1. Purpose

The purpose of this **reliability standard** is to provide the **ISO** with the capabilities necessary to monitor and analyze data needed to perform their **reliability** functions.

2. Applicability

This **reliability standard** applies to:

   (a) the **ISO.**

3. Requirements

R1   The **ISO** must have data exchange capabilities with entities, that the **ISO** deems necessary, for it to perform operational planning analysis.

R2   The **ISO** must have data exchange capabilities, with redundant and diversely routed data exchange infrastructure within the **ISO**'s primary **control centre**, for the exchange of real time data with entities it deems necessary, for performing its real time monitoring and real time assessments.

R3A The **ISO** must test its primary **control centre** data exchange capabilities specified in requirement R2 for redundant functionality at least once every 90 **days**.

R3B The **ISO** must, if the test conducted pursuant to requirement R3A is unsuccessful, initiate action within 2 hours to restore redundant functionality.

R4   The **ISO** must provide its real time operating personnel with the authority to approve planned outages and maintenance of its telecommunication, monitoring, and analysis capabilities.

R5   The **ISO** must, as necessary, monitor:

   (a) **system elements** that are part of the **bulk electric system**;
   (b) the status of **remedial action schemes**; and
   (c) **system elements** that are not part of the **bulk electric system**,

   within Alberta and neighbouring **reliability coordinator areas**, to identify any **system operating limit** exceedances and to determine any **interconnection reliability operating limit** exceedances within Alberta.

R6   The **ISO** must have monitoring systems that provide information utilized by the **ISO**'s operating personnel, giving particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant infrastructure.

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 data exchange capabilities as required in requirement R1 exists. Evidence may include a document that lists the **ISO**'s data exchange capabilities with entities, that the **ISO** deems necessary, for it to perform operational planning analysis, or other equivalent evidence.

MR2 Evidence of having data exchange capabilities as required in requirement R2 exists. Evidence may include system specifications, system diagrams, other documentation that lists the **ISO**'s data exchange capabilities, or other equivalent evidence.

MR3A Evidence of testing the **ISO**'s primary **control centre** data exchange capabilities for redundant functionality as required in requirement R3A exists. Evidence may include dated and time-stamped test records, operator logs, voice recordings, electronic communications, or other equivalent evidence.

MR3B Evidence of initiating action within 2 hours to restore redundant functionality of the **ISO**'s primary **control centre** data exchange capabilities as required in requirement R3B exists. Evidence may include dated and time-stamped test records, operator logs, voice recordings, electronic communications, or other equivalent evidence.

MR4 Evidence of providing the **ISO**'s real time operating personnel with the authority as required in requirement R4 exists. Evidence may include a documented procedure, or other equivalent evidence.

MR5 Evidence of monitoring **system elements** and **remedial action schemes** as required in requirement R5 exists. Evidence may include energy management system description documents, computer printouts, SCADA data collection, or other equivalent evidence.

MR6 Evidence of having monitoring systems as required in requirement R6 exists. Evidence may include energy management system description documents, computer printouts, SCADA data collection, or other equivalent evidence.

Revision History

Date	Description
2019-12-01	Initial release.