



Date of Request for Comment: <u>January 31, 2019</u>	Contact: <u>Jenette Yearsley</u>
Period of Comment: <u>January 31, 2019</u> through <u>February 15, 2019</u>	Phone: <u>(403) 387-8275</u>
Comments From: <u>AltaLink</u>	Email: <u>Jenette.Yearsley@AltaLink.ca</u>
Date [yyyy/mm/dd]: <u>February 15, 2019</u>	

Listed below is the summary description of changes for the proposed amended PRC-005-AB1-6 Please refer back to the Consultation Letter under the “Attachments” section to view materials related to the proposed amended PRC-005-AB1-6. Please place your comments/reasons for position underneath (if any).

Alberta Reliability Standard PRC-005-AB1-6	Stakeholder Comments and/or Alternative Proposal
<p>2. Applicability:</p> <p>2.1 This <b>reliability standard</b> applies to:</p> <p>(a) the <b>legal owner</b> of a <b>transmission facility</b>; that:</p> <p>(i) is part of the bulk electric system, excluding a transformer that does not have its primary terminal and at least one secondary terminal energized at 100 kV or higher; or</p> <p>(ii) is material to this <b>reliability standard</b> and to the <b>reliability</b> of either the <b>interconnected electric system</b> or the City of Medicine Hat electric system, as the <b>ISO</b> determines and includes on a list published on the AESO website, which the <b>ISO</b> may amend from time to time in accordance with the process set out in Appendix 3;</p> <p>2.2 This <b>reliability standard</b> applies to the following devices:</p> <p>(b) <b>protection systems</b> used for the <b>ISO’s underfrequency load shedding</b> program;</p> <p>(c): <b>protection systems</b> used for <b>undervoltage load shed</b> systems installed to prevent system voltage collapse or voltage instability for the reliability of</p>	<p><b>Comment # 1:</b></p> <p>For section 2.1 (a) (i): The current bulk electric system definition excludes “radial transmission facilities serving only load with one (1) transmission source”. As T-tapped load serving substations are radially connected to a single system element (the transmission line), they should be excluded from bulk electric system and the scope of PRC-005-AB1-6. Please confirm.</p> <p><b>Comment # 2:</b></p> <p>For section 2.1 (a) (ii): AltaLink suggests the AESO publish the ISO’s current list of “extra transmission facilities” that would be included in 2.1(a)(ii) prior to the implementation of PRC-005 amendments. This would allow AltaLink to assess any impacts of these “extra transmission facilities” to AltaLink’s maintenance program.</p> <p><b>Comment # 3:</b></p> <p>The PRC-005-AB1-6 is not applicable to the legal owner of a distribution facility, nor does it explicitly indicate applicability to distributed UFLS/UVLS installed in facilities operated at 100 KV or lower. Therefore AltaLink’s interpretation is that all requirements related to UFLS/UVLS and</p>

the **interconnected electric system**;

Appendix 1, Table 1-2

Any communications system necessary for correct operation of protective functions with continuous monitoring or periodic automated testing for the presence of the channel function, and alarming for loss of function (See Table 2).	12 calendar years	Verify that the communications system meets performance criteria pertinent to the communications technology applied (e.g. signal level, reflected power, or data error rate).  Verify operation of communications system inputs and outputs that are essential to proper functioning of the <b>protection system</b> .
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Appendix 1, Tables 1-3 (the comment is also applicable to Tables 4.1 and 4.3 )

Voltage and current sensing devices connected to microprocessor relays with ac measurements that are continuously verified by comparison of sensing input value, as measured by the microprocessor relay, to an independent ac measurement source, with alarming for unacceptable error or failure (see Table 2).	No periodic maintenance specified	None.
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Appendix 5 – Implementation Plan  
5. Implementation Plan for Requirements R3 and R4

included in section 2.2 (b) and 2.2 (c) are not applicable to the UFLS/UVLS schemes deployed at 99 kV and lower levels Please confirm.

**Comment # 4:**  
AltaLink interprets that this requirement is not applicable to devices and communication circuits used for sending Transfer Trips (generally as part of anti-islanding scheme or protection transfer trip) from distribution substations to the Independent Power Producers (IPPs) operated below 100 kV. Please confirm.

**Comment # 5:**  
AltaLink’s interpretation of the term “independent ac measurement” is outlined below. Please confirm if this is acceptable.

- The measurements of separate phases can be considered as independent ac measurements. Microprocessor relays allow techniques (beyond simple comparison) for detecting failure of input signals. For e.g. VT failure element that uses negative sequence components.

**Comment # 6:**  
Regarding Section 5.1 of Appendix 5, AltaLink’s interpretation is outlined below. Please confirm if this is acceptable.

- For maintenance activities that have a maximum maintenance interval of 4 months, Market Participants need to complete the first instance of those maintenance

1. For protection system, automatic reclosing, and sudden pressure relaying component maintenance activities with maximum allowable intervals of less than 1 calendar year, as established in Tables 1-1 through 1-5, the entity must be compliant with PRC-005-AB1-6 by April 1, 2020.

Protection system station dc supply using Vented Lead-Acid (VLA) batteries not having monitoring attributes of Table 1-4(f).	4 months unless a variance is granted by the AESO	Verify: Station dc supply voltage Inspect: Electrolyte level; and For unintentional grounds
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Table 1-4(a)

activities within 4 months after April 1, 2020 and every 4 months thereafter regardless of when the previous maintenance activity was completed. Please confirm AltaLink's interpretation is correct.

**Comment # 7:** (General Comment)

Are the following **NERC's Supplementary Reference and FAQ's** definition of "a Calendar Year" and the example of "4 calendar months" applicable to the PRC-005-AB-6? If not, please provide the appropriate definition and example.

**NERC's Supplementary Reference and FAQ**

**7.1 Frequently Asked Questions (page 26):**

**What is a Calendar Year?**

*Calendar Year - January 1 through December 31 of any year. As an example, if an event occurred on June 17, 2009 and is on a "One Calendar Year Interval," the next event would have to occur on or before December 31, 2010.*

**Please provide an example of "4 Calendar Months".**

*If a maintenance activity is described as being needed every four Calendar Months then it is performed in a (given) month and due again four months later. For example a battery bank is inspected in month number 1 then it is due again before the end of the month number 5. And specifically consider that you perform your battery inspection on January 3 then it must be inspected again before the end of May. Another example could be that a four-month inspection*

	<p><i>was performed in January is due in May, but if performed in March (instead of May) would still be due four months later therefore the activity is due again July. Basically every “four Calendar Months” means to add four months from the last time the activity was performed and perform the activity by the end of the fourth month.</i></p>
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