

AltaLink Comments to FAC Standards

Standard	AltaLink Comments
<p>Standard FAC-010-2: System Operating Limits Methodology for the Planning Horizon</p> <p>FAC-010-AB-2.1 establishes the AESO’s system operating limits methodology. The Alberta Reliability Standards section of the AESO website, in particular the section that contains this reliability standard, will contain reference to FAC-010-AB-2.1 as a related authoritative document.</p> <p>Proposed for adoption by AESO.</p>	<ul style="list-style-type: none"> AltaLink supports the adoption of this standard.
<p>R2.3.2. System reconfiguration through manual or automatic control or protection actions.</p>	AltaLink has no comment.
<p>R2.4. To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology.</p>	AltaLink has no comment.
<p>R2.5. Starting with all Facilities in service and following any of the multiple Contingencies identified in Reliability Standard TPL-003 the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading or uncontrolled separation shall not occur.</p>	AltaLink has no comment.
<p>R2.6. In determining the system’s response to any of the multiple Contingencies, identified in Reliability Standard TPL-003, in addition to the actions identified in R2.3.1 and R2.3.2, the following shall be acceptable: R2.6.1. Planned or controlled interruption of electric supply to customers (load shedding), the planned removal from service of certain generators, and/or the curtailment of contracted Firm (non-recallable reserved) electric power Transfers.</p>	AltaLink has no comment.
<p>R3. The Planning Authority’s methodology for determining SOLs, shall include, as a minimum, a description of the following, along with any reliability margins applied for each: R3.1. Study model (must include at least the entire Planning Authority Area as well as the critical modeling details from other Planning Authority Areas that would impact the Facility or Facilities under study).</p>	AltaLink has no comment.
<p>R3.2. Selection of applicable Contingencies.</p>	AltaLink has no comment.

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R3.3. Level of detail of system models used to determine SOLs.	AltaLink has no comment.
R3.4. Allowed uses of Special Protection Systems or Remedial Action Plans.	AltaLink has no comment.
R3.5. Anticipated transmission system configuration, generation dispatch and Load level.	AltaLink has no comment.
R3.6. Criteria for determining when violating a SOL qualifies as an Interconnection Reliability Operating Limit (IROL) and criteria for developing any associated IROL Tv.	AltaLink has no comment.
R4. The Planning Authority shall issue its SOL Methodology, and any change to that methodology, to all of the following prior to the effectiveness of the change:	AltaLink has no comment.
R4.1. Each adjacent Planning Authority and each Planning Authority that indicated it has a reliability-related need for the methodology.	AltaLink has no comment.
R4.2. Each Reliability Coordinator and Transmission Operator that operates any portion of the Planning Authority's Planning Authority Area.	AltaLink has no comment.
R4.3. Each Transmission Planner that works in the Planning Authority's Planning Authority Area.	AltaLink has no comment.
R5. If a recipient of the SOL Methodology provides documented technical comments on the methodology, the Planning Authority shall provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the SOL Methodology and, if no change will be made to that SOL Methodology, the reason why.	AltaLink has no comment.
R2.3.2. System reconfiguration through manual or automatic control or protection actions.	AltaLink has no comment.
R2.4. To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology.	AltaLink has no comment.
R2.5. Starting with all Facilities in service and following any of the multiple Contingencies identified in Reliability Standard TPL-003 the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading or uncontrolled separation shall not occur.	AltaLink has no comment.
R2.6. In determining the system's response to any of the multiple Contingencies, identified in Reliability Standard TPL-003, in	AltaLink has no comment.

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addition to the actions identified in R2.3.1 and R2.3.2, the following shall be acceptable: R2.6.1. Planned or controlled interruption of electric supply to customers (load shedding), the planned removal from service of certain generators, and/or the curtailment of contracted Firm (non-recallable reserved) electric power Transfers.	
R3. The Planning Authority's methodology for determining SOLs, shall include, as a minimum, a description of the following, along with any reliability margins applied for each: R3.1. Study model (must include at least the entire Planning Authority Area as well as the critical modeling details from other Planning Authority Areas that would impact the Facility or Facilities under study).	AltaLink has no comment.
R3.2. Selection of applicable Contingencies.	AltaLink has no comment.
R3.3. Level of detail of system models used to determine SOLs.	AltaLink has no comment.
R3.4. Allowed uses of Special Protection Systems or Remedial Action Plans.	AltaLink has no comment.
R3.5. Anticipated transmission system configuration, generation dispatch and Load level.	AltaLink has no comment.
R3.6. Criteria for determining when violating a SOL qualifies as an Interconnection Reliability Operating Limit (IROL) and criteria for developing any associated IROL Tv.	AltaLink has no comment.
R4. The Planning Authority shall issue its SOL Methodology, and any change to that methodology, to all of the following prior to the effectiveness of the change:	AltaLink has no comment.
R4.1. Each adjacent Planning Authority and each Planning Authority that indicated it has a reliability-related need for the methodology.	AltaLink has no comment.
R4.2. Each Reliability Coordinator and Transmission Operator that operates any portion of the Planning Authority's Planning Authority Area.	AltaLink has no comment.
R4.3. Each Transmission Planner that works in the Planning Authority's Planning Authority Area.	AltaLink has no comment.
R5. If a recipient of the SOL Methodology provides documented technical comments on the methodology, the Planning Authority shall provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the SOL Methodology and, if no change will be made to that SOL Methodology, the reason why.	AltaLink has no comment.

