## **Alberta Reliability Standards Program Work Plan**

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|                        | NERC and WECC Standards   | Applicability    | Related ISO<br>Rules                 | Stakeholder<br>Consultation   | Forward to the AUC  | Forecast Effective Date <sup>2</sup>  |  |
|------------------------|---|------------------|--------------------------------------|---|---|---|--|
| 1. Approved by A       | UC  |                  |                                      |   |   |   |  |
| 2. Forwarded to        |   |                  |                                      |   |   |   |  |
| CIP-SUPP-001-AB1       | Supplemental CIP Alberta Reliability Standard   | ISO/MP           |                                      | Oct 18, 2016 - Nov 25, 2016   | Feb 13 2017   | The day following Commission approval.  |  |
| CIP-SUPP-002-AB        | Supplemental CIP Alberta Reliability Standard Technical Feasibility Exceptions  | ISO/MP           |                                      | Oct 18, 2016 - Nov 25, 2016   | Feb 13 2017   | The day following Commission approval.  |  |
| 3. Under Develop       | oment   |                  |                                      |   |   |   |  |
| CIP-SUPP-001-AB1       | Supplemental CIP Alberta Reliability Standard   | ISO/MP           |                                      | Oct 18, 2016 - Nov 25, 2016   | Q <del>1 2017</del>   | The day following Commission-<br>approval<br>First day of the calendar month-<br>following Commission approval. |  |
| CIP-SUPP-002-AB        | Supplemental CIP Alberta Reliability Standard Technical Feasibility Exceptions  | ISO/MP           |                                      | Oct 18, 2016 - Nov 25, 2016   | Q <del>1 2017</del>   | The day following Commission-<br>approval<br>First day of the calendar month-<br>following Commission approval. |  |
| PRC-001-AB3-1.1 (ii)   | System Protection Coordination  | MP               |                                      | Dec 15, 2015 - Jan 26, 2016   | Q2 <del>Q1</del> 2017   | First day of the calendar quarter following one full calendar quarter after approval by the AUC.                |  |
| EOP-005-AB-2           | System Restoration from Blackstart Resources  | ISO/MP           |                                      | Feb 7 2017 - Mar 7 2017   | Q2 2017   | First day of the month following three full calendar quarters after Commission approval.                        |  |
| FAC-008-AB-3           | Facility Ratings Methodology  | MP               | ISO Rules 502.15,<br>304.6 and 502.2 | March Q2 2017   | Q2 2017   | TBD   |  |
| PRC-025-AB-1           | Generator Relay Loadability   | MP               |                                      | Q2 2017   | Q3 2017   | TBD   |  |
| PRC-005-AB-6           | Protection System, Automatic Reclosing, and Sudden Pressure Relaying Maintenance  | MP               |                                      | Q3 2017   | TBD   | TBD   |  |
| CIP-014-AB-2           | Physical Security   | ISO/MP           | ISO Rule 501.2                       | TBD   | TBD   | TBD   |  |
| TPL-002-AB             | System Performance Following Loss of a Single BES Element   | ISO              |                                      | Q3 Q2-2017  | TBD   | TBD   |  |
| 4. Development I       |   |                  |                                      |   |   |   |  |
| COM-001-2              | Communications  | ISO/MP           |                                      | TBD   | TBD   | TBD   |  |
| COM-002-4              | Operating Personnel Communications Protocols  | ISO/MP           |                                      | TBD   | TBD   | TBD   |  |
| PRC-024-2<br>PER-003-1 | Generator Frequency and Voltage Protective Relay Settings   | MP<br>ICO/MP     |                                      | TBD<br>TBD  | TBD<br>TBD  | TBD<br>TBD  |  |
|                        | Operating Personnel Credentials  o be Adopted in Alberta - FERC Approved  | ISO/MP           |                                      | IBD   |   | IBD   |  |
| EOP-010-1              | Geomagnetic Disturbance Operations  |                  |                                      | Status In effect in US, April 1, 2015; R5 in effect on April 1, 2017                          |   |   |  |
| EOP-011-1              | Emergency Operations  |                  |                                      | In effect in US, April 1, 2015; R5 in effect on April 1, 2017  In effect in US, April 1, 2017 |   |   |  |
| FAC-013-2              | Assessment of Transfer Capability for the Near-term Transmission Planning Horizon   |                  |                                      | FERC approved November 11, 2011   |   |   |  |
| IRO-017-1              | Outage Coordination   |                  |                                      | In effect in US, April 1, 2017  |   |   |  |
| MOD-001-1a             | Available Transmission System Capability  |                  |                                      | In effect in US, April 4, 2011  |   |   |  |
| MOD-001-1a             | Transmission Reliability Margin Calculation Methodology   |                  |                                      | In effect in US, June 18, 2007  |   |   |  |
| MOD-025-2              | Verification and Data Reporting of Generator Real and Reactive Power Capability and Synchronous Condenser Reactive Power Capability |                  |                                      | In effect in US, July 1, 2016   |   |   |  |
| MOD-026-1              | Verification of Models and Data for Generator Excitation Control System or Plant Volt/Var Control Functions                         |                  |                                      | FERC approved March 20, 2014  |   |   |  |
| MOD-027-1              | Verification of Models and Data for Turbine/Governor and Load Ctrl  |                  |                                      | FERC approved March 20, 2014  |   |   |  |
| MOD-029-2a             | Rated System Path Methodology   |                  |                                      | In effect in US, July 1, 2014   |   |   |  |
| MOD-031-2              | Demand and Energy Data  |                  |                                      | In effect in US, October 1, 2016  |   |   |  |
| MOD-032-1              | Data for Power System Modeling and Analysis   |                  |                                      | In effect in US, July 1, 2015   |   |   |  |
| MOD-033-1              | Steady-State and Dynamic System Model Validation  | 10.5 % 15        |                                      | In effect in US, July 1, 2017   |   |   |  |
| PRC-002-2<br>PRC-006-2 | Disturbance Control Performance   | ISO/MP<br>ISO/MP |                                      | In effect in US, July 1 2016  |   |   |  |
|                        | Automatic Underfrequency load shedding  Special Protection System Data and Documentation  | ISO/MP           | 704C                                 |   | In effect in US, October 1, 2015 In effect in the US, April 1, 2017 |   |  |
| PRC-015-1              | Special Protection System Data and Documentation  |                  | 704C                                 |   | in enect in the US, Apri  | 11, 2017  |  |

|  | NERC and WECC Standards  | Applicability | Related ISO<br>Rules | Stakeholder<br>Consultation  | Forward to the AUC          | Forecast Effective Date <sup>2</sup>   |
|--|--|---------------|----------------------|--|-----------------------------|--|
| PRC-016-1  | Remedial Action Scheme Misoperations   |               |                      | In effect in the US, April 1, 2017   |                             |  |
| PRC-017-1  | Remedial Action Scheme Maintenance and Testing   |               |                      | In effect in the US, April 1, 2017   |                             |  |
| PRC-019-2  | Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection       |               |                      | In effect in US, July 1 2016   |                             |  |
| TOP-001-3  | Transmission Operations  |               |                      | In effect in US, April 1, 2017   |                             |  |
| TOP-002-4  | Operation Planning   |               |                      | In effect in US, April 1, 2017   |                             |  |
| TOP-003-3  | Operational Reliability Data   |               |                      | In effect in US, January 1, 2017 (all requirements, except R5) R5 in effect April 1, 2017                  |                             |  |
| TOP-004-2  | Transmission Operations  |               |                      | In effect in US, January 1, 2009   |                             |  |
| TOP-008-1  | Response to Transmission Limit Violations  |               |                      |  | In effect in US, June 1     | 8, 2007                                |
| 6. New Versions of   | f Adopted Standards - FERC Approved  |               |                      | Status   |                             |  |
| BAL-001-2  | Real Power Balancing Control Performance   |               |                      |  | In effect in US, July 1     |  |
| BAL-002-2  | Disturbance Control Standard - Contingency Reserve for Recovery from a Balancing Contingency Event       |               |                      | FERC Ap  | oproved January 19, 2017    | [FERC Order 835]                       |
| BAL-003-1  | Frequency Response   |               |                      |  | In effect in US, April 1    | , 2015                                 |
| BAL-006-2  | Inadvertant Interchange  |               |                      |  | In effect In US, April 1    | , 2014                                 |
| CIP-003-6  | Cyber Security - Security Management Controls  |               |                      |  | In effect in US, April 1    | , 2017                                 |
| CIP-004-6  | Cyber Security - Personnel and Training  |               |                      | In effect in US, 0   | October 1 2016 (R2.3, 4.3   | 3,4.4 in effect July 1, 2017)          |
| CIP-006-6  | Cyber Security - Physical Security of BES Cyber Systems  |               |                      | In effect in   | US, July 1, 2016 (R3.1 ii   | n effect July 1, 2017)                 |
| CIP-007-6  | Cyber Security - System Security Management  |               |                      |  | In effect in US, July 1     | , 2016                                 |
| CIP-009-6  | Cyber Security - Recovery Plans for BES Cyber Systems  |               |                      | In effect in U   | IS, July 1, 2016 (R2.1 -2.2 | 2 in effect July 1, 2017)              |
| CIP-010-2  | Cyber Security - Configuration Change Management and Vulnerability Assessments                           |               |                      | In effect in US, August 5,   | 2016 (all requirements, e   | except R4) R4 in effect April 1, 2017  |
| CIP-011-2  | Cyber Security - Information Protection  |               |                      |  | In effect in US, July 1     | , 2016                                 |
| EOP-001-2.1b   | Emergency Operations Planning  |               |                      |  | In effect in US, July 1     | , 2013                                 |
| EOP-002-3.1  | Capacity and Energy Emergencies  |               |                      | In effect in US, September 13, 2012  |                             |  |
| EOP-003-2  | Load Shedding Plans  |               |                      | In effect in US, October 1, 2013   |                             |  |
| EOP-004-3  | Event Reporting  |               |                      |  | In effect in the US, Apri   |  |
| FAC-001-2  | Facility Interconnection Requirements  |               |                      |  | In effect in US, January    | 1, 2016                                |
| FAC-002-2  | Facility Interconnection Studies   |               |                      |  | In effect in US, January    |  |
| FAC-003-4  | Transmission Vegetation Management   |               |                      |  | In effect in US, October    |  |
