ISO Rules
Part 300 System Reliability and Operations
Division 304 Routine Operations
Section 304.8 Event Analysis

External Consultation Draft

August 29, 2017

Applicability

1 Section 304.8 applies to:

(a) the **operator** of a **transmission facility**;

(b) the **operator** of an **electric distribution system**;

(c) the **operator** of a facility that provides **ancillary services**;

(d) the **operator** of a **generating unit** that:

(i) is not part of an **aggregated generating facility**;
(ii) has a maximum authorized real power rating greater than 4.5 MW; and
(iii) is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat, including a **generating unit** situated within an industrial complex that is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat;

(e) the **operator** of an **aggregated generating facility** that

(i) has a maximum authorized real power rating greater than 4.5 MW; and
(ii) is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat, including an **aggregated generating facility** situated within an industrial complex that is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat**;**

(f) the **legal owner** of a **transmission facility**;

(g) the **legal owner** of an **electric distribution system**;

(h) the **legal owner** of a facility that provides **ancillary services**;

(i) the **legal owner** of a **generating unit** that:

(i) is not part of an **aggregated generating facility**; and
(ii) is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat, including a **generating unit** situated within an industrial complex that is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat;

the **legal owner** of an **aggregated generating facility** that is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat, including an **aggregated generating facility** situated within an industrial complex that is directly connected to the **transmission system** or to **transmission facilities** within the City of Medicine Hat;

(collectively referred to as the “Responsible Entities”)

and

(k) the **ISO**.

Requirements

Requirements to Perform Event Analysis

2(1) The **ISO** may conduct an event analysis of an event listed in Appendix 1.

(2) The **ISO** may conduct an event analysis for an event that is not listed in Appendix 1 where:

(a) the **ISO** determines that an analysis is necessary to evaluate the impact of an event on the reliable operation of the **interconnected electric system**; or

(b) an event analysis report is requested by the **NERC** or the **WECC**.

(3) The **ISO** may categorize the event using the highest applicable category in Appendix 1 where Category 1 is the lowest and Category 5 is the highest.

Event Analysis Requests

3(1) The **ISO** may request a brief report or an event analysis report or both from a Responsible Entity while conducting an event analysis.

Responsible Entity Reporting

4(1) A Responsible Entity must provide the **ISO** with a report requested in accordance with subsection 3(1):

(a) in a manner specified by the **ISO**;

(b) within ten (10) **business days** if the **ISO** requests a brief report; and

(c) within thirty (30) **business days** if the **ISO** requests an event analysis report.

(2) Notwithstanding subsection 4(1), a Responsible Entity may request, in writing, including all relevant supporting documentation, that the **ISO** provide an extension to the time frames indicated in subsections 4(1)(b) and 4(1)(c):

(a) to allow for system restoration; or

(b) to allow the Responsible Entity to obtain accurate and complete information regarding the event.

(3) The **ISO** must respond, in writing, to an extension request made in accordance with subsection 4(2) within three (3) **business days** of receiving the request.

Review

5(1) Upon reviewing a brief report or event analysis report provided in accordance with subsection 4, the **ISO** may request that the Responsible Entity provide additional information as required to complete the event analysis within a specified time frame.

(2) A Responsible Entity must, upon receiving a request from the **ISO** under subsection 5(1) and within the time frame specified in the request:

(a) provide the **ISO** with the requested information; or

(b) notify the **ISO**, in writing, of the reasons for which the requested information is not available or the specified time frame cannot be met.

ISO Reporting

6(1) The **ISO** may, after reviewing the reports provided in accordance with subsection 4 and subsection 5, decide to author additional reports.

Event Analysis Recommendations

7(1) The **ISO** may, after completing a report under subsection 6, identify:

(a) the Responsible Entity required to implement each recommendation in the report; and

(b) an implementation date for each recommendation in the report.

(2) The **ISO** may:

(a) provide a copy of a report issued under subsection 6 to each Responsible Entity identified under subsection 7(1); and

(b) advise each Responsible Entity identified under subsection 7(1), in writing, of the implementation date for each recommendation applicable to that Responsible Entity.