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<p>FAC-011-2 SOL Methodology for the Operations Horizon</p> <p>To ensure that System Operating Limits (SOLs) used in the reliable operation of the Bulk Electric System (BES) are determined based on an established methodology or methodologies.</p> <p>Proposed for Rejection by AESO</p>	<ul style="list-style-type: none"> This standard is not applicable in Alberta therefore AltaLink supports the proposal to reject this standard.
<p>The Reliability Coordinator shall have a documented methodology for use in developing SOLs (SOL Methodology) within its Reliability Coordinator Area. This SOL Methodology shall:</p>	
<p>AR1.1. Be applicable for developing SOLs used in the operations horizon.</p>	<p>AltaLink has no comment.</p>
<p>R1.2. State that SOLs shall not exceed associated Facility Ratings.</p>	<p>AltaLink has no comment.</p>
<p>R1.3. Include a description of how to identify the subset of SOLs that qualify as IROLs.</p>	<p>AltaLink has no comment.</p>
<p>R2. The Reliability Coordinator's SOL Methodology shall include a requirement that SOLs provide BES performance consistent with the following:</p>	<p>AltaLink has no comment.</p>
<p>R2.1. In the pre-contingency state, the BES shall demonstrate transient, dynamic and voltage stability; all Facilities shall be within their Facility Ratings and within their thermal, voltage and stability limits. In the determination of SOLs, the BES condition used shall reflect current or expected system conditions and shall reflect changes to system topology such as Facility outages.</p>	<p>AltaLink has no comment.</p>
<p>R2.2. Following the single Contingencies¹ identified in Requirement 2.2.1 through Requirement 2.2.3, the system shall demonstrate transient, dynamic and voltage stability; all Facilities shall be operating within their Facility Ratings and within their thermal, voltage and stability limits; and Cascading or uncontrolled separation shall not occur.</p>	<p>AltaLink has no comment.</p>
<p>R2.2.1. Single line to ground or 3-phase Fault (whichever is more severe), with Normal Clearing, on any Faulted generator, line, transformer, or shunt device.</p>	<p>AltaLink has no comment.</p>
<p>R2.2.2. Loss of any generator, line, transformer, or shunt device without a Fault.</p>	<p>AltaLink has no comment.</p>
<p>R2.2.3. Single pole block, with Normal Clearing, in a monopolar or bipolar high voltage direct current system.</p>	<p>AltaLink has no comment.</p>
<p>R2.3. In determining the system's response to a single Contingency, the following shall be acceptable:</p>	<p>AltaLink has no comment.</p>
<p>R2.3.1. Planned or controlled interruption of electric supply to radial customers or some local network customers connected to or supplied by the Faulted Facility or by the affected area. Interruption of other network customers, (a) only if the system has already been adjusted, or is being adjusted, following at least one prior outage, or b) if the real-time operating conditions are more adverse</p>	<p>AltaLink has no comment.</p>

