



AESO Reliability Standards Monthly Report

March 2011

Comments/Questions

For comments or questions about the reliability standards or

to submit comments on NERC or WECC reliability standards for AESO consideration contact:

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Related Links

- [NERC Standards Development](#)
- [WECC Standards Development](#)
- [AESO Reliability Standards Monthly Reports](#)
- [AESO Reliability Committee](#)
- [Alberta Reliability Standards](#)

In This Issue

The Reliability Standards Monthly Report provides an overview of the AESO's activities related to NERC and WECC standards, business practices and criterion that are posted for review, comment or balloting.

The AESO consults with internal subject matter experts and the Standards Review Committee (SRC) of the ISO/RTO Council (IRC) when responding to NERC and WECC on the standards.

NERC Standards

Standard	Name/Description	Status	Due Date
PRC-023-2	Transmission Relay Loadability	Recirculation Ballot Period Ended	2011-03-07
COM and IRO	Reliability Coordination	Ballot and Comment Period Ended	2011-03-07
BAL-003-1	Frequency Response and Frequency Bias Setting	Comment Period Ended	2011-03-07
COM-001-1.1	Real-Time Tools	Comment Period	2011-04-04
EOP-004-2	Impact Event and Disturbance Assessment, Analysis, and Reporting	Comment Period	2011-04-08
CIP-005-4	Cyber Security — Electronic Security Perimeter(s)	Comment and Ballot Period	2011-04-28
FAC-008-3	Facility Ratings Methodology	Comment Period	2011-05-02

WECC Standards and Criterion

Standard or Criterion	Name/Description	Status	Due Date
WECC-0046 VAR-001- WECC-1	Voltage and Reactive Control	WECC OC Approved	2011-03-03
WECC-0070 PRC-301- WECC-CRT-1	Governor Droop Setting	WECC OC Remanded	2011-03-03
WECC-0059 PRC-003- WECC-CRT-1	Analysis of Misoperations of Transmission and Generation Protection Criterion	WECC OC Approved	2011-03-03
WECC-0066 COM-002- WECC-CRT-1	Digital Circuits Synchronization	WECC OC Approved	2011-03-03
WECC-0055 PRC-012 to 14- WECC-CRT-1	Remedial Action Scheme	WECC OC Approved	2011-03-03
WECC-0065 PRC-006- WECC-CRT-01	Underfrequency Load Shedding	Comment Period Ended	2011-03-17
WECC-0049 EOP-007-0- WECC-CRT-1	Blackstart Unit Testing	Comment Period Ended	2011-03-25
WECC-0083 BAL-002- WECC-1	Contingency Reserves	Comment Period	2011-04-11
WECC-0074 MOD-(11&13)- WECC-CRT-1	Steady State and Dynamic Data	Comment Period	2011-04-22
WECC-0075 INT-019- WECC-CRT-2	After-the-Fact Tagging Guidelines	Comment Period	2011-04-27
WECC-071 TPL-001- WECC-CRT-2	System Performance Criteria	Comment Period	2011-05-09



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PRC-023-2 - Transmission Relay Loadability

Purpose:

PRC-023-2 posted for a successive ballot.

Current Standard:

On March 18, 2010 FERC issued Order No. 733 which approved Reliability Standard PRC-023-1 – Transmission Relay Loadability, and also directed NERC to develop certain modifications to the PRC-023-1 standard through its Reliability Standards development process.

Proposed Standard:

PRC-023-2 addresses the Phase I directives from Order 733 including a process for use in determining which facilities (transmission lines operated below 200 kV and transformers with low voltage terminals connected below 200 kV) must meet specific relay loadability criteria.

Applicability:

Distribution Providers that own specific facilities, Generator Owners that own specific facilities, Transmission Owners that own specific facilities (see the standard for details) and Planning Coordinators

Current Status:

The standard is posted for a recirculation ballot until March 7, 2011. The AESO voted in favour of the standard in the previous ballot and that vote will carry through to the recirculation ballot. The ballot body approved the standard by a narrow margin.

