

TOP-005-~~AB1~~AB2-1 Operational Reliability Information

1. Purpose

The purpose of this **reliability standard** is to require [the ISO to provide operating data to entities responsible for reliable power system operation](#), ~~to so that those entities~~ have the operating data needed to monitor system conditions within their areas.

2. Applicability

This **reliability standard** applies to:

- ~~(a) a pool participant that submits an offer or bid to transact across interconnections with Alberta;~~
- ~~(b) the operator of a transmission facility;~~
- ~~(c) 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 four point five (4.5) MW; and~~
 - ~~(iii) is directly connected to the transmission system or to transmission facilities within the City of Medicine Hat;~~~~
- ~~(d) the operator of an aggregated generating facility that:

 - ~~(i) has a maximum authorized real power rating greater than four point five (4.5) MW; and~~
 - ~~(ii) is directly connected to the transmission system or to transmission facilities within the City of Medicine Hat; and~~~~
- ~~(e)~~(a) the ISO.

~~3. Definitions~~

~~Italicized terms used in this reliability standard have the meanings as set out in the [Consolidated Authoritative Document Glossary](#).~~

4.3. Requirements

- R1** The ISO must provide the ~~VRG~~WECC Reliability Coordinator with the operating data that the ~~VRG~~WECC Reliability Coordinator reasonably requires to perform operational **reliability** assessments and to coordinate reliable operations within the ~~VRG~~WECC Reliability Coordinator area.
- ~~**R2** Upon request, each operator of a transmission facility must provide to the ISO, the operating data that is necessary to allow the ISO to perform operational reliability assessments and to coordinate reliable operations. Each operator of a transmission~~

~~facility must provide the types of data as listed in Appendix 1 of this reliability standard, unless otherwise agreed to by the ISO.~~

R3R2 Upon request, the **ISO** must provide to other **balancing authorities** and **transmission operators** external to Alberta with immediate responsibility for operational **reliability**, the operating data that is necessary to allow these **balancing authorities** and **transmission operators** external to Alberta to perform operational **reliability** assessments and to coordinate reliable operations. The **ISO** must provide the types of operating data as listed in Appendix 1 of this **reliability standard**, unless otherwise agreed to by these **balancing authorities** and **transmission operators**.

R4R3 Upon request, the **ISO** must provide to each **operator** of a **transmission facility** with immediate responsibility for operational **reliability**, the operating data that is necessary to allow such **operator** of a **transmission facility** to perform operational **reliability** assessments and to coordinate reliable operations. The **ISO** must provide the types of operating data as listed in Appendix 1 of this **reliability standard**, unless otherwise agreed to by the **operator** of a **transmission facility** and with immediate responsibility for operational **reliability**.

~~**R5**—Each pool participant, operator of a generating unit and operator of an aggregated generating facility must provide to the ISO, data as specified in other ISO rules that is necessary to enable the ISO to conduct operational reliability assessments and coordinate reliable operations.~~

~~5. Procedures~~

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

6.4. Measures

The following measures correspond to the requirements identified in ~~Section 4~~section 3 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 monitoring duties in accordance with ISO rule 12. The ISO may consider other data and information, including any provided by a market participant.~~

MR1 A confirmation letter from the **ISO** ~~is provided to the compliance monitor within 30 days of a request. The letter confirms~~confirming that the **ISO** has provided the data as requested by the ~~VRC~~WECC Reliability Coordinator. The letter is dated and signed by an authorized representative of the ~~VRC~~WECC Reliability Coordinator.

~~**MR2**—A confirmation letter from the operator of a transmission facility is provided to the ISO within 30 days of request. The letter confirms that the operator of a transmission facility has provided the data as requested by the ISO, and is acceptable to the ISO. The letter is dated and signed by an authorized representative of the ISO.~~

~~**MR3**—A confirmation letter from the ISO is provided to the compliance monitor within 30 days of request. The letter confirms~~MR2 A confirmation letter from the ISO confirming that the **ISO** has provided the data as requested by the **balancing authorities** or **transmission operators**. The letter is dated and signed by an authorized representative of the **balancing authorities** and **transmission operators** external to Alberta.

~~MR4~~MR3 A confirmation letter from the **ISO** ~~is provided to the compliance monitor within 30 days of request. The letter confirms~~confirming that the **ISO** has provided the data as requested by the **operator** of a **transmission facility**. The letter is dated and signed by an authorized representative of the **operator** of a **transmission facility**.

~~MR5~~ A confirmation letter from the ~~pool participant, operator of a generating unit or operator of an aggregated generating facility~~ is provided to the ~~ISO~~ within 30 days of a request. The letter confirms that the ~~pool participant, operator of a generating unit or operator of an aggregated generating facility~~ has provided the data as requested by the ~~ISO~~, and is acceptable to the ~~ISO~~. The letter is dated and signed by an authorized representative of the ~~ISO~~.

