

## Alberta Reliability Standards Program Work Plan

Update: May 2019

Contact: ars\_comments@aes0.ca

NERC and WECC Standards		Applicability <sup>1</sup>	Related ISO Rules	Stakeholder Consultation	Forward to the AUC	Forecast Effective Date <sup>2</sup>
<b>1. Standards Approved by the AUC</b>						
BAL-001-AB-2	Real Power Balancing Control Performance	ISO		N/A	July 12, 2018	July 1, 2019
BAL-003-AB-1.1	Frequency Response	ISO		N/A	July 12, 2018	July 1, 2019
BAL-005-AB-1	Balancing Authority Control	ISO		N/A	July 12, 2018	July 1, 2019
BAL-006-AB-1	Inadvertent Interchange	ISO		N/A - Recommend Retirement of Standard	July 12, 2018	July 1, 2019
BAL-002-AB-3	Disturbance Control Standard - Contingency Reserve for Recovery from a Balancing Contingency Event	ISO		N/A	Jan-19	July 1, 2019
CIP-014-AB-2	Physical Security	ISO/MP	Remove ISO rules Section 501.2	May 31, 2018 - Jun 15, 2018	July 18, 2018	July 1, 2020
EOP-008-AB-1	Loss of Control Center Functionality	ISO/MP		September 30, 2015 to October 28, 2015	March 12, 2015	July 1, 2019
PRC-002-AB-2	Disturbance Monitoring and Reporting Requirements	ISO/MP		September 19, 2018	November 23, 2018	October 1, 2019
PRC-005-AB-6	Protection System, Automatic Reclosing and Sudden Pressure Relaying Maintenance	ISO/MP		February 15, 2018 - March 15, 2018	July 24, 2018	October 1, 2019
PRC-018-AB-1 (retire)	Disturbance Monitoring Equipment Installation and Data Reporting	ISO/MP		September 19, 2018	November 23, 2018	See Implementation Plan PRC-002-AB-2, Appendix 2. Retirement of existing PRC-018-AB-1 effective midnight on September 30, 2025.
PRC-019-AB-2	Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection	ISO/MP		June 21, 2018 - July 12, 2018	August 31, 2018	January 1, 2022
<b>2. Standards Forwarded to the AUC</b>						
None at this time						
<b>3. Standards Under Development</b>						
BES Definition	bulk electric system	ISO/MP		Q2 2019	Q3 2019	TBD
COM-001-AB-3 (retire)	Communications	N/A	Sections 502.17 and 502.4 of the ISO rules	March 19, 2019 - April 3, 2019	Q2 2019	TBD
COM-002-AB-4	Operating Personnel Communications Protocols	ISO/MP		March 19, 2019 - April 3, 2019	Q2 2019	TBD
EOP-001-AB1-2.1b (retire)	Emergency Operations Planning	ISO/MP		Q3 2019	Q3 2019	TBD
EOP-002-AB1-2 (retire)	Capacity and Energy Emergencies	ISO/MP		Q3 2019	Q3 2019	TBD
EOP-003-AB1-1 (retire in part)	Load Shedding Plans	ISO/MP		Q3 2019	Q3 2019	TBD
EOP-011-AB-1	Emergency Operations	ISO/MP	Sections 202.2 and 305.1 of the ISO rules	Q3 2019	Q3 2019	TBD
IRO-001-4	Reliability Coordination - Responsibilities	ISO/MP		TBD N/A	Q2 2019	TBD
IRO-002-5	Reliability Coordination - Monitoring and Analysis	ISO		N/A	Q2 2019	TBD
IRO-003-AB-2	Reliability Coordination – Wide-Area View	ISO		N/A	Q2 2019	TBD
IRO-005-AB-3.1a	Reliability Coordination – Current Day Operations	ISO		N/A	Q2 2019	TBD
IRO-008-2	Reliability Coordinator Operational Analyses and Real-time Assessments	ISO		N/A	Q2 2019	TBD
IRO-009-2	Reliability Coordinator Actions to Operate within IROLs	ISO		N/A	Q2 2019	TBD
IRO-010-2	Reliability Coordinator Data Specification and Collection	ISO/MP		TBD N/A	Q2 2019	TBD
IRO-014-3	Coordination Among Reliability Coordinators	ISO		N/A	Q2 2019	TBD
IRO-015-AB-1	Notifications and Information Exchange Between Reliability Coordinators	ISO		N/A	Q2 2019	TBD
IRO-016-AB-1	Coordination of Real-time Activities Between Reliability Coordinators	ISO		N/A	Q2 2019	TBD
IRO-017-1	Outage Coordination	ISO/MP		TBD N/A	Q2 2019	TBD
IRO-018-1(i)	Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities	ISO		N/A	Q2 2019	TBD
PRC-001-AB4-1.1(ii)	System Protection Coordination (retire R3 and R4)	MP		Q2 2019	Q2 2019	TBD
PRC-005-AB1-6 amendment	Protection System, Automatic Reclosing and Sudden Pressure Relaying Maintenance	MP		March 28, 2019 - April 12, 2019	Q2 2019	October 1, 2019
PRC-006-AB-3	Automatic Underfrequency Load Shedding	ISO/MP	OPP 804	Q3 2019	Q3 2019	TBD
PRC-009-AB-0 (retire)	UFLS Performance Following an Underfrequency Event	ISO		Q3 2019	Q3 2019	TBD
PRC-010-2	Undervoltage Load Shedding	ISO/MP		Q3 2019	Q3 2019	TBD