NERC Link:

[PRC-023-2](#)

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COM-001-2, COM-002-3, IRO-001-2, IRO-001-2 & IRO-014-2 - Reliability Coordination

Purpose:

Draft 4 standards, posted for comment and ballot.

Current Standards:

Most of the requirements in this set of standards were translated from Operating Policies as part of the Version 0 process. There have been suggestions for improving these requirements, and the drafting team will consider comments submitted by stakeholders, drafting teams and FERC in determining what changes should be proposed to stakeholders.

Proposed Standards:

The proposed standards are meant to:

- ensure that the reliability related requirements applicable to the Reliability Coordinator are clear, measurable, unique, and enforceable,
- ensure that this set of requirements is sufficient to maintain reliability of the Bulk Electric System,
- revise the group of standards based on FERC Order 693.

Applicability:

Reliability Coordinator, Balancing Authority, Transmission Service Provider, Transmission Operator, Distribution Provider, Generator Operator, Purchasing Selling Entity and Load Serving Entity

Current Status:

The standards were posted for comment and ballot until March 7, 2011. The AESO voted in favour of the standards and submitted comments as part of the ISO Standards Review Committee (SRC). The standards were not approved by the ballot body and they will proceed to a successive ballot.

NERC Link:

[Reliability Coordination](#)

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BAL-003-1 - Frequency Response and Frequency Bias Setting

Purpose:

Version 1 Standard, posted for comment.

Current Standard:

BAL-003-0 became effective on April 1, 2005. The Alberta Reliability Standard version became effective on February 13, 2009.

Proposed Standard:

Frequency Response, a measure of an Interconnection's ability to stabilize frequency immediately following the sudden loss of generation or load, is a critical component to the reliable operation of the bulk power system, particularly during disturbances and restoration. The proposed standard's intent is to collect data needed to accurately analyze existing Frequency Response, set a minimum Frequency Response obligation, provide a uniform calculation of Frequency Bias Settings that transition to values closer to Frequency Response, and encourage coordinated AGC operation. There is evidence of continuing decline in Frequency Response over the past 10 years, but no confirmed reason for the apparent decline. The proposed standard requires entities to provide data so that Frequency Response in each of the Interconnections can be analyzed, and the reasons for the decline in Frequency Response can be identified. Once Frequency Response has been analyzed and confirmed, requirements can be modified to maintain reliability.

Applicability:

Balancing Authority

Current Status:

The standard was posted for comment until March 7. The AESO submitted comments, which can be seen using the link below.

NERC Link:

[Frequency Response](#)

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COM-001-1.1 - Real-time Reliability Monitoring and Analysis Capabilities

Purpose:

Draft 3 SAR and Concept White Paper, posted for comment.

Current Standard:

COM-001-1.1 was approved by the NERC Board of Trustees on October 29, 2008.

Proposed Standard:

The new or revised standard(s) will establish requirements for the functionality, performance, and change management of Real-time capabilities for Reliability Coordinators, Transmission Operators, Generator Operators, and Balancing Authorities for use by their System Operators in support of reliable System operations.

The scope of the SAR is to establish requirements for the monitoring and analysis capabilities provided to System Operators and used to support Real-time System Operations. The SAR addresses availability parameters, performance metrics, and procedures for failure notification, maintenance coordination, and change management. The intent is to describe 'what' needs to be done but not 'how' to do it.

Applicability:

Reliability Coordinator, Balancing Authority, Transmission Operator, Generator Operator

Current Status:

The SAR is posted for comment until April 4.

NERC Link:

[Real-time Reliability](#)

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EOP-004-2 - Impact Event and Disturbance Assessment, Analysis, and Reporting

Purpose:

Draft 2 Standard, posted for comment.

Current Standards:

CIP-001-1 deals with sabotage reporting and EOP-004 -1 deals with disturbance reporting.

Proposed Standard(s):

This project involves revising and combining existing standards CIP-001-1 — Sabotage Reporting and EOP-004-1 — Disturbance Reporting to eliminate redundancies and provide clarity on sabotage events. The project will address several issues identified by stakeholders, as well as FERC directives from Order 693, including a directive to provide greater clarity to requirements associated with "sabotage."

