

WECC Standard FAC-501-WECC-1 – Transmission Maintenance

A. Introduction

1. **Title:** Transmission Maintenance
2. **Number:** FAC-501-WECC-1
3. **Purpose:** To ensure the Transmission Owner of a transmission path identified in the table titled “Major WECC Transfer Paths in the Bulk Electric System” including associated facilities has a Transmission Maintenance and Inspection Plan (TMIP); and performs and documents maintenance and inspection activities in accordance with the TMIP.
4. **Applicability**
 - 4.1. Transmission Owners that maintain the transmission paths in the most current table titled “Major WECC Transfer Paths in the Bulk Electric System” provided at:
<http://www.wecc.biz/Standards/Approved%20Standards/Supporting%20Tables/Table%20Major%20Paths%204-28-08.pdf>
5. ***Effective Date:** On the first day of the first quarter, after applicable regulatory approval.

B. Requirements

- R.1. Transmission Owners shall have a TMIP detailing their inspection and maintenance requirements that apply to all transmission facilities necessary for System Operating Limits associated with each of the transmission paths identified in table titled “Major WECC Transfer Paths in the Bulk Electric System.” *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*
 - R1.1. Transmission Owners shall annually review their TMIP and update as required. *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*
- R.2. Transmission Owners shall include the maintenance categories in Attachment 1-FAC-501-WECC-1 when developing their TMIP. *[Violation Risk Factor: Medium] [Time Horizon: Operations Assessment]*
- R.3. Transmission Owners shall implement and follow their TMIP. *[Violation Risk Factor: Medium] [Time Horizon: Operations Assessment]*

C. Measures

- M1. Transmission Owners shall have a documented TMIP per R.1.
 - M1.1 Transmission Owners shall have evidence they have annually reviewed their TMIP and updated as needed.
- M2. Transmission Owners shall have evidence that their TMIP addresses the required maintenance details of R.2.
- M3. Transmission Owners shall have records that they implemented and followed their TMIP as

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WECC Standard FAC-501-WECC-1 – Transmission Maintenance

required in R.3. The records shall include:

1. The person or crew responsible for performing the work or inspection,
2. The date(s) the work or inspection was performed,
3. The transmission facility on which the work was performed, and
4. A description of the inspection or maintenance performed.

D. Compliance

1. Compliance Monitoring Process

1.1 Compliance Monitoring Responsibility

The British Columbia Utilities Commission

1.2 Compliance Monitoring Period

The Compliance Enforcement Authority may use one or more of the following methods to assess compliance:

- Self-certification conducted annually
- Spot check audits conducted anytime with 30 days notice given to prepare
- Periodic audit as scheduled by the Compliance Enforcement Authority
- Investigations
- Other methods as provided for in the Compliance Monitoring Enforcement Program

The Reset Time Frame shall be one year.

1.3 Data Retention

The Transmission Owners shall keep evidence for Measure M1 through M3 for three years plus the current year, or since the last audit, whichever is longer.

1.4 Additional Compliance Information

No additional compliance information.

2. Violation Severity Levels

2.1. Lower: There shall be a Lower Level of non-compliance if any of the following conditions exist:

- 2.1.1** The TMIP does not include associated Facilities for one of the Paths identified in Attachment 1 FAC-501-WECC-1 as required by R.1 but Transmission Owners are performing maintenance and inspection for the missing Facilities.
- 2.1.2** Transmission Owners did not review their TMIP annually as required by R.1.1.
- 2.1.3** The TMIP does not include one maintenance category identified in Attachment 1 FAC-501-WECC-1 as required by R.2 but Transmission Owners are performing maintenance and inspection for the missing maintenance categories.

WECC Standard FAC-501-WECC-1 – Transmission Maintenance

- 2.1.4** Transmission Owners do not have maintenance and inspection records as required by R.3 but have evidence that they are implementing and following their TMIP.
- 2.2. Moderate:** There shall be a Moderate Level of non-compliance if any of the following conditions exist:
- 2.2.1** The TMIP does not include associated Facilities for two of the Paths identified in the most current Table titled “Major WECC Transfer Paths in the Bulk Electric System” as required by R.1 and Transmission Owners are not performing maintenance and inspection for the missing Facilities.
- 2.2.2** The TMIP does not include two maintenance categories identified in Attachment 1 FAC-501-WECC-1 as required by R.2 but Transmission Owners are performing maintenance and inspection for the missing maintenance categories.
- 2.2.3** Transmission Owners are not performing maintenance and inspection for one maintenance category identified in Attachment 1 FAC-501-WECC-1 as required in R3.
- 2.3. High:** There shall be a High Level of non-compliance if any of the following condition exists:
- 2.3.1** The TMIP does not include associated Facilities for three of the Paths identified in the most current Table titled “Major WECC Transfer Paths in the Bulk Electric System” as required by R.1 and Transmission Owners are not performing maintenance and inspection for the missing Facilities.
- 2.3.2** The TMIP does not include three maintenance categories identified in Attachment 1 FAC-501-WECC-1 as required by R.2 but Transmission Owners are performing maintenance and inspection for the missing maintenance categories.
- 2.3.3** Transmission Owners are not performing maintenance and inspection for two maintenance categories identified in Attachment 1 FAC-501-WECC-1 as required in R3.
- 2.4. Severe:** There shall be a Severe Level of non-compliance if any of the following condition exists:
- 2.4.1** The TMIP does not include associated Facilities for more than three of the Paths identified in the most current Table titled “Major WECC Transfer Paths in the Bulk Electric System” as required by R.1 and Transmission Owners are not performing maintenance and inