



August 17, 2009

**To: Alberta Utilities Commission (“Commission”)**

**Re: Notice of Filing – Alberta Reliability Standards (“Reliability Standards”):**

- a) **EOP-002-AB-2 Capacity and Energy Emergencies**
  - b) **FAC-001-AB-0 Facility Connection Requirements**
  - c) **FAC-002-AB-0 Coordination of Plans for New Facilities**
  - d) **INT-001-AB-3 Interchange Information**
  - e) **INT-006-AB-2 Response to Interchange Authority**
  - f) **INT-009-AB-1 Implementation of Interchange**
  - g) **INT-010-AB-1 Interchange Coordination Exemptions**
  - h) **PRC-009-AB-0 UFLS Performance Following an Underfrequency Event**
  - i) **PRC-010-AB-0 Assessment of the Design and Effectiveness of UVLS Program**
  - j) **PRC-022-AB-1 Under Voltage Load Shedding Program Performance**
  - k) **TPL-001-AB-0 System Performance Under Normal Conditions**
  - l) **TPL-002-AB-0 System Performance Following Loss of a Single BES Element**
  - m) **TPL-003-AB-0 System Performance Following Loss of Two or More BES Elements**
  - n) **TPL-004-AB-0 System Performance Following Extreme BES Events**
1. Please be advised that pursuant to Section 19(4)(b) of the *Transmission Regulation* the Alberta Electric System Operator (“AESO”) is forwarding and recommending that the Alberta Utilities Commission (“Commission”) approve the above-captioned Reliability Standards. These Reliability Standards, if approved, will apply to the AESO.
  2. The Reliability Standards are based on the reliability standards and definitions developed and enforced by the North American Electric Reliability Corporation (“NERC”) in the United States. NERC was approved as the Electric Reliability Organization (“ERO”) for the United States by the Federal Energy Regulatory Commission (“FERC”) as per the US Energy Policy Act. NERC has been granted recognition as the ERO by the Minister of Energy in Alberta pursuant to Section 20 of the *Transmission Regulation*.



3. These Reliability Standards contain certain changes from the ERO reliability standards and definitions to ensure that the standards are properly aligned with the industry structure and adapted for application in Alberta. The AESO has consulted with those market participants that it considers are likely to be directly affected in accordance with Section 19(4)(a) of the *Transmission Regulation*.
4. The AESO is also including as attachments tables comparing the recommended Reliability Standard with the equivalent NERC reliability standard. These attachments are being provided for information purposes with the understanding they may assist the Commission in its review when satisfying itself under Section 19(5) of the *Transmission Regulation*.

### **Summary of Reliability Standards**

#### **EOP-002-AB-2 Capacity and Energy Emergencies**

5. The purpose of this Reliability Standard is to ensure the ISO is prepared for a supply shortfall event.
6. This new Reliability Standard is based on the NERC reliability standard entitled EOP-002-2

#### **FAC-001-AB-0 Facility Connection Requirements**

7. The purpose of this Reliability Standard is to establish connection and performance requirements for facilities connecting to the AIES
8. This new Reliability Standard is based on the NERC reliability standard entitled FAC-001-0

#### **FAC-002-AB-0 Coordination of Plans for New Facilities**

9. The purpose of this Reliability Standard is to demonstrate that proper evaluation of potential reliability impacts of new transmission facilities to be connected to the AIES has occurred.
10. This new Reliability Standard is based on the NERC reliability standard entitled FAC-002-0



### **INT-001-AB-3 Interchange Information**

11. The purpose of this Reliability Standard is to require that interchange information is submitted to the interchange authority.
12. This new Reliability Standard is based on the NERC reliability standard INT-001-3

### **INT-006-AB-2 Response to Interchange Authority**

13. The purpose of this Reliability Standard is to require that each arranged interchange is checked for reliability before it is implemented in an interchange schedule.
14. This new Reliability Standard is based on the NERC reliability standard INT-006-2

### **INT-009-AB-1 Implementation of Interchange**

15. The purpose of this reliability standard is to require that the implementation of interchange between source and sink balancing authorities is coordinated by an interchange authority such that the balancing authorities implement the interchange as agreed upon in the interchange confirmation process.
16. This new Reliability Standard is based on the NERC reliability standard INT-009-1

### **INT-010-AB-1 Interchange Coordination Exemptions**

17. The purpose of this reliability standard is to allow certain types of interchange schedules to be initiated or modified by reliability entities, and to be exempt from compliance with other interchange standards under abnormal operating conditions.
18. This new Reliability Standard is based on the NERC reliability standard INT-010-1.



### **PRC-009-AB-0 UFLS Performance Following an Underfrequency Event**

19. The purpose of this reliability standard is to ensure effectiveness of the UFLS program performance.
20. This new Reliability Standard is based on the NERC reliability standard PRC-009-0

### **PRC-010-AB-0 Assessment of the Design and Effectiveness of UVLS Program**

21. The purpose of this reliability standard is to ensure the effectiveness of each UVLS program.
22. This new Reliability Standard is based on the NERC reliability standard PRC-010-0

### **PRC-022-AB-1 Under Voltage Load Shedding Program Performance**

23. The purpose of this reliability standard is to ensure that UVLS programs perform as intended to mitigate the risk of voltage collapse or voltage instability in the AIES.
24. This new Reliability Standard is based on the NERC reliability standard PRC-022-1.

### **TPL-001-AB-0 System Performance Under Normal Conditions**

25. The purpose of this reliability standard is to ensure that a reliable transmission system is planned that meets specified performance requirements, with sufficient lead time. The transmission system must continue to be modified or upgraded as required to meet present and future system specified performance requirements as identified by periodically performed system simulations and associated planning assessments.
26. This new Reliability Standard is based on the NERC reliability standard TPL-001-0



### **TPL-002-AB-0 System Performance Following Loss of a Single BES Element**

27. The purpose of this reliability standard is to ensure that a reliable transmission system is planned that meets specified performance requirements with sufficient lead time. The transmission system must continue to be modified or upgraded as required to meet present and future system specified performance requirements as identified by periodically performed system simulations and associated planning assessments.
28. This new Reliability Standard is based on the NERC reliability standard TPL-002-0.

### **TPL-003-AB-0 System Performance Following Loss of Two or More BES Elements**

29. The purpose of this reliability standard is to ensure that a reliable transmission system is planned that meets specified performance requirements, with sufficient lead time. The transmission system must continue to be modified or upgraded as required to meet present and future system specified performance requirements as identified by periodically performed system simulations and associated planning assessments.
30. This new Reliability Standard is based on the NERC reliability standard TPL-003-0

### **TPL-004-AB-0 System Performance Following Extreme BES Events**

31. The purpose of this reliability standard is to ensure that a reliable transmission system is planned that meets specified performance requirements with sufficient lead time. The transmission system must continue to be modified or upgraded as required to meet present and future system specified performance requirements as identified by periodically performed system simulations and associated planning assessments.
32. This new Reliability Standard is based on the NERC reliability standard TPL-004-0



## Attachments to Notice of Filing

10. Please find the following attached to this Notice of Filing\*:
- a) The [Letter of Notice](#) that was sent to market participants that the AESO considers likely to be affected by these changes and that was posted on the AESO web site on May 1, 2009. In this letter, the AESO sought feedback from stakeholders;
  - b) The [Stakeholder Comment on Letter of Notice](#) with written comments received, the name of market participants or other persons who submitted each comment in response to the Letter of Notice and the date on which the comment was submitted that was sent to market participants that the AESO considers likely to be affected by these changes and that was posted on the AESO web site on June 9, 2009;
  - c) The [Final Proposed Alberta Reliability Standards](#) letter (posted on July 24, 2009). Attached to this letter is the AESO's comment-response matrix including the AESO's responses to stakeholder comments.
  - d) Copies of the following filed Reliability Standards and comparison documents:
    - i. [EOP-002-AB-2](#) Capacity and Energy Emergencies
    - ii. [Comparison Document](#) between NERC EOP-002-2 and Alberta EOP-002-AB-2;
    - iii. [FAC-001-AB-0](#) Facility Connection Requirements
    - iv. [Comparison Document](#) between NERC FAC-001-0 and Alberta FAC-001-AB-0;
    - v. [FAC-002-AB-0](#) Coordination of Plans for New Facilities
    - vi. [Comparison Document](#) between NERC FAC-002-0 and Alberta FAC-002-AB-0;
    - vii. [INT-001-AB-3](#) Interchange Information
    - viii. [Comparison Document](#) between NERC INT-001-3 and Alberta INT-001-AB-3;
    - ix. [INT-006-AB-2](#) Response to Interchange Authority
    - x. [Comparison Document](#) between NERC INT-006-2 and Alberta INT-006-AB-2;
    - xi. [INT-009-AB-1](#) Implementation of Interchange
    - xii. [Comparison Document](#) between NERC INT-009-1 and Alberta INT-009-AB-1;
    - xiii. [INT-010-AB-1](#) Interchange Coordination Exemptions

- xiv. [Comparison Document](#) between NERC INT-010-1 and Alberta INT-010-AB-1;
- xv. [PRC-009-AB-0](#) UFLS Performance Following an Underfrequency Event
- xvi. [Comparison Document](#) between NERC PRC-009-0 and Alberta PRC-009-AB-0
- xvii. [PRC-010-AB-0](#) Assessment of the Design and Effectiveness of UVLS Program
- xviii. [Comparison Document](#) between NERC PRC-010-0 and Alberta PRC-010-AB-0
- xix. [PRC-022-AB-1](#) Under Voltage Load Shedding Program Performance
- xx. [Comparison Document](#) between NERC PRC-022-1 and Alberta PRC-022-AB-1;
- xxi. [TPL-001-AB-0](#) System Performance Under Normal Conditions
- xxii. [Comparison Document](#) between NERC TPL-001-0 and Alberta TPL-001-AB-0;
- xxiii. [TPL-002-AB-0](#) System Performance Following Loss of a Single BES Element
- xxiv. [Comparison Document](#) between NERC TPL-002-0 and Alberta TPL-002-AB-0;
- xxv. [TPL-003-AB-0](#) System Performance Following Loss of Two or More BES Elements
- xxvi. [Comparison Document](#) between NERC TPL-003-0 and Alberta TPL-003-AB-0
- xxvii. [TPL-004-AB-0](#) System Performance Following Extreme BES Events
- xxviii. [Comparison Document](#) between NERC TPL-004-0 and Alberta TPL-004-AB-0

11. \* Please be advised that certain of the attachments noted above include reference to other ISO Reliability Standards that are not the subject of this filing.

#### **Proposed Effective Date**

12. Proposed effective dates are as follows:

**EOP-002-AB-2 Capacity and Energy Emergencies** - ten calendar days after the date of approval by the Commission



**FAC-001-AB-0 Facility Connection Requirements** – 365 calendar days after the date of approval by the Commission (To provide time to modify interconnection standards)

**FAC-002-AB-0 Coordination of Plans for New Facilities** – 180 calendar days after approval by the Commission (This allows time to put into place process requirements and documentation.)

**INT-001-AB-3 Interchange Information** -ten calendar days after the date of approval by the Commission

**INT-006-AB-2 Response to Interchange Authority** - ten calendar days after the date of approval by the Commission

**INT-009-AB-1 Implementation of Interchange** - ten calendar days after the date of approval by the Commission

**INT-010-AB-1 Interchange Coordination Exemptions** - ten calendar days after the date of approval by the Commission

**PRC-009-AB-0 UFLS Performance Following an Underfrequency Event** – ten calendar days after the date of approval by the Commission

**PRC-010-AB-0 Assessment of the Design and Effectiveness of UVLS Program** - ten calendar days after the date of approval by the Commission

**PRC-022-AB-1 Under Voltage Load Shedding Program Performance** - ten calendar days after the date of approval by the Commission

**TPL-001-AB-0 System Performance Under Normal Conditions** – 365 calendar days after approval by the Commission (This allows time to put into place process requirements and documentation.)

**TPL-002-AB-0 System Performance Following Loss of a Single BES Element** - 365 calendar days after approval by the Commission (This allows time to put into place process requirements and documentation.)

**TPL-003-AB-0 System Performance Following Loss of Two or More BES Elements** - 365 calendar days after approval by the Commission (This allows time to put into place process requirements and documentation.)



**TPL-004-AB-0 System Performance Following Extreme BES Events -  
365 calendar days after approval by the Commission (This allows time to put  
into place process requirements and documentation.)**

13. The AESO submits that the Reliability Standards noted above, comply with the requirements of the *Transmission Regulation*, are not technically deficient, and are in the public interest.

Yours truly,

*<original signed by>*

Jennifer Hocking  
Regulatory Legal Counsel  
Tel: 403-539-2578  
jennifer.hocking@aeso.ca

Attachments