



September 30, 2010

**To: Market Participants and Interested Persons**

**Re: Information Document # 2010-008RS Implementing Transmission Planning Reliability Standards**

This information document provides interested market participants with information regarding the implementation of Alberta's transmission planning reliability standards. This information is likely of most interest to entities affected by transmission planning in Alberta.

Sincerely

Shan Bhattacharya, Vice President, Transmission

**Comments/Questions**

If you have any comments or questions about the information in this document please contact:

**Jerry Mossing**

Director Transmission Support, Transmission

Phone # 403-539-2496

e-mail: [jerry.mossing@aeso.ca](mailto:jerry.mossing@aeso.ca)



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## 1. Purpose

This information document provides interested market participants with information regarding the implementation of Alberta's transmission planning ("TPL") reliability standards.

## 2. Background

The TPL reliability standards – specifically TPL-001-AB-0, TPL-002-AB-0, TPL-003-AB-0 and TPL-004-AB-0 were approved by the Commission on September 23, 2009 and become effective on September 24, 2010. The AESO consulted with stakeholders, including the AESO Reliability Committee ("ARC") and its work groups, as part of the AESO's Reliability Standards Project. The Transmission Planning Work Group reviewed and made recommendations for implementing the NERC TPL standards as Alberta reliability standards, and acknowledged that the AESO's implementation of these reliability standards would entail significant efforts in conducting planning assessments and, if necessary, developing and implementing corrective plans. The AESO accepted the ARC's recommendation to have the TPL reliability standards become effective one year after the Commission approval date.

## 3. Implementing the Alberta TPL Reliability Standards

Essentially, each of the TPL reliability standards contains two distinct requirements<sup>1</sup>. The first requirement is for the AESO to conduct annual planning assessments to demonstrate the transmission system's ability to meet certain performance requirements over a ten year planning horizon. The second requirement is for the AESO to develop corrective plans if the planning assessments indicate performance requirements will not be met.

As the effective date of the TPL reliability standards is September 24, 2010, the AESO's first annual performance assessments must be completed within one year of that date, i.e. by September 24, 2011. The AESO began conducting the necessary planning assessments in June of this year. The studies conducted in these planning assessments are also part of the AESO's long term planning process, which will culminate in an update to the AESO's 2009 Long-term Transmission System Plan in Q2 2011. The planning assessments are scheduled to be completed by the end of 2010.

<sup>1</sup> A third requirement exists but is not relevant to this discussion. The third requirement has AESO providing information to the WECC regarding the assessments and plans created out of the first two requirements.



Following the completion of the planning assessments and as part of the second requirement in the TPL reliability standards, the AESO may need to create corrective action plans. Corrective action plans may include: adding new transmission facilities, implementing remedial action schemes and creating new or modifying existing operating procedures. As the TPL reliability standards require, the AESO's corrective action plans must align with the TPL performance requirements for single and multiple contingencies.

Critical to the implementation of corrective actions is close coordination with transmission system development and connection projects currently underway. In addition, close coordination with the on-going implementation measures as described in section 4 below is necessary. Without such coordination, implementing a corrective action plan could interfere with transmission development plans underway and reduce overall system reliability or disrupt service to customers unnecessarily.

#### **4. On-going NERC TPL Standards Implementation (i.e. NERC TPL standards actions prior to Commission approved Alberta reliability standards)**

In addition to meeting the TPL reliability standard requirements described above, the AESO is currently implementing measures to meet some category B and C performance requirements<sup>2</sup> described in the NERC transmission planning reliability standards TPL-002 and 003. The measures being implemented are based on recommendations resulting from previous system planning studies conducted by the AESO. The measures can be grouped into two categories; operating procedures and overload mitigation schemes. Implementing these measures requires close coordination with transmission system development and connection projects currently underway, as well as with any changes to ISO rules, including operating policy and procedures. For example, following the loss of multiple transmission elements, pre-planned operating procedures are used to curtail generating units or loads thereby reducing overloads. As an alternative, automatically re-configuring the transmission system or automatically tripping load following contingencies using relay control systems can also reduce overloads. In this manner, TPL reliability standard performance requirements are met through the use of operator actions to be taken following contingencies.

#### **5. Summary**

The AESO's long term planning process will include the performance assessments to meet the TPL reliability standards requirements. Any corrective action plans resulting from the performance assessments will need to be closely coordinated with transmission system development, connection projects underway as well as the on-going implementation measures described in section 4.

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<sup>2</sup> Category B refers to single contingencies and category C refers to several types of multiple contingencies



## Revision History

Version	Effective Date	Description of Changes
1.0	2010-09-24	First release

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Director Transmission Support, Transmission

Phone # 403-539-2496

e-mail: [jerry.mossing@aeso.ca](mailto:jerry.mossing@aeso.ca)