NERC and WECC Standards		Applicability <sup>1</sup>	Related ISO Rules	Stakeholder Consultation	Forward to the AUC	Forecast Effective Date <sup>2</sup>
PRC-023-AB-4	Transmission Relay Loadability	ISO/MP		January 10, 2019 - January 31, 2019	Q2 2019	The first day of the calendar quarter following one full calendar quarter after approval by the Commission
PRC-024-2	Generator Frequency and Voltage Protective Relay Settings	MP	Sections 502.1, 502.5 and 502.15 of the ISO rules	Q3 2019	Q3 2019	
PRC-025-AB-2	Generator Relay Loadability	MP	Section 502.5 of the ISO rules	January 10, 2019 - January 31, 2019	Q2 2019	The first day of the calendar quarter that follows twenty full calendar quarters after approval by the Commission
PRC-026-AB-1	Relay Performance During Stable Power Swings	ISO/MP		Q2 Q4 2019	Q2 Q4 2019	TBD
PRC-027-AB-1	Coordination of Protection Systems for Performance During Faults	MP		Q2 2019	Q2 Q3 2019	TBD
TOP-001-4	Transmission Operations	ISO/MP N/A		TBD N/A	Q2 2019	TBD
TOP-002-4	Operation Planning	ISO/MP N/A		TBD N/A	Q2 2019	TBD
TOP-003-3	Operational Reliability Data	ISO/MP N/A		TBD N/A	Q2 2019	TBD
TOP-005-AB3-1	Operational Reliability Information	ISO N/A		N/A	Q2 2019	TBD
TOP-006-2	Monitoring System Conditions	ISO/MP N/A		TBD N/A	Q2 2019	TBD
TOP-010-1(i)	Real Time Reliability Monitoring and Analysis Capabilities	ISO/MP N/A		TBD N/A	Q2 2019	TBD
TPL-001-AB-4 or 5	Transmission System Planning Performance Requirements	ISO		TBD	TBD	TBD
TPL-002-AB1-0 (retire)	System Performance Following Loss of a Single BES Element	ISO		TBD	TBD	TBD
TPL-003-AB-0 (retire)	System Performance Following Loss of Two or More BES Elements	ISO		TBD	TBD	TBD
TPL-004-AB-0 (retire)	System Performance Following Extreme BES Events	ISO		TBD	TBD	TBD
<b>4. Standards Next in Queue for Development</b>				<b>Status</b>		
CIP-006-6	Cyber Security - Physical Security of BES Cyber Systems	ISO/MP		In effect in US, July 1, 2016 (R3.1 in effect July 1, 2017)		
CIP-013-1	Cyber Security – Supply Chain Risk Management	ISO/MP		In effect in US, July 1, 2020		
<b>5. High Priority Standards for Development</b>				<b>Status</b>		
None at this time						
<b>6. Medium Priority Standards for Development</b>				<b>Status</b>		
BAL-004-WECC-3	Automatic Time Error Correction	ISO		FERC Approved May 30, 2018		
EOP-005-3	System Restoration from Blackstart Resources	MP		In effect in US, April 1, 2019		
EOP-006-3	System Restoration Coordination	ISO		In effect in US, April 1, 2019		
EOP-010-1	Geomagnetic Disturbance Operations	ISO/MP		In effect in US, April 1, 2015; R5 in effect on April 1, 2017		
FAC-003-4	Transmission Vegetation Management	MP		In effect in US, October 1, 2016		
FAC-011-3	System Operating Limits Methodology for the Operations Horizon	ISO		In effect in the US, April 1, 2017		
PER-006-1	Specific Training for Personnel	MP		In effect in the US, October 1, 2020		
PRC-004-WECC-2 (retire)	Protection System and Remedial Action Scheme Misoperation	ISO/MP		Retire in the US, January 1, 2021 with the effective date of PRC-012-2		
PRC-012-2	Remedial Action Schemes	ISO/MP		In effect in the US, January 1 2021, <del>proposed to</del> will result in retirement of PRC-004-WECC-		
PRC-015-1	Special Protection System Data and Documentation	MP		In effect in the US, April 1, 2017		
PRC-016-1	Remedial Action Scheme Misoperations	MP		In effect in the US, April 1, 2017		
TPL-007-3	Transmission System Planned Performance for Geomagnetic Disturbance Events	ISO/MP		In effect in the US July 1, 2019		
VAR-002-WECC-2 (retire)	Automatic Voltage Regulators	MP		Inactive in US, September 5, 2018		
VAR-501-WECC-3.1	Power System Stabilizer	MP		In effect in US, September 26, 2017		
<b>7. Low Priority Standards for Development</b>				<b>Status</b>		
BAL-002-WECC-AB-2a	Contingency Reserve	ISO				
CIP-002-5.1a	Cyber Security - BES Cyber System Categorization	ISO/MP		In effect in US, December 27, 2016		
CIP-003-7	Security Management Controls	ISO/MP		FERC approved, April 19, 2018		
CIP-004-6	Cyber Security - Personnel and Training	ISO/MP		In effect in US, October 1 2016 (R2.3, 4.3,4.4 in effect July 1, 2017)		
CIP-005-6	Cyber Security – Electronic Security Perimeter(s)	ISO/MP		In effect in US, July 1, 2020		
CIP-007-6	Cyber Security - System Security Management	ISO/MP		In effect in US, July 1, 2016		
CIP-009-6	Cyber Security - Recovery Plans for BES Cyber Systems	ISO/MP		In effect in US, July 1, 2016 (R2.1 -2.2 in effect July 1, 2017)		
CIP-010-3	Cyber Security – Configuration Change Management and Vulnerability Assessments	ISO/MP		In effect in US, July 1, 2020		
CIP-011-2	Cyber Security - Information Protection	ISO/MP		In effect in US, July 1, 2016		
EOP-004-4	Event Reporting	ISO/MP		In effect in US, April 1, 2019		
EOP-008-2	Loss of Control Center Functionality	ISO/MP		In effect in US, April 1, 2019		
FAC-001-3	Facility Interconnection Requirements	ISO/(MP?)		In effect in the US January 1 2019		
FAC-002-2	Facility Interconnection Studies	ISO/MP		In effect in US, January 1, 2016		
FAC-010-3	System Operating Limits Methodology for the Planning Horizon	ISO		In effect in the US, April 1, 2017		
FAC-013-2	Assessment of Transfer Capability for the Near-term Transmission Planning Horizon	ISO		In effect in US, April 1, 2013		
MOD-001-1a	Available Transmission System Capability	ISO		In effect in the US, April 1, 2011		
MOD-008-1	TRM Calculation Methodology	ISO		In effect in the US, April 1, 2011		

