

Alberta Reliability Standard

Analysis and Mitigation of Transmission and Generation Protection System Misoperation

PRC-004-AB2-1



1. Purpose

The purpose of this **reliability standard** is to ensure all **misoperations** of transmission and generation **protection systems** affecting the **reliability** of the **bulk electric system** are analyzed and mitigated.

2. Applicability

This **reliability standard** applies to:

- (a) the **legal owner** of a **transmission facility**;
- (b) the **legal owner** of a **generating unit** that:
 - (i) is not part of an **aggregated generating facility**;
 - (ii) has a **maximum authorized real power** rating greater than 4.5 MW;
 - (iii) is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat; and
 - (iv) has **protection systems** that directly affect the **reliability** of the **bulk electric system**;
- (c) the **legal owner** of an **aggregated generating facility** that:
 - (i) is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat;
 - (ii) has a **maximum authorized real power** rating greater than 4.5 MW; and
 - (iii) has **protection systems** that directly affect the **reliability** of the **bulk electric system**; and
- (d) the **ISO**.

3. Requirements

- R1** Each **legal owner** of a **transmission facility**, **legal owner** of a **generating unit** and **legal owner** of an **aggregated generating facility** must analyze **misoperations** of its **protection systems** affecting the **reliability** of the **bulk electric system**, and develop and implement a corrective action plan to avoid future **misoperations** of a similar nature.
- R2** Each **legal owner** of a **transmission facility**, **legal owner** of a **generating unit** and **legal owner** of an **aggregated generating facility** must provide to the **ISO** documentation of its **misoperations** analyses and corrective action plans upon request by the **ISO**.
- R3** The **ISO** must provide to the **WECC** documentation of the **misoperations** analyses and corrective action plans upon request by the **WECC**.

4. Measures

The following measures correspond to the requirements identified in section 3 of this **reliability standard**. For example, MR1 is the measure for requirement R1.

MR1 Evidence of analyzing **misoperations**, and developing and implementing a corrective action plan as required in requirement R1 exists. Evidence may include reports that include analysis and corrective action plans, emails, work orders, or other equivalent evidence.

MR2 Evidence of providing to the **ISO** documentation of **misoperations** analyses and corrective action

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plans as required in requirement R2 exists. Evidence may include emails, dated correspondence, or other equivalent evidence.

MR3 Evidence of providing to the **WECC** documentation of the **misoperations** analyses and corrective action plans as required in requirement R3 exists. Evidence may include emails, dated correspondence, or other equivalent evidence

Revision History

Date	Description
2018-xx-xx	Clarification to ensure the protections system misoperations that must be analyzed are those affecting the reliability of the bulk electric system. Administrative update: existing PRC-004-AB1-1 is being renamed PRC-004-AB2-1; and amendments to ensure consistent use of defined terms as included in the AESO's Consolidated Authoritative Document Glossary ("CADG"); formatting and grammatical corrections; the deletion of the following sections: (a) "Definitions"; (b) "Processes and Procedures", (c) "Appendices"; and (d) "Guidelines"
2013-01-02	Administrative update – "TFO" and "GFO" replaced with "legal owner of a transmission facility", "legal owner of a generating unit" and "legal owner of an aggregated generating facility"; and other minor clean up items.
2010-02-11	Initial release.