

1. Purpose

The purpose of this **reliability standard** is to ensure continued reliable operations of the **bulk electric system** in the event that a **control centre** becomes inoperable.

2. Applicability

This **reliability standard** applies to:

- (a) the **ISO**; and
- (b) the **operator** of a **transmission facility** who operates a **control centre** that controls **transmission facilities** that are part of the **bulk electric system**.

This **reliability standard** does not apply to the **operator** of a **transmission facility** whose **transmission facilities** are only:

- (a) radial **transmission facilities** connecting to:
 - load;
 - one or more **generating units**; and / or
 - one or more **aggregated generating facilities**; or
- (b) either part of an industrial complex or connected to an industrial complex and cannot interrupt power flow on the **interconnected electric system**, other than power flow on its own **transmission facilities**.

3. Requirements

R1 The **ISO** and each **operator** of a **transmission facility** must have a current operating plan describing the manner in which it continues to meet its functional obligations with regard to the reliable operations of the **bulk electric system** in the event that its primary **control centre** functionality is lost.

This operating plan for backup functionality must include the following, at a minimum:

- (a) the location and method of implementation for providing backup functionality;
- (b) a summary description of the items required to support the backup functionality. These items must include, at a minimum:
 - (i) tools and applications to ensure that system operators have situational awareness of the **bulk electric system**;
 - (ii) data communications;
 - (iii) voice communications;
 - (iv) power source(s); and
 - (v) physical and cyber security;
- (c) an operating process for keeping the backup functionality consistent with the primary **control centre**;
- (d) operating procedures, including decision authority, for use in determining when to implement the operating plan for backup functionality;

- (e) a transition period between the decision to transfer functionality to the back up **control centre** following the loss of primary **control centre** functionality and the time to fully implement the backup functionality that is less than or equal to two (2) hours; and
- (f) an operating process describing the actions to be taken during the transition period between the loss of primary **control centre** functionality and the time to fully implement the backup functionality items identified in requirement R1, part (b). The operating process must include at a minimum:
 - (i) a list of all entities to notify when there is a change in operating locations;
 - (ii) actions to manage the risk to the **bulk electric system** during the transition from primary to backup functionality, as well as during outages of the primary or backup functionality; and
 - (iii) identification of the roles for personnel involved during the initiation and implementation of the operating plan for backup functionality.

R2 The **ISO** and each **operator** of a **transmission facility** must have a copy of its current operating plan for backup functionality available at its primary **control centre** and at the location providing backup functionality.

R3 The **ISO** must have a backup **control centre** facility (provided through its own dedicated backup facility or at another entity's **control centre** staffed with **NERC** certified "reliability coordinator operators" when control has been transferred to the backup facility) that provides the functionality required for maintaining compliance with all **reliability standards** that depend on primary **control centre** functionality. To avoid requiring a tertiary facility, a backup facility is not required during:

- (a) planned outages of the primary or backup facilities of two (2) weeks or less; or
- (b) unplanned outages of the primary or backup facilities.

R4 Each **operator** of a **transmission facility** must, when control has been transferred to the backup functionality location, have backup functionality provided either through:

- (a) a facility staffed by operators that are certified in accordance with any applicable **reliability standards**; or
- (b) contracted services staffed by operators that are certified in accordance with any applicable **reliability standards**

that includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all **reliability standards** that depend on the **operator** of a **transmission facility's** primary **control centre** functionality.

To avoid requiring tertiary functionality, backup functionality is not required during:

- (i) planned outages of the primary or backup functionality of two (2) weeks or less; or
- (ii) unplanned outages of the primary or backup functionality.

R5 The **ISO** and each **operator** of a **transmission facility** must annually review and approve its operating plan for backup functionality.

R5.1 An update and approval of the operating plan for backup functionality must take place within sixty (60) **days** of identifying any necessary changes to any part of the operating plan described in requirement R1.