| FAC-010-3  | System Operating Limits Methodology for the Planning Horizon   |               |                      |  | In effect in the US, Apri   | 1. 2017                                |
| FAC-011-3  | System Operating Limits Methodology for the Operations Horizon   |               |                      |  | In effect in the US, Apri   | 1. 2017                                |
| INT-006-4  | Response to Interchange Authority  |               |                      |  | FERC Approved, June         | 30, 2014                               |
| INT-009-2  | Implementation of Interchange  |               |                      |  | FERC Approved, June         |  |
| INT-010-2.1  | Interchange Initiation of Modification for Reliability   |               |                      | In effect in US, November 26, 2014   |                             |  |
| IRO-001-4  | Reliability Coordination - Responsibilities  |               |                      | In effect in US, April 1, 2017   |                             |  |
| IRO-010-2  | Reliability Coordinator Data Specification and Collection  |               |                      | R1, R2, in effect in US, January 1, 2017. R3 in effect April 1, 2017                                       |                             |  |
| IRO-008-2  | Reliability Coordinator Operational Analyses and Real-time Assessments                                   |               |                      |  | In effect in US, April 1    |  |
| MOD-019-0.1  | Reporting of Interruptible Demands and Direct Control Load Management                                    |               |                      |  | FERC Approved, May          | •                                      |
| PRC-004-5(i)   | Protection System Misoperation Identification and Correction   |               |                      |  | In effect in US, April 2    | •                                      |
| PRC-004-WECC-2   | Protection System and Remedial Action Scheme Misoperation  |               |                      |  | In effect in the US, Apri   |  |
| PRC-010-1  | Undervoltage Load Shedding   |               |                      |  | In effect in US, April 2    | ·                                      |
| PRC-023-4  | Transmission Relay Loadability   |               |                      |  |                             | •                                      |
| PRC-026-1  | Relay Performance During Stable Power Swings   |               |                      | In effect in the US, April 1, 2017 R1 in effect in US, January 1, 2018. R2 to R4 in effect January 1, 2020 |                             |  |
| TPL-001-4  | Transmission System Planning Performance Requirements  |               |                      |  | In effect in the US, Janua  |  |
| TPL-001-4<br>TPL-007-1   | , , ,  |               |                      |  | ,                           | · ·                                    |
| VAR-002-WECC-2   | Transmission System Planned Performance for Geomagnetic Disturbance Events  Automatic Voltage Regulators |               |                      | in enect in the OS, July 1, 2  | In effect in US, April 1    | 018. R5 in effect January 1, 2019. R3, |
| VAR-002-WECC-2   | Power System Stabilizers   |               |                      |  |                             | •                                      |
| VAR-501-WECC-2   | Generator Operation for Maintaining Network Voltage Schedules  |               |                      | In effect in US, April 1, 2015 FERC Approved, May 29, 2015   |                             |  |
|  | · ·  |               |                      |  |                             | 29, 2010                               |
| 7. New Versions of Adopted/New Standards - Filed with FERC  BAL-002-1a Disturbance Control Performance  Status  Filed with FERC, February 12, 2013 |  |               |                      |  |                             | v 12 - 2013                            |
| BAL-005-1  | Balancing Authority Control  |               |                      |  | Filed with FERC, May        |  |
| CIP-003-7  | Security Management Controls   |               |                      |  |                             |  |
| COM-001-3  | Communications   |               |                      | Filed with FERC, March 3, 2017 Filed with FERC, August 25, 2016  |                             |  |
| FAC-001-3  |  |               |                      |  |                             |  |
|  | Facility Interconnection Requirements  |               |                      |  | Filed with FERC, May        | *                                      |
| IRO-005-4  | Reliability Coordination – Current-Day Operations  |               |                      |  | Filed with FERC, April      | 16, 2013                               |

