



Alberta Reliability Standards
Transmission Operations
TOP-005-AB-1

TOP-005-AB-1 Operational Reliability Information

1. Purpose

The purpose of this reliability standard is to require entities responsible for reliable power system operation, to have the operating data needed to monitor system conditions within their areas.

2. Applicability

This reliability standard applies to the entities listed below:

- ISO
pool participants
TFOs

3. Definitions

Italicized terms used in this reliability standard have the meanings as set out in the Alberta Reliability Standards Glossary of Terms and Part 1 of the ISO Rules.

4. Requirements

- R1 The ISO must provide the VRC with the operating data that the VRC reasonably requires to perform operational reliability assessments and to coordinate reliable operations within the VRC area.
R2 Upon request, each TFO must provide to the ISO, the operating data that is necessary to allow ISO to perform operational reliability assessments and to coordinate reliable operations. TFOs must provide the types of data as listed in Appendix 1 of this reliability standard, unless otherwise agreed to by the ISO.
R3 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 data as listed in Appendix 1 of this reliability standard, unless otherwise agreed to by these balancing authorities and transmission operators.
R4 Upon request, the ISO must provide to TFOs with immediate responsibility for operational reliability, the operating data that is necessary to allow TFOs to perform operational reliability assessments and to coordinate reliable operations. The ISO must provide the types of data as listed in Appendix 1 of this reliability standard, unless otherwise agreed to by the TFOs and with immediate responsibility for operational reliability.

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TOP-005-AB-1 Operational Reliability Information

R5 Each pool participant 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. Measures

The following measures correspond to the requirements identified in Section 4 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 that the ISO has provided the data as requested by the VRC. The letter is dated and signed by an authorized representative of the VRC.

MR2 A confirmation letter from the TFO is provided to the ISO within 30 days of request. The letter confirms that the TFO has provided the data as requested by 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 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 A confirmation letter from the ISO is provided to the compliance monitor within 30 days of request. The letter confirms that the ISO has provided the data as requested by the TFO. The letter is dated and signed by an authorized representative of the TFO.

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

7. Appendices

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

Appendix 1 lists the types of data that the ISO, TFOs, VRC, 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

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TOP-005-AB-1 Operational Reliability Information

- 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.

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Balancing Authority

Commission

compliance monitor

day

interchange schedule

interchange transaction

interconnection

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Independent System Operator or ISO

North American Electric Reliability Corporation or NERC

pool participants

operating reserves

peak demand

¹ Where a defined term is followed by an acronym, the acronym may be used as an alternative to the defined term.

reliability standard

remedial action scheme

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operator

transmission facility owners or TFOs

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MR1

The *ISO* must provide to the *compliance monitor*, within 30 days of a request, a confirmation letter dated and endorsed by an authorized representative of the Vancouver Reliability Coordinator confirming that the *ISO* has provided the data as requested by the Vancouver Reliability Coordinator. The letter will state whether the Vancouver Reliability Coordinator has received the data from the *ISO* in the time interval specified and the format agreed upon.

MR2

The *TFO* must provide to the *compliance monitor*, within 30 days of a request, a confirmation letter dated and endorsed by an authorized representative of the *ISO* confirming that the *TFO* has provided the data requested by the *ISO*. The letter will state whether the *ISO* has received the data from the *TFO* in the time interval specified and the format agreed upon.

- MR3 The *ISO* must provide to the *compliance monitor*, within 30 days of a request, confirmation letters dated and endorsed by authorized representatives of the *Balancing Authorities* and *Transmission Operators* external to Alberta, confirming that the *ISO* has provided the data requested by the BAs and *TFOs*. Each letter will state whether the *Balancing Authorities* or *Transmission Operator* has received the data from the *ISO* in the time interval specified and the format agreed upon.
- MR4 The *ISO* must provide to the *compliance monitor*, within 30 days of a request, a confirmation letter dated and endorsed by an authorized representative of the *TFO* confirming that the *ISO* has provided the data requested. The letter will state whether the *TFO* has received the data from the *ISO* in the time interval specified and the format agreed upon.
- MR5 The *pool participant* must provide to the *compliance monitor*, within 30 days of a request, a confirmation letter dated and endorsed by an authorized representative of the *ISO* confirming that the pool participant has provided the data requested by the *ISO*. The letter will state whether the *ISO* has received the data from the pool participant in the time interval specified and the format agreed upon.

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