EOP–003–AB1–1 Load Shedding Plans

1. Purpose

The purpose of this *reliability standard* is to ensure plans are in place and plans are implemented to shed *load* when there is insufficient generation or transmission capacity, to mitigate the risk of an uncontrolled failure of the *Interconnection*.

2. Applicability

This *reliability standard* applies to the entities listed below:

(a) the *operator* of a *transmission facility* that is part of the *bulk electric system*;

(b) a *market participant* receiving service under Rate DTS of the *ISO tariff*, unless such service is used solely for supplying station service to a *generating unit* or an *aggregated generating facility*;

(c) the *operator* of an *electric distribution system* who is a counterparty to an agreement with a *market participant* receiving service under Rate DTS of the *ISO tariff*, for the provision of *load* shedding services; and

(d) the *ISO.*

This *reliability standard* does not apply to the *operator* of a *transmission facility* whose *transmission facility* is a radial connection from a *generating unit* or an *aggregated generating facility* to either the *transmission system* or to *transmission facilities* within the city of Medicine Hat.

3. Definitions

Italicized terms used in this *reliability standard* have the meanings as set out in the *Consolidated Authoritative Document Glossary*.

4. Requirements

R1 When the AIES is operating with insufficient generation or transmission capacity and after considering all remedial steps, the *ISO* must issue *directives* to shed *load*.

R1.1 Each *market participant* and *operator* of an *electric distribution system* must shed *load* or reduce *MW* inflow as directed by the *ISO*.

R1.2 When coordination with the *ISO* is not possible or practicable, and after considering all remedial steps, the *operator* of a *transmission facility*, when operating with insufficient generation or transmission capacity, must shed *load* rather than risk an uncontrolled failure of components or *cascading* of the *Interconnection*.

R2 The *ISO* must establish plans for automatic *load* shedding for *underfrequency* or under voltage conditions.

R3 The *ISO* must submit *UFLS* plans to *WECC* for coordination of *UFLS* plans among other *interconnected transmission operators* and *balancing authorities*.

R4 The *ISO* must coordinate *UVLS* plans among other *interconnected transmission operators* and *balancing authorities* external to Alberta.

R5 The *ISO* must consider one or more of these factors in designing an automatic *load* shedding scheme: frequency, rate of frequency decay, voltage level, rate of voltage decay, or power flow levels.

R6 The *ISO* must implement automatic *load* shedding in *MW* blocks established to minimize the risk of further uncontrolled separation, loss of generation, or system shutdown.

R7 After the *AIES* separates from the *Interconnection*, if there is insufficient generating capacity to restore frequency following automatic *underfrequency load shedding*, the *ISO* must issue *directives* to shed additional *load*.

R8 The *ISO* must coordinate automatic *load* shedding throughout Alberta with *underfrequency* isolation of generating units, tripping of shunt capacitors, and other automatic actions that will occur under abnormal frequency, voltage, or power flow conditions.

R9 The *ISO* must have procedures for directing operator controlled manual *load* shedding to respond to real-time emergencies.

R10 The *ISO* must be capable of directing manual *load* shedding in a time frame adequate for responding to the emergency.

R11 Each *market participant* and *operator* of an *electric distribution system* must be capable of implementing manual *load* shedding in a time frame adequate for responding to the emergency.

5. Processes and Procedures

No procedures have been defined for this *reliability standard*.

6. Measures

The following measures correspond to the requirements identified in Section 4 of this *reliability standard*. For example, MR1 is the measure for R1.

These measures will be used by the *ISO* in carrying out its *compliance monitor*ing duties in accordance with *ISO rule* 12. The *ISO* may consider other data and information, including any provided by a *market participant*.

MR1 Voice recordings and logs exist to confirm the *ISO* issued *directives* to shed *load*.

- **MR1.1** Electronic logs, metering or electronic data exists to confirm the *market participant* or *operator* of an *electric distribution system* shed *load*.
- **MR1.2** Electronic logs and/or electronic data exist to confirm the *operator of a transmission facility* shed *load*.

MR2 Automatic *load* shedding plans exist. Plans meet the defined need of *load* shedding situations.

MR3 Written confirmation from *WECC* that the *ISO* submitted *UFLS* plans.

MR4 Written confirmation from *interconnected transmission operators* and *balancing authorities* external to Alberta indicating that the *ISO* coordinated *UVLS* plans.

MR5 One or more of these factors were considered in the design of the *load* shed scheme.

MR6 One or more *MW* blocks exist in *load* shed plans or schemes.

MR7 Voice recordings and logs exist to confirm the *ISO* issued *directives* to shed additional *load*.

MR8 *ISO rules*, *interconnection* standards or studies exist to show coordination with automatic actions.

MR9 Procedures exist for directing operator controlled manual *load* shedding.

MR10 Electronic logs, and/or voice recordings exist to confirm the *ISO* directed manual *load* shedding. Manual *load* shedding is performed in a time frame adequate to respond to the emergency as defined in operating procedures or equipment ratings.

MR11 Electronic logs, metering or electronic data exists to confirm the manual *load* shedding. Manual *load* shedding is performed in a time frame adequate to respond to the emergency as defined in operating procedures or equipment ratings.

7. Appendices

No appendices have been defined for this *reliability standard*.

8. Guidelines

No guidelines have been defined for this *reliability standard*.

Revision History

Effective	Description
2012-12-17	Administrative update – "*TFO*", "*demand customer*" and "*WSP*" replaced with "*operator of a transmission facility*", "*market participant* receiving service under Rate DTS of the *ISO tariff*" and "*operator* of an *electric distribution system*"; and other cleanup items.
2009-06-17	New Issue