(3) Each Responsible Entity identified under subsection 7(1) must:

(a) implement each applicable recommendation by the implementation date; or

(b) if the recommendation cannot been implemented by the implementation date, provide the **ISO** with a revised implementation date.

(4) Each Responsible Entity identified in subsection 7(1) must provide the **ISO** with notification that the recommendation has been implemented or a revised implementation date at least five (5) **business days** before the implementation date identified by the **ISO** in subsection 7(2)(b).

Lessons Learned

8(1) The **ISO** may complete a *Lessons Learned* document which includes the following information:

(a) high level details of the event;

(b) corrective actions for possible future events; and

(c) a list of lessons learned from the event.

(2) A *Lessons Learned* document may not contain any of the following information:

(a) names of market participants;

(b) names of facilities; or

(c) the date on which the event occurred.

(3) The **ISO** may publish the *Lessons Learned* document on the AESO website.

Requirement to Report to the NERC and the WECC

9 The **ISO** may forward the reports and documents described in this section 304.8 to the **NERC** and the **WECC.**

Appendices

Appendix 1 – Event Categories

Revision History

Date	Description
yyyy-mm-dd	Initial release

Appendix 1

Event Categories

Category 1: An event that results in one or more of the following:

(a) An unexpected sustained outage caused by a common disturbance and contrary to design of any combination of three (3) or more **transmission facilities** or **generating units** with an aggregate generation of 500 MW to 1,999 MW at the time of the outage.

(b) Failure or misoperation of a **remedial action scheme**.

(c) An **operator** initiated voltage reduction of 3% or more that lasts more than fifteen (15) continuous minutes due to an emergency on the **interconnected electric system**.

(d) Unintended separation within the **interconnected electric system** that results in an island of 100 MW to 999 MW. Excludes **transmission system** radial connections, and **electric distribution system** level islanding.

(e) The loss of monitoring or control that significantly affects a Responsible Entity's ability to make operating decisions for thirty (30) continuous minutes or more, including:

(i) loss of **operator** ability to remotely monitor or control elements of the **bulk electric system** or **generating units** connected to the **bulk electric system**;

(ii) loss of communications from supervisory and data acquisition remote terminal units;

(iii) unavailability of inter control centre protocol links reducing **bulk electric system** visibility

(iv) loss of the ability to remotely monitor and control **generating units** providing **regulating reserves**; or

(v) state estimator or contingency analysis failing to solve at a **control centre** for:

(A) the **ISO**; or

(B) the **operator** of a **transmission facility.**

Category 2: An event that results in one or more of the following:

(a) Complete loss, for thirty (30) minutes or more, of all voice communication systems for a **control centre** including a **control centre** for:

(i) the **ISO**;

(ii) the **operator** of a **transmission facility** (that controls **transmission facilities** at two (2) or more locations); or

(iii) the **operator** of a **generating unit** (that controls **generating units** at two (2) or more locations).

(b) Voltage excursions equal to or greater than 10% lasting more than fifteen (15) continuous minutes.

(c) Unintended separation within the **interconnected electric system** that results in an island of 1,000 MW to 4,999 MW.

(d) Unintended loss of 300 MW or more of firm load for more than fifteen (15) minutes.

(e) **Interconnection reliability operating limit Tv** violation.

Category 3: An event that results in one or more of the following:

(a) Unintended loss of load or generation within the **interconnected electric system** of 2,000 MW to 5,000 MW.

(b) Unintended separation within the **interconnected electric system** that results in an island of 5,000 to 10,000 MW. Excludes the loss of **interconnections.**

Category 4: An event that results in one or more of the following:

(a) Unintended loss of load or generation within the **interconnected electric system** of 5,001 MW to 9,999 MW.

(b) Unintended separation within the **interconnected electric system** that results in an island of more than 10,000 MW. Excludes the loss of **interconnections.**

Category 5: An event that results in one or more of the following:

(a) Unintended loss of load within the **interconnected electric system** of 10,000 MW or more.

(b) Unintended loss of generation within the **interconnected electric system** of 10,000 MW or more.