~~7.5~~7.5 Appendices

Appendix 1 - TOP-005-~~AB-0~~AB2-1 Electric System Reliability Data

Appendix 1 lists the types of data that the ~~ISO, operator of a transmission facility, VRG, balancing authorities, and transmission operators~~ are expected to provide and share with each other.

~~1. The following data must be updated at least every ten minutes.~~

~~1.1 Transmission data. Transmission data for all interconnections plus all other facilities considered key, from a reliability standpoint:~~

~~1.1.1 Status~~

~~1.1.2 MW or ampere loadings~~

~~1.1.3 MVA capability~~

~~1.1.4 Transformer tap and phase angle settings~~

~~1.1.5 Key voltages~~

~~1.2 Generator data:~~

~~1.2.1 Status~~

~~1.2.2 MW and MVA_r capability~~

~~1.2.3 MW and MVA_r net output~~

~~1.2.4 Status of automatic voltage control facilities~~

~~1.3. Operating reserves:~~

~~1.3.1 MW reserve available within ten minutes~~

~~1.4. Balancing authority demand:~~

~~1.4.1 Instantaneous~~

~~1.5. Interchange:~~

~~1.5.1 Instantaneous actual interchange with each balancing authority~~

~~1.5.2 Current interchange schedules with each balancing authority by individual interchange transaction, including interchange identifiers, and reserve responsibilities~~

~~1.5.3 Interchange schedules for the next 24 hours~~

- ~~1.6. Area control error and frequency:~~
- ~~1.6.1 Instantaneous area control error~~
- ~~1.6.2 Clock hour area control error~~
- ~~1.6.3 System frequency at one or more locations in the balancing authority~~
- ~~2. The following information must be updated as soon as the information becomes available:~~
- ~~2.1. Interconnection reliability operating limits and system operating limits in effect~~
- ~~2.2. Forecast of operating reserves at peak, and time of peak for current day and next day~~
- ~~2.3. Forecast peak demand for current day and next day~~
- ~~2.4. Forecast changes in equipment status~~
- ~~2.5. New facilities in place~~
- ~~2.6. New or degraded remedial action schemes~~
- ~~2.7. Emergency operating procedures in effect~~
- ~~2.8. Severe weather, fire, or earthquake~~
- ~~2.9. Multi-site sabotage~~

8. Guidelines

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

Revision History

Effective	Description
2013-04-01	Remove requirements R2 and R5 applicable to non-ISO Alberta entities.
2013-01-02	Administrative update – “TFO” replaced with “ operator of a transmission facility ”; clarified “ <i>pool participant</i> ”; specified “ operator of a generating unit ”; and specified “ operator of an aggregated generating facility ”.
2009-05-26	New Issue

Appendix 1 - TOP-005-AB2-1 Electric System Reliability Data

Appendix 1 lists the types of data that the ISO is expected to provide to:

- (i) other **balancing authorities** and **transmission operators** external to Alberta;
and
- (ii) each **operator** of a **transmission facility**;

with immediate responsibility for operational **reliability**.

1. The following operating data must be updated at least every ten (10) minutes.

1.1 **Transmission data.** Transmission data for all **interconnections** plus all other facilities considered key, from a **reliability** standpoint:

1.1.1 Status

1.1.2 MW or ampere loadings

1.1.3 MVA capability

1.1.4 Transformer tap and phase angle settings

1.1.5 Key voltages

1.2 **Generator data:**

1.2.1 Status

1.2.2 MW and MVA_r capability

1.2.3 MW and MVA_r net output

1.2.4 Status of automatic voltage control facilities

1.3. **Operating reserves:**

1.3.1 MW reserve available within ten minutes

1.4. **Balancing authority demand:**

1.4.1 Instantaneous

1.5. **Interchange:**

1.5.1 Instantaneous actual **interchange** with each **balancing authority**

1.5.2 Current **interchange schedules** with each **balancing authority** by individual **interchange transaction**, including **interchange** identifiers, and reserve responsibilities

1.5.3 **Interchange schedules** for the next twenty-four (24) hours

1.6. **Area control error and frequency:**

1.6.1 Instantaneous **area control error**

1.6.2 Clock hour **area control error**

1.6.3 System frequency at one (1) or more locations in the **balancing authority**

2. The following information must be updated as soon as the information becomes available.

- 2.1. Interconnection reliability operating limits and system operating limits in effect
- 2.2. Forecast of operating reserves at peak, and time of peak for current **day** and next **day**
- 2.3. Forecast **peak demand** for current **day** and next **day**
- 2.4. Forecast changes in equipment status
- 2.5. New facilities in place
- 2.6. New or degraded **remedial action schemes**
- 2.7. Emergency operating procedures in effect
- 2.8. Severe weather, fire, or earthquake
- 2.9. Multi-site sabotage