EOP-004-2 was drafted using the "results-based" criteria for developing a reliability standard. The results-based approach includes considerably more emphasis on the "concepts and assumptions" underlying the development of requirements and goes beyond the steps most drafting teams have previously used when developing a standard. Accordingly, the "look and feel" of a results-based standard is quite different than NERC's existing standards. However, at the core is a set of mandatory and enforceable requirements with useful guidance supporting these requirements, an approach NERC's legal counsel has reviewed and finds acceptable.

Applicability:

Reliability Coordinator, Balancing Authority, Transmission Operator, Transmission Owner, Generator Operator, Generator Owner, Load-Serving Entity, Regional Reliability Organization

Current Status:

The draft standard is posted for comment until April 8.

NERC Link:

[Sabotage and Disturbance Reporting](#)

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CIP-005-4 - Cyber Security — Electronic Security Perimeter(s)

Purpose:

Draft 2 of expedited revisions to CIP-005-3.

Current Standard:

CIP-005-3 was approved by the NERC BOT on December 16, 2009.

Proposed Standard:

The purpose of these expedited revisions to CIP-005 is to add a requirement to identify the controls an entity must have in place before it grants remote access to Critical Cyber Assets within its Electronic Security Perimeters. This new requirement closes an identified gap in the scope of requirements aimed at protecting critical cyber assets from unauthorized access.

Applicability:

Reliability Coordinator, Balancing Authority, Interchange Authority, Transmission Service Provider, Transmission Owner, Transmission Operator, Generator Owner, Generator Operator, Load Serving Entity, NERC, Regional Entity

Current Status:

CIP-005-4 is posted for comment and ballot until April 28.

NERC Link:

[CIP-005-4](#)

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FAC-008-3 – Facility Ratings

Purpose:

Draft 1 Supplemental SAR posted for comment

Current Standard:

There were two Facility Ratings Standards, FAC-008-1 and FAC-009-1, being modified to address concerns raised by FERC and industry stakeholders. FAC-008-2 was approved by the NERC ballot body after concerns with one of the requirements, R7, were addressed. However FERC has not approved the standard.

Proposed Standard:

The revisions to these two standards will result in a single standard (FAC-008-2 — Facility Ratings) that is responsive to the recommended changes identified in the Standard Review Guidelines attached to this SAR and to two of the three applicable FERC directives in Order 693.

The proposed changes to FAC-008-1 and FAC-009-1 have already been through stakeholder review and reached consensus in 2008 on all requirements except Requirement R7, developed to meet the FERC directive in Order 693 that required identification of the most limiting component of a facility and the theoretical increase in rating if the limitation were removed. Stakeholders indicated that Requirement R7 did not have a reliability-related benefit, and voted against the inclusion of a requirement to meet this directive.

The sole focus of this supplemental SAR and proposed revisions to FAC-008-2 – Facility Ratings is to address a directive from Order 693 that is related to FAC-008-1 and was not addressed in the development of FAC-008-2. NERC is required to file a version of FAC-008 that addresses all directives from Order 693 related to FAC-008 by June 15, 2011.

Applicability:

Transmission Owners, Generation Owners

Current Status:

The standard is posted for comment and then ballot until May 2.

NERC Link:

[Facility Ratings](#)

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VAR-001-WECC-1 - Voltage and Reactive Control

Purpose:

Final Draft Standard, posted for comment and OC ballot.

Current Standard:

Applicable WECC entities must follow the NERC standard, VAR-001-2.

Proposed Standard:

The proposed standard, which is now Attachment E in NERC VAR-001-2, will to ensure that voltage levels, reactive flows, and reactive resources are monitored, controlled, and maintained within limits in real time to protect equipment and the reliable operation of the Western Interconnection.

Applicability:

Generator Operators, Transmission Operators

Current Status:

The final draft of VAR-001-WECC-1 was posted for comment until February 25. The standard was approved at the WECC OC meeting on March 3.

WECC Link:

[Voltage and Reactive Control](#)

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WECC-0070 Governor Droop Setting Criterion

Purpose:

Draft 2 Criterion, posted for comment.

Current Criterion:

There is a new criterion.

Proposed Criterion:

The objective is to develop a regional criterion as a replacement to current MORC Section 1.C.2. The ORCWG recommends that a criterion be developed to address governor droop settings. The drafting team should develop a governor droop criteria that contain a range for droop settings and/or if appropriate an area (system) droop performance requirement.

Applicability:

Generator Owners

Current Status:

The criterion was posted until February 28. The AESO did not submit comments. The criterion was remanded back to the drafting team by the WECC OC at the March 3 meeting.

WECC Link:

[Governor Droop Setting](#)

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WECC-0059

PRC-003-WECC-CRT-1 - Analysis of Misoperations of Transmission and Generation Protection Criterion

Purpose:

Draft 5 of the proposed criterion, posted for comment and OC ballot.

Current Criterion:

There is no current criterion to address this issue.

Proposed Criterion:

To define and document the Western Electricity Coordinating Council (WECC) procedures required by PRC-003-1 R1 (cross-referenced in PRC-004-1, R1-R3) for analyzing, reporting, and mitigating Misoperations of the Protection Systems and RAS on the Bulk Electric System (BES).

This regional criterion is being developed to meet North American Electric Reliability Corporation (NERC) Reliability Standards PRC-003-1, R1 (Regional Procedure for Analysis of Misoperations of Transmission). Failure to follow the requirements in this regional criterion may lead to penalties or sanctions imposed by NERC for violation of requirements in PRC-004-1, the associated NERC Reliability Standard.

Applicability:

Distribution Provider that owns a transmission Protection System, Generator Owner, Reliability Assurer (WECC), Transmission Owner

Current Status:

The criterion was posted for comment until February 28, 2011. The criterion was approved by the WECC OC at the March 3 meeting.

WECC Link:

[PRC-003-WECC-CRT-1](#)

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WECC-0066 COM-002-WECC-CRT-1 - Digital Circuits Synchronization

Purpose:

Final Draft of a new criterion, posted for OC ballot.

Current Criterion:

This is a new WECC criterion.

Proposed Criterion:

This criterion is being proposed to inform applicable WECC entities owning or operating digital TDM telecommunication systems of the synchronization requirements needed to interface digital circuits between entities. The goal is to minimize digital circuit timing problems between entities. This document does not cover Ethernet TCP/IP network timing protocol requirements.

Applicability:

Transmission Operator, Transmission Owner

Current Status:

The criterion was approved by the WECC OC at the March 3 meeting.

WECC Link:

[Digital Circuits Synchronization](#)

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WECC-0055 PRC-012 through 14-WECC-CRT-1- Remedial Action Scheme Criterion

Purpose:

Final Draft Criterion, posted for OC ballot.

Current Criterion:

This is a new criterion.

Proposed Criterion:

The criterion is being developed in order to more efficiently comply with NERC Reliability Standards, specifically PRC-012-0 – Special Protection System Review Procedure, PRC-013-1 – Special Protection System Database, and PRC-014-0 – Special Protection System Assessment.

Applicability:

Reliability Assurer (WECC), Generator Owner, Transmission Owner, Distribution Provider

Current Status:

The final draft of criterion was posted for WECC OC ballot at the March 3 & 4 meeting.

WECC Link:

[RAS](#)

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WECC-0065 PRC-006-WECC-CRT-01 - Under Frequency Load Shedding

Purpose:

Version 1 Criterion, posted for comment.

Current Criterion:

This is a new regional criterion

Proposed Criterion:

The proposed criterion is meant to document the WECC Off-Nominal Frequency Load Shedding Plan (Coordinated Plan), and to assure consistent and coordinated requirements for the Coordinated Plan among all WECC applicable entities.

Applicability:

Planning Coordinator, Balancing Authority, UFLS Entities, Transmission Owner, Distribution Provider, Generator Owner, Transmission Operator, Reliability Assurer

Current Status:

The criterion is posted for comment until March 17. The AESO did not submit comments.

WECC Link:

[UFLS](#)

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WECC-0049 EOP-007-0-WECC-CRT-1 - Blackstart Unit Testing

Purpose:

Version 4 Criterion, posted for comment.

