

ARC Operations Work Group Assessment and Conversion of NERC PRC-010-0 to Alberta PRC-010-AB-0 Assessment of the Design and Effectiveness of UVLS Program

Section	NERC PRC-010-0	Alberta PRC-010-AB-0	Reason for Difference¹
Purpose	Provide System preservation measures in an attempt to prevent system voltage collapse or voltage instability by implementing an Undervoltage Load Shedding (UVLS) program.	<p>Provide System preservation measures in an attempt to prevent system voltage collapse or voltage instability by implementing an Undervoltage Load Shedding (UVLS) program.</p> <p><u>The purpose of this reliability standard is to ensure the effectiveness of each UVLS program.</u></p>	Align the purpose with the contents of the reliability standard.
Applicability	<p>4.1. Load-Serving Entity that operates a UVLS program 4.2. Transmission Owner that owns a UVLS program 4.3. Transmission Operator that operates a UVLS program 4.4. Distribution Provider that owns or operates a UVLS program</p>	<p>4.1. Load-Serving Entity that operates a UVLS program 4.2. Transmission Owner that owns a UVLS program 4.3. Transmission Operator that operates a UVLS program 4.4. Distribution Provider that owns or operates a UVLS program</p> <p><u>This reliability standard applies to the ISO.</u></p>	
Effective Date	April 1, 2005	<p>April 1, 2005</p> <p><u>Ten calendar days after the date of approval by the Commission.</u></p>	
Definitions		Italicized terms used in this reliability	

¹ The following revisions have been made throughout this proposed reliability standard:

- Identified the responsible entities in Alberta.
- Applied a consistent writing style and added clarity.
- Changed passive terms such as “shall” to “must”.



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		standard have the same meanings as set out in the Alberta Reliability Standards Glossary of Terms and Part 1 of the ISO Rules. ²	
Requirement	<p>R1. The Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall periodically (at least every five years or as required by changes in system conditions) conduct and document an assessment of the effectiveness of the UVLS program. This assessment shall be conducted with the associated Transmission Planner(s) and Planning Authority(ies).</p>	<p>R1. The Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shallISO must periodically (at least every five years or sooner if as required by changes in system conditions.) conduct and document an assessment of the effectiveness of the each UVLS program <u>every five years</u> More frequent assessments may be appropriate when conditions affecting UVLS operation occur. <u>In the event the AESO determines that conditions affecting the UVLS operation have occurred, it may conduct and document an assessment within such five year period as it deems appropriate.</u> This assessment shall be conducted with the associated Transmission Planner(s) and Planning Authority(ies).</p>	

² Defined terms are not italicized in this document, but will appear in the Alberta Reliability Standards document.

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Measure	M1. Each Transmission Owner's and Distribution Provider's UVLS program shall include the elements identified in Reliability Standard PRC-010-0_R1.	<p>M1. Each Transmission Owner's and Distribution Provider's UVLS program shall include the elements identified in Reliability Standard PRC-010-0_R1.</p> <p><u>MR1. Documentation of the most recent assessment of the effectiveness of each UVLS program exists and was carried out within the last five5 years.</u></p>	
Requirement	<p>R1.1. This assessment shall include, but is not limited to:</p> <p>R1.1.1. Coordination of the UVLS programs with other protection and control systems in the Region and with other Regional Reliability Organizations, as appropriate.</p> <p>R1.1.2. Simulations that demonstrate that the UVLS programs performance is consistent with Reliability Standards TPL-001-0, TPL-002-0, TPL-003-0 and TPL-004-0.</p> <p>R1.1.3. A review of the voltage set points and timing.</p>	<p>R21.4. This assessment of the effectiveness of each UVLS program shall include without limitation, the following, but is not limited to:</p> <ul style="list-style-type: none"> • Coordination of the UVLS programs with other protection and control systems in the Region<u>WECC and with other Regional Reliability Organizations</u>, as appropriate. • Simulations that demonstrate that the <u>performance of each UVLS programs performance</u> is consistent with <u>Reliability Alberta reliability Standardsstandards</u> TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0. • A review of the voltage set points and timing. 	<p>Identified the specific regional entity.</p> <p>Note: TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0 are being submitted in the July ISO rules cycle.</p>



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Measure		<u>MR2. Documentation of the most recent assessment includes the elements of R2.</u>	
Requirement	<p>R2. The Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall provide documentation of its current UVLS program assessment to its Regional Reliability Organization and NERC on request (30 calendar days).</p>	<p>R2R3. The Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall<u>ISO must</u> provide documentation of its <u>current most recent assessment of</u> UVLS programs <u>assessment to its Regional Reliability Organization, the WECC and NERC</u> on request <u>and within the timeframe agreed to by the ISO and WECC. specified by the WECC and agreed to by the ISO. (30 calendar days).</u></p>	<p>Revised the time frame to coincide with that required by the WECC.</p>

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Measure	<p>M2. Each Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall have evidence it provided documentation of its current UVLS program assessment to its Regional Reliability Organization and NERC as specified in Reliability Standard PRC-010-0_R2.</p>	<p>M2. Each Load-Serving Entity, Transmission Owner, Transmission Operator, and Distribution Provider that owns or operates a UVLS program shall have evidence it provided documentation of its current UVLS program assessment to its Regional Reliability Organization and NERC as specified in Reliability Standard PRC-010-0_R2.</p> <p>MR3. <u>Written confirmation from the WECC that the documentation requested by it pursuant to R3 has been received.</u></p>	<p>Identified the type of evidence required.</p>
Procedures			
Compliance	<p>To view the compliance section D of the NERC reliability standard follow this link: http://www.nerc.com/files/PRC-010-0.pdf</p>	<p>1.1. Compliance Monitoring Responsibility Compliance Monitor: Regional Reliability Organizations. Each Regional Reliability Organization shall report compliance and violations to NERC via the NERC Compliance Reporting process.</p> <p>1.2. Compliance Monitoring Period and Reset Timeframe Assessments every five years or as required by System changes. Current</p>	<p>There is no compliance section currently proposed in the Alberta Reliability Standards.</p> <p>A compliance program will be developed at a later date for Alberta Reliability Standards that recognizes the compliance monitoring and enforcement structure in Alberta.</p>

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		<p>assessment on request (30 calendar days.) 1.3. Data Retention None specified. 1.4. Additional Compliance Information None. 2. Levels of Non-Compliance 2.1. Level 1: Not applicable. 2.2. Level 2: Not applicable. 2.3. Level 3: Not applicable. 2.4. Level 4: An assessment of the UVLS program did not address one of the three requirements listed in Reliability Standard PRC-010-0_R1.1 or an assessment of the UVLS program was not provided.</p>	<p>This approach is deemed consistent with the existing ISO Rules.</p>
Regional Differences	None identified.	None identified.	Not applicable in Alberta

Proposed Terms for the Alberta Reliability Standard Glossary:

None specified.

Existing Defined Terms Used in this Standard:

(As included in the ISO Rules Definitions or Alberta Reliability Standards Glossary)

- reliability standard
- Commission
- ISO



- under voltage load shed (UVLS)
- WECC
- day