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MOD-029-2a	Rated System Path Methodology	ISO			In effect in US, July 1, 2014	
MOD-032-1	Data for Power System Modeling and Analysis (retires MOD-010&012)	ISO/MP			In effect in US, July 1, 2015	
MOD-033-1	Steady-State and Dynamic System Model Validation	ISO/(MP?)			In effect in US, July 1, 2017	
PRC-004-5(i)	Protection System Misoperation Identification and Correction	MP			In effect in US, April 2, 2017	
VAR-002-4.1	Generator Operation for Maintaining Network Voltage Schedules	MP			In effect in US, September 26, 2017	
8. Standards Not Yet Prioritized for Development						
FAC-501-WECC-2	Transmission Maintenance	MP			In effect in the US, July 1, 2018	
PER-003-2	Personnel Credentials	ISO/MP			In effect in the US, July 1, 2019	
<del>TPL-007-3</del>	<del>Transmission System Planned Performance for Geomagnetic Disturbance Events</del>	<del>ISO/MP</del>			<del>In effect in US, July 1, 2019</del>	
VAR-001-5	Voltage and Reactive Control	ISO/MP			In effect in US, January 1, 2019	
9. Standards Approved by NERC and Filed with FERC					Status	
CIP-008-6	Cyber Security – Incident Reporting and Response Planning				Filed FERC March 7, 2019	
CIP-012-1	Cyber Security – Communications between Control Centers				Filed with FERC September 18, 2018 (FERC proposes to approve and proposes to direct NERC to modify standard)	
IRO-006-WECC-3	Qualified Path Unscheduled Flow Relief	ISO			Filed with FERC March 6, 2019	
MOD-001-2	Available Transmission System Capability				Filed with FERC, February 10, 2014	
TPL-001-5	Transmission System Planning Performance Requirements	ISO			Filed with FERC December 7, 2018	
10. Standards Approved by NERC and Awaiting Filing with FERC					Status	
None at this time						