|  | NERC and WECC Standards  | Applicability | Related ISO<br>Rules | Stakeholder<br>Consultation                                       | Forward to the AUC | Forecast Effective Date <sup>2</sup> |  |
|--|--|---------------|----------------------|---|--------------------|--------------------------------------|--|
| IRO-009-2  | Reliability Coordinator Actions to Operate within IROLs                            |               |                      | Filed with FERC, September 16, 2015                               |                    |                                      |  |
| IRO-018-1  | Reliability Coordinator Real-time Reliability Monitoring and Analysis Capabilities |               |                      | Filed with FERC, May 26, 2016                                     |                    |                                      |  |
| MOD-001-2  | Available Transmission System Capability   |               |                      | Filed with FERC, February 10, 2014                                |                    |                                      |  |
| PER-006-1  | Specific Training for Personnel  |               |                      | Filed with FERC, September 2, 2016                                |                    |                                      |  |
| PRC-001-2  | System Protection Coordination   |               |                      | Filed with FERC, April 16, 2013                                   |                    |                                      |  |
| PRC-012-2  | Remedial Action Schemes  |               |                      | Filed with FERC, August 5, 2016                                   |                    |                                      |  |
| PRC-023-4  | Transmission Relay Loadability   |               |                      | Filed with FERC, February 3, 2015                                 |                    |                                      |  |
| PRC-027-1  | Coordination of Protection Systems for Performance During Faults                   |               |                      | Filed with FERC, September 2, 2016                                |                    |                                      |  |
| TOP-006-3  | Monitoring System Conditions   |               |                      | Filed with FERC April 4, 2013                                     |                    |                                      |  |
| TOP-007-WECC-1a  | System Operating Limits  |               |                      | Filed with FERC March 23, 2016 - Recommend Retirement of Standard |                    |                                      |  |
| TOP-010-1  | Real-time Reliability Monitoring and Analysis Capabilities                         |               |                      | Filed with FERC, May 26, 2016                                     |                    |                                      |  |
| 8. New Versions of Adopted/New Standards - NERC BOT Approved |  |               | Status               |   |                    |                                      |  |
| PRC-005-5  | Protection System, Automatic Reclosing and Sudden Pressure Relaying Maintenance    |               |                      | NERC BOT approved May 7, 2015                                     |                    |                                      |  |
| 9. Projects to be Confirmed N/A in Alberta - FERC Approved   |  |               |                      | Status  |                    |                                      |  |
| IRO-002-4  | Reliability Coordination - Monitoring and Analysis                                 |               |                      | In effect in US, April 1, 2017                                    |                    |                                      |  |
| IRO-014-3  | Coordination Among Reliability Coordinators  |               |                      | In effect in US, April 1, 2017                                    |                    |                                      |  |
| MOD-030-3  | Flowgate Methodology   |               |                      | In effect in US, April 1, 2017                                    |                    |                                      |  |

Changes from the last posting are in red text.

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.

Footnote 3 - The AESO reviewed the standard and came to the conclusion that the proposed changes do not directly affect market participants. Therefore, consultation with market participants to address the foregoing is not required.

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