

Alberta Reliability Standard

Loss of Control Centre Functionality

EOP-008-AB-2

A. Introduction

1. Title: Loss of Control Centre Functionality
2. Number: EOP-008-AB-2
3. Purpose: Ensure continued reliable operations of the **bulk electric system** in the event that a **control centre** becomes inoperable.
4. Applicability:
 - 4.1. Functional Entities:
 - 4.1.1. the **ISO**; and
 - 4.1.2. the **operator** of a **transmission facility** that is part of the **bulk electric system**.
 - 4.2. this **reliability standard** does not apply to the **operator** of a **transmission facility** whose **transmission facilities** are only:
 - 4.2.1. **radial circuits** connecting to:
 - 4.2.1.1. load;
 - 4.2.1.2. one or more **generating units** that are only used to export energy directly from a **generating unit**;
 - 4.2.1.3. one or more **aggregated facilities** that are only used to export energy directly from an **aggregated facility**;
 - 4.2.1.4. one or more **energy storage resources** that are only used for the operation of the **energy storage resource**; or
 - 4.2.2. 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**.
5. Effective Date: The later of (i) July 1, 2028, and (ii) the first **day** of the first calendar quarter 12 **months** following **Commission** approval.

B. Requirements and Measures

- 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: *[Alberta Risk Rating: Medium] [Time Horizon: Operations Planning]*
 - 1.1. The location and method of implementation for providing backup functionality.

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- 1.2. A summary description of the elements required to support the backup functionality. These elements must include:
 - 1.2.1. Tools and applications to ensure that real-time operating personnel have situational awareness of the **bulk electric system**;
 - 1.2.2. Data exchange capabilities;
 - 1.2.3. Interpersonal communications;
 - 1.2.4. Power source(s); and
 - 1.2.5. Physical and cyber security.
 - 1.3. An operating process for keeping the backup functionality consistent with the primary **control centre**.
 - 1.4. **Operating procedures**, including decision authority, for use in determining when to implement the **operating plan** for backup functionality.
 - 1.5. A transition period between the loss of primary **control centre** functionality and the time to fully implement the backup functionality that is less than or equal to 2 hours.
 - 1.6. 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 backup functionality elements identified in Requirement R1, Part 1.2. The operating process must include:
 - 1.6.1. A list of all entities to notify when there is a change in operating locations;
 - 1.6.2. 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
 - 1.6.3. Identification of the roles for personnel involved during the initiation and implementation of the **operating plan** for backup functionality.
- M1.** The **ISO** and each **operator** of a **transmission facility** must have a dated, current, and in effect **operating plan** for backup functionality in accordance with Requirement R1, in electronic or hardcopy format.
- 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. *[Alberta Risk Rating: Lower] [Time Horizon: Operations Planning]*
- M2.** The **ISO** and each **operator** of a **transmission facility** must have a dated, current, and in effect copy of its **operating plan** for backup functionality in accordance with Requirement R2, in electronic or hardcopy format, 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 are applicable to the primary **control centre** functionality. To avoid requiring a tertiary facility, a backup facility is not required during: *[Alberta Risk Rating: High] [Time Horizon: Operations Planning]*

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- 3.1. **Planned outages** of the primary or backup facilities of 2 weeks or less; or
 - 3.2. Unplanned outages of the primary or backup facilities.
- M3.** The **ISO** must provide dated evidence that it has 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 are applicable to the primary **control centre** functionality in accordance with Requirement R3.
- R4.** Each **operator** of a **transmission facility** must have backup functionality, provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location, that includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all **reliability standards** that are applicable to an **operator** of a **transmission facility's** primary **control centre** functionality. To avoid requiring tertiary functionality, backup functionality is not required during: *[Alberta Risk Rating: High] [Time Horizon: Operations Planning]*
- 4.1. **Planned outages** of the primary or backup functionality of 2 weeks or less; or
 - 4.2. Unplanned outages of the primary or backup functionality.
- M4.** Each **operator** of a **transmission facility** must provide dated evidence that its backup functionality, provided either through a facility or contracted services staffed by applicable certified operators when control has been transferred to the backup functionality location, includes monitoring, control, logging, and alarming sufficient for maintaining compliance with all **reliability standards** that are applicable to an **operator** of a **transmission facility's** primary **control centre** functionality in accordance with Requirement R4.
- R5.** The **ISO** and each **operator** of a **transmission facility** must annually review (with no more than 15 months between reviews) and approve its **operating plan** for backup functionality. *[Alberta Risk Rating: Medium] [Time Horizon: Operations Planning]*
- 5.1. An update and approval of the **operating plan** for backup functionality must take place within 60 days of any changes to any part of the **operating plan** described in Requirement R1.
- M5.** The **ISO** and each **operator** of a **transmission facility** must have evidence that its dated, current, and in effect **operating plan** for backup functionality, in electronic or hardcopy format, has been reviewed and approved annually and that it has been updated within 60 days of any changes to any part of the **operating plan** described in Requirement R1 in accordance with Requirement R5.
- 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**. *[Alberta Risk Rating: Medium] [Time Horizon: Operations Planning]*
- M6.** The **ISO** and each **operator** of a **transmission facility** must have dated evidence that its primary and backup functionality do not depend on each other for the **control centre** functionality required to maintain compliance with **reliability standards** in accordance with Requirement R6.
- 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: *[Alberta Risk Rating: Medium] [Time Horizon: Operations Planning]*

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- 7.1. The transition time between the simulated loss of primary **control centre** functionality and the time to fully implement the backup functionality; and
- 7.2. The backup functionality for a minimum of 2 continuous hours.

M7. The **ISO** and each **operator** of a **transmission facility** must provide evidence including dated records, that it has completed and documented its annual test of its **operating plan** for backup functionality, in accordance with Requirement R7.

R8. The following requirements apply in the event of a loss of primary or backup functionality that is anticipated to last for more than 6 **months**: *[Alberta Risk Rating: Medium] [Time Horizon: Operations Planning]*

- 8.1. 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 6 **months** of the date when the functionality is lost, showing how it will re-establish primary or backup functionality; and
- 8.2. Where the **ISO** loses primary or backup functionality as described in Requirement R8, it must provide a plan to the **WECC** within 6 **months** of the date when the functionality is lost, showing how it will re-establish primary or backup functionality.

M8. The following measures apply in the event of a loss of primary or backup functionality that is anticipated to last for more than 6 **months**:

- 8.1. Where the **operator** of a **transmission facility** loses primary or backup functionality as described in Requirement R8, it must provide evidence that a plan has been submitted to the **ISO** within 6 **months** of the date when the functionality is lost showing how it will re-establish primary or backup functionality in accordance with Requirement R8.
- 8.2. Where the **ISO** loses primary or backup functionality as described in Requirement R8, it must provide evidence that a plan has been submitted to the **WECC** within 6 **months** of the date when the functionality is lost, showing how it will re-establish primary or backup functionality in accordance with Requirement R8.

C. Compliance

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D. Regional Variances

None.

E. Associated Documents

None.

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Version History

Version	Effective Date	Description of Changes
AB-2	The later of (i) July 1, 2028, and (ii) the first day of the first calendar quarter 12 months following Commission approval	Revised based on NERC EOP-008-2, approved by FERC in Docket No. RM17-12-000. The revision includes clarifying language throughout the standard to eliminate ambiguity regarding contents of an operating plan and reduce likelihood of errors in reporting events when control centres become inoperable.
AB-1	2019-07-01	Initial Release.

Rationale

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