Changes from the last posting are in red text.

Footnote 2 - The AESO reviewed the standards and came to the conclusion that at this time the proposed changes do not directly affect market participants. Therefore the AESO will not be consulting on these standards.

Footnote 1 - For new standards, the applicability represents the entities the standard applies to; for amendments to existing standards, applicability identifies the entities that the amendments apply to.

Footnote 2 - The effective date is not firm and the actual date is dependent upon approval by the Commission.

The Alberta Reliability Standards Project Work Plan (the "Work Plan") is for general information purposes only and the Alberta Electric System Operator reserves the right to change or modify the Work Plan at any time without notice. Under no circumstances will the Alberta Electric System Operator, its members, officers, employees, contractors or agents, or any of their respective affiliates, be liable for any errors or omissions in, or any losses, damages or claims whatsoever, whether in contract, tort or otherwise, arising from use of or reliance upon, the Work Plan or any information contained herein. Parties using or relying on the Work Plan do so solely at their own risk, and all information contained herein should be independently verified.

#### Legend for Section 3 - Standards Under Development

	Individual reliability standard or initiative
	Communication related standards
	Standards related to the development of EOP-011-AB-1 Emergency Operations
	Standards that are part of the reliability coordinator initiative
	Standards related to the development of PRC-027-AB-1 Coordination of Protection Systems for Performance During Faults
	Relay Loadability standards
	Transmission Planning standards