?</p> <p>Also Nexen would respectfully request further clarity on what the AESO defines as a “capability change” of a reactive power resource. Can the AESO provide clarity on what would trigger the need to contact the AESO within the 30 minute time outlined in the requirement?</p>	
<p><b>R8.</b> Each GFO with generating unit step-up and auxiliary transformers with primary voltages equal to or greater than the generating unit terminal voltage must provide the ISO any one or more of the following within 30 days of a request:</p>	<input type="checkbox"/> Support <input type="checkbox"/> Support with language suggestions <input checked="" type="checkbox"/> Oppose	<p>As noted, Nexen strongly disagrees with the requirement to produce a new confirmation letter from the AESO to</p>



2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<p><b>R8.1</b> Tap settings.  <b>R8.2</b> Available fixed tap ranges.  <b>R8.3</b> Impedance data.  <b>R8.4</b> The +/- voltage range with step-change in % for on-load tap changing transformers.</p>	<p>In responding to the AESO's request would nameplate data be sufficient? If not, Nexen submits greater detail is required in the standard, so that market participants can prepare the appropriate response for the AESO.</p> <p>It is also noted that the measure for this requirement expects there is confirmation from the AESO that the information was provided in the timeline specified. Nexen strongly disagrees with the need to get confirmation from the AESO in order to demonstrate compliance.</p> <p>Nexen fails to understand the need for the AESO to include greater compliance obligations than what is already proposed in the NERC standard. It appears that it is sufficient for NERC participants to simply provide the necessary evidence that the information was provided in the 30 day requirement; there is no requirement to provide an additional confirmation letter.</p> <p>Nexen also suggests this information is generally provided to the AESO as part of the customer interconnection process. Further review of this requirement in relation to the AESO's existing interconnection standards and requirements may be necessary to ensure there is no duplication of this requirement.</p> <p>Also see comments to Requirement 4 above. The information required may be applicable to or necessary for facilities where generation is deep behind the fence of an industrial process.</p>	<p>demonstrate compliance. Nexen requests that the measurement for this requirement be revised to only require the market participant to provide evidence that the information was provided within the 30 window.</p>



2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<p><b>R9.</b> Each GFO with step-up transformer off-load taps, after reviewing with the ISO, must ensure that transformer tap positions are changed according to the specifications provided by the ISO.</p>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input checked="" type="checkbox"/> Oppose         </p> <p>Nexen submits that this requirement fails to account for circumstances where there may be multiple owners in a facility, where one of the parties is operator and the other is not. As the operator of the facility would have intimate knowledge of the facility (where in some cases a GFO may not), the requirement should be directed to a GOP rather than a GFO.</p>	
<p><b>R10.</b> Each GFO must notify the ISO within 30 days of the ISO providing the specifications pursuant to requirement R9 if the GFO cannot comply and must include the technical justification in such notice.</p>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input type="checkbox"/> Oppose         </p> <p><i>Insert Comments / Reason for Position (if any)</i></p>	
<p><b>(b) Removals (Alberta Variances)</b></p>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input type="checkbox"/> Oppose         </p> <p><i>Insert Comments / Reason for Position (if any)</i></p>	



2. Alberta Reliability Standards	Comments	Rationale and/or Alternate Proposal
<p><b>(c) Amendments (Alberta Variances)</b></p> <p>The following revisions have been made throughout this proposed reliability standard:</p> <ul style="list-style-type: none"> <li>- Identified the responsible entities in Alberta.</li> <li>- Applied a consistent writing style and added clarity.</li> <li>- Changed passive terms such as “shall” to “must”.</li> <li>- Developed measures specific to the requirements.</li> </ul>	<p> <input type="checkbox"/> Support  <input type="checkbox"/> Support with language suggestions  <input type="checkbox"/> Oppose         </p> <p><i>Insert Comments / Reason for Position (if any)</i></p>	
<p><b>(d) Other</b> <i>(Stakeholders wishing to comment on specific provisions are requested to copy the provision into this area and provide comments)</i></p>		