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than anticipated in the corresponding studies	
R2.3.3. System reconfiguration through manual or automatic control or protection actions:	AltaLink has no comment.
R2.4. To prepare for the next Contingency, system adjustments may be made, including changes to generation, uses of the transmission system, and the transmission system topology.	AltaLink has no comment.
R3. The Reliability Coordinator's methodology for determining SOLs, shall include, as a minimum, a description of the following, along with any reliability margins applied for each:	AltaLink has no comment.
R3.1. Study model (must include at least the entire Reliability Coordinator Area as well as the critical modeling details from other Reliability Coordinator Areas that would impact the Facility or Facilities under study.)	AltaLink has no comment.
R3.2. Selection of applicable Contingencies	AltaLink has no comment.
R3.3. A process for determining which of the stability limits associated with the list of multiple contingencies (provided by the Planning Authority in accordance with FAC-014 Requirement 6) are applicable for use in the operating horizon given the actual or expected system conditions.	AltaLink has no comment.
R3.3.1. This process shall address the need to modify these limits, to modify the list of limits, and to modify the list of associated multiple contingencies.	AltaLink has no comment.
R3.4. Level of detail of system models used to determine SOLs.	AltaLink has no comment.
R3.5. Allowed uses of Special Protection Systems or Remedial Action Plans.	AltaLink has no comment.
R3.6. Anticipated transmission system configuration, generation dispatch and Load level	AltaLink has no comment.
R3.7. Criteria for determining when violating a SOL qualifies as an Interconnection Reliability Operating Limit (IROL) and criteria for developing any associated IROL Ty.	AltaLink has no comment.
R4. The Reliability Coordinator shall issue its SOL Methodology and any changes to that methodology, prior to the effectiveness of the Methodology or of a change to the Methodology, to all of the following:	AltaLink has no comment.
R4.1. Each adjacent Reliability Coordinator and each Reliability Coordinator that indicated it has a reliability-related need for the methodology.	AltaLink has no comment.
R4.2. Each Planning Authority and Transmission Planner that models any portion of the Reliability Coordinator's Reliability Coordinator Area.	AltaLink has no comment.
R4.3. Each Transmission Operator that operates in the Reliability Coordinator Area.	AltaLink has no comment.

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<p>R5. If a recipient of the SOL Methodology provides documented technical comments on the methodology, the Reliability Coordinator shall provide a documented response to that recipient within 45 calendar days of receipt of those comments. The response shall indicate whether a change will be made to the SOL Methodology and, if no change will be made to that SOL Methodology, the reason why.</p>	AltaLink has no comment.
<p>FAC-014-AB-2 Establish and Communicate System Operating Limits (note AB version not NERC)</p> <p>The purpose of proposed FAC-014-AB-2 is to establish and communicate system operating limits to be used in the reliable planning and operation of the bulk electric system.</p> <p>Proposed for adoption by AESO by July 2012</p> <p>The NERC version of FAC-014-AB-2 has been recommended for the following amendments:</p>	<ul style="list-style-type: none"> AltaLink supports the adoption of this standard.
<p>1. The Applicability section has been amended to correctly identify the applicable entities in Alberta and to align with the defined terms included in the AESO <i>Consolidated Authoritative Documents Glossary</i>;</p>	AltaLink has no comment.
<p>2. NERC requirements R3, R5 and R6 have been amended to improve clarity and consistency;</p>	AltaLink has no comment.
<p>3. The effective date of FAC-014-AB-2 has been amended to allow 90 days after the system operating limits methodology, as required in FAC-010-AB-2.1 comes into effect, in order to allow time for the AESO to establish and communicate the system operating limits;</p>	AltaLink has no comment.
<p>4. NERC requirements R1, R5.1 and its sub-requirements have been deleted as they apply to Reliability Coordinators and therefore are not applicable to any entities in Alberta;</p>	AltaLink has no comment.
<p>5. Alberta requirement R1 has been amended to clarify that the establishment of system operating limits applies in the operations time horizon;</p>	AltaLink has no comment.
<p>6. NERC requirement R4 has been deleted as the AESO is the transmission planner and the planning authority in Alberta. NERC requirement R4 is therefore redundant with Alberta Requirement R2;</p>	AltaLink has no comment.

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7. NERC requirement R5.2 is included in Alberta requirement R3 as the AESO is the applicable entity for this requirement in Alberta;	AltaLink has no comment.
8. NERC requirement R5.3 is included in Alberta requirement R3 as the AESO is the applicable entity for this requirement in Alberta;	AltaLink has no comment.
9. NERC requirement R5.4 is included in Alberta requirement R3 as the AESO is the applicable entity for this requirement in Alberta;	AltaLink has no comment.
10. Passive terms such as “shall” have been changed to “must”, a consistent writing style has been applied, requirements have been clarified, and measures have been appropriately aligned with requirements. In addition, defined terms now appear in bold font rather than italics; and the use of acronyms is limited to the ‘ISO’ and the ‘WECC’ with all other defined terms being written out in full;	AltaLink has no comment.
11. Proposed FAC-014-AB-2 has also been amended to include certain “Alberta variances” ¹ from the NERC standard. These variances have been included to ensure that proposed FAC-014-AB-2 properly aligns with the industry structure in Alberta and is capable of being applied in Alberta. A summary of these variances are as follows:	AltaLink has no comment.
12. The AESO did not include the wording from NERC FAC-014-2 requirement R2 that states: a. “establish system operating limits as directed by its Reliability Coordinator” b. but rather, Alberta requirement R1 requires the AESO to develop system operating limits consistent with the WECC Reliability Coordinator’s system operating limits methodology.	AltaLink has no comment.