

A. Introduction

- 1. Title:** **Monitoring System Conditions**
- 2. Number:** TOP-006-1
- 3. Purpose:**
To ensure critical reliability parameters are monitored in real-time.
- 4. Applicability**
 - 4.1.** Transmission Operators.
 - 4.2.** Balancing Authorities.
 - 4.3.** Generator Operators.
 - 4.4.** Reliability Coordinators.
- 5. Effective Date:** January 1, 2007

B. Requirements

- R1.** Each Transmission Operator and Balancing Authority shall know the status of all generation and transmission resources available for use.
 - R1.1.** Each Generator Operator shall inform its Host Balancing Authority and the Transmission Operator of all generation resources available for use.
 - R1.2.** Each Transmission Operator and Balancing Authority shall inform the Reliability Coordinator and other affected Balancing Authorities and Transmission Operators of all generation and transmission resources available for use.
- R2.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor applicable transmission line status, real and reactive power flows, voltage, load-tap-changer settings, and status of rotating and static reactive resources.
- R3.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall provide appropriate technical information concerning protective relays to their operating personnel.
- R4.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall have information, including weather forecasts and past load patterns, available to predict the system's near-term load pattern.
- R5.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall use monitoring equipment to bring to the attention of operating personnel important deviations in operating conditions and to indicate, if appropriate, the need for corrective action.
- R6.** Each Balancing Authority and Transmission Operator shall use sufficient metering of suitable range, accuracy and sampling rate (if applicable) to ensure accurate and timely monitoring of operating conditions under both normal and emergency situations.
- R7.** Each Reliability Coordinator, Transmission Operator, and Balancing Authority shall monitor system frequency.

C. Measures

- M1.** The Generator Operator shall have and provide upon request evidence that could include but is not limited to, operator logs, voice recordings, electronic communications, or other equivalent

evidence that will be used to confirm that it informed its Host Balancing Authority and Transmission Operator of all generation resources available for use. (Requirement 1.1)

- M2.** Each Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, operator logs, voice recordings, electronic communications, or other equivalent evidence that will be used to confirm that it informed its Reliability Coordinator and other affected Balancing Authorities and Transmission Operators of all generation and transmission resources available for use. (Requirement 1.2)
- M3.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, computer printouts or other equivalent evidence that will be used to confirm that it monitored each of the applicable items listed in Requirement 2.
- M4.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, printouts, training documents, description documents or other equivalent evidence that will be used to confirm that it has weather forecasts and past load patterns, available to predict the system's near-term load pattern. (Requirement 4)
- M5.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, a description of its EMS alarm capability, training documents, or other equivalent evidence that will be used to confirm that important deviations in operating conditions and the need for corrective actions will be brought to the attention of its operators. (Requirement 5)
- M6.** Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have and provide upon request evidence that could include but is not limited to, a list of the frequency monitoring points available to the shift-operators or other equivalent evidence that will be used to confirm that it monitors system frequency. (Requirement 7)

D. Compliance

1. Compliance Monitoring Process

1.1. Compliance Monitoring Responsibility

Compliance Monitor – British Columbia Utilities Commission

Compliance Monitor's Administrator – Western Electricity Coordinating Council

1.2. Compliance Monitoring and Reset Time Frame

One or more of the following methods will be used to assess compliance:

- Self-certification (Conducted annually with submission according to schedule.)
- Spot Check Audits (Conducted anytime with up to 30 days notice given to prepare.)
- Periodic Audit (Conducted once every three years according to schedule.)
- Triggered Investigations (Notification of an investigation must be made within 60 days of an event or complaint of noncompliance. The entity will have up to 30 days to prepare for the investigation. An entity may request an extension of the preparation period and the extension will be considered by the Compliance Monitor on a case-by-case basis.)

The Performance-Reset Period shall be 12 months from the last finding of non-compliance.

1.3. Data Retention

Each Generator Operator shall keep 90 days of historical data (evidence) for Measure 1.

Each Transmission Operator and Balancing Authority shall keep 90 days of historical data (evidence) for Measure 2.

Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have current documents as evidence for Measure 3, 5 and 6..

Each Reliability Coordinator, Transmission Operator and Balancing Authority shall have current documents as evidence of compliance to Measure 4.

If an entity is found non-compliant the entity shall keep information related to the noncompliance until found compliant or for two years plus the current year, whichever is longer.

Evidence used as part of a triggered investigation shall be retained by the entity being investigated for one year from the date that the investigation is closed, as determined by the Compliance Monitor,

The Compliance Monitor's Administrator shall keep the last periodic audit report and all supporting compliance data, except where the records contain Restricted Information (as defined in the Rules of Procedure).

1.4. Additional Compliance Information

None.

2. Levels of Non-Compliance for Reliability Coordinators:

2.1. Level 1: Not applicable.

2.2. Level 2: Not applicable.

2.3. Level 3: Not applicable.

2.4. Level 4: There shall be a separate Level 4 non-compliance, for every one of the following requirements that is in violation:

2.4.1 Does not monitor all of the applicable items listed in Requirement 2.

2.4.2 Did not have the information specified in R4.

2.4.3 Did not bring to the attention of its operators, important deviations in operating conditions and the need for corrective actions. (Requirement 5)

2.4.4 No evidence it monitors system frequency. (Requirement 7)

3. Levels of Non-Compliance for Generator Operators:

3.1. Level 1: Not applicable.

3.2. Level 2: Not applicable.

3.3. Level 3: Not applicable.

3.4. Level 4: Did not inform its Host Balancing Authority and/or the Transmission Operator of all generation resources available for use. (R1.1)

4. Levels of Non-Compliance for Transmission Operators and Balancing Authorities:

4.1. Level 1: Not applicable.

4.2. Level 2: Not applicable.

4.3. Level 3: Not applicable.

4.4. Level 4: There shall be a separate Level 4 non-compliance, for every one of the following requirements that is in violation:

4.4.1 Did not inform the Reliability Coordinator and/or other affected Balancing Authorities and Transmission Operators of all generation and transmission resources available for use in accordance with R1.2.

4.4.2 Does not monitor all the applicable items listed in R2.

4.4.3 Did not have the information specified in R4.

4.4.4 Does not have monitoring to bring to the attention of operating personnel important deviations in operating conditions and the need for corrective actions as specified in R5.

4.4.5 No evidence it monitors system frequency. (R7).

E. Regional Differences

None identified.