- R6** The **ISO** and each **operator** of a **transmission facility** must have primary and backup functionality that do not depend on each other for the **control centre** functionality required to maintain compliance with **reliability standards**.
- R7** The **ISO** and each **operator** of a **transmission facility** must conduct and document results of an annual test of its operating plan that demonstrates:
- R7.1** The transition time between the decision to transfer functionality to the backup **control centre** following the simulated loss of primary **control centre** functionality and the time to fully implement the backup functionality; and
 - R7.2** The backup functionality for a minimum of two (2) continuous hours.
- R8** The following requirements apply in the event of a loss of primary or backup functionality that is anticipated to last for more than six (6) months:
- R8.1** Where the **operator** of a **transmission facility** loses primary or backup functionality as described in requirement R8, it must provide a plan to the **ISO** within six (6) **months** of the date when the functionality is lost, showing how it will re-establish primary or backup functionality; and
 - R8.2** Where the **ISO** loses primary or backup functionality as described in requirement R8, it must provide a plan to the **WECC** within six (6) **months** of the date when the functionality is lost, showing how it will re-establish primary or backup functionality.

4. Measures

The following measures correspond to the requirements identified in section 3 of this **reliability standard**. For example, MR1 is the measure for requirement R1.

- MR1** Evidence of having a current operating plan for backup functionality as required in requirement R1 exists. Evidence may include, but is not limited to, a dated, current operating plan with specified elements or other equivalent evidence.
- MR2** Evidence of having an electronic or paper copy of the current operating plan for backup functionality available at its primary **control centre** and at the location providing backup functionality as required in requirement R2 exists.
- Evidence may include, but is not limited to, a current electronic or paper copy of the operating plan, operator log identifying when the plan was put into the **control centre**, or other equivalent evidence.
- MR3** Evidence of having a backup **control centre** facility that provides the functionality and is staffed as required in requirement R3 exists. Evidence may include, but is not limited to, documentation identifying that the backup **control centre** facility is staffed with **NERC** certified “reliability coordinator operators” and provides the same functionality to maintain compliance with all **reliability standards** as the primary **control centre**, or other equivalent evidence.
- MR4** Evidence of having backup functionality provided either through a facility or contracted services staffed as required in requirement R4 exists. Evidence may include, but is not limited to, documentation identifying that the backup functionality includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all **reliability standards** that depend on the primary **control centre** functionality, or other equivalent evidence.
- MR5** Evidence of reviewing and approving annually the operating plan for backup functionality as required in requirement R5 exists. Evidence may include, but is not limited to, a dated, current,

operating plan for backup functionality, including a revision and approval history, or other equivalent evidence.

MR5.1 Evidence of updating and approving the operating plan for backup functionality as required in requirement R5.1 exists. Evidence may include, but is not limited to, an updated and approved operating plan for backup functionality within sixty (60) **days** of any changes to any part of the operating plan described in requirement R1, or other equivalent evidence.

MR6 Evidence of having primary and backup functionality that do not depend on each other for the **control centre** functionality required to maintain compliance with **reliability standards** as required in requirement R6 exists. Evidence may include, but is not limited to, documentation or drawings that show the independence of the two (2) **control centres**, or other equivalent evidence.

MR7 Evidence of conducting an annual test for backup functionality and documenting the results of the operating plan as required in requirement R7 exists. Evidence may include, but is not limited to, testing documentation or other equivalent evidence.

MR8 Evidence for requirement R8 is included in the following measures:

MR8.1 Evidence of providing a plan to the **ISO** as required in requirement R8.1 exists. Evidence may include, but is not limited to, a dated email or letter providing the plan to the **ISO**, or other equivalent evidence.

MR8.2 Evidence of providing a plan to the **WECC** as required in requirement R8.2 exists. Evidence may include, but is not limited to, a dated email or letter to the **WECC**, or other equivalent evidence.

Revision History

Date	Description
2019-07-01	Initial release.