Current Criterion:

WECC currently does not have an interconnection-wide procedure based on a common set of criteria.

Proposed Criterion:

To establish: 1) a Blackstart Capability Plan pursuant EOP-007-0, 2) a set of consistent, minimum test requirements for Blackstart Resources, and 3) Reliability Assurer (WECC) compliance with EOP-007-0 addressing establishment, maintenance and documentation of a Regional Blackstart Capability Plan.

Applicability:

Reliability Assurer (WECC), Generator Operator of Blackstart Resource(s), Transmission Operator of Blackstart Resource(s)

Current Status:

The criterion was posted for comment until March 25. The AESO did not submit comments.

WECC Link:

[Blackstart](#)

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WECC-0083 BAL-002-WECC-1 – Contingency Reserves

Purpose:

Draft 2 of the remanded standard, posted for comment.

Current Standard:

The current standard is BAL-STD-002-1, which was NERC BOT approved in October, 2008.

Proposed Standard:

The standard will ensure Contingency Reserve is available for the reliable operation of the interconnected power system. Adequate generating capacity must be available at all times to maintain scheduled frequency, and avoid loss of firm load following transmission or generation contingencies. This generating capacity is necessary to replace generating capacity and energy lost due to forced outages of generation or transmission equipment.

Applicability:

Balancing Authorities, Reserve Sharing Group

Current Status:

Draft 1 of the revised standard was posted for comment until March 7. The AESO submitted comments which can be seen using the link below. Draft 2 is posted for comment until April 11.

WECC Link:

[Contingency Reserves](#)

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WECC-0074 MOD-(11 and 13)-WECC-CRT-1 - Steady State and Dynamic Data Criterion

Purpose:

Draft 2 Criterion, posted for comment.

Current Criterion:

There is a new criterion.

Proposed Criterion:

The criterion is being developed to coordinate steady-state and dynamic data requirements and reporting procedures used for modeling and analysis of the steady-state and dynamic behavior of the Western Interconnection. This Regional Criterion was developed pursuant to North American Electric Reliability Corporation (NERC) Reliability Standard MOD-11-0 and MOD-13-1. Violation of this criterion may result in a violation of NERC Reliability Standards MOD-11-0 and/or MOD-13-1 as well as any of the NERC Standards that are incorporated by reference into MOD-11-0 and MOD-13-1. Violation of NERC Reliability Standard may result in financial penalties imposed by NERC.

Applicability:

Transmission Owner, Transmission Planner, Generator Owner, Resource Planner, Reliability Assurer

Current Status:

Criterion posted for comment until April 22.

WECC Link:

[Steady State and Dynamic Data](#)

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WECC-0075 INT-019-WECC-CRT-2- After-the-Fact Tagging Protocol

Purpose:

Draft 3 Guideline or Criterion, posted for comment.

Current Criterion:

There is a new guideline or criterion.

Proposed Criterion:

The guideline or criterion is being developed to establish the criteria for the creation and utilization of After-the-Fact (ATF) e-Tags for scheduled interchange between Balancing Authorities within the WECC excluding Dynamic and Pseudo-Tie transaction type e-Tags and e-Tags for automatic reserve sharing.

Applicability:

Balancing Authorities, Transmission Service Providers, Purchasing and Selling Entities

Current Status:

Criterion posted for comment until April 27.

WECC Link:

[ATF Tagging](#)

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**WECC-0071
TPL-001-WECC-CRT-2 – System Performance Criteria**

Purpose:

Draft 1 of the criterion, posted for comment.

Current Criterion:

This is a new regional criterion

Proposed Criterion:

The purpose is to revise the current TPL – (001 thru 004) – WECC – 1 – CR - System Performance Criteria requirement WRS1.1 to permit the more efficient use of rights-of-way while promoting the use of separate towers instead of multi-circuit towers and maintaining an acceptable level of reliability for the Western Interconnection. The use of separate towers is preferred to multi-circuit towers.

Applicability:

Planning Authority, Transmission Planner

Current Status:

Draft 1 of the criterion is posted for comment until May 9.

WECC Link:

[System Performance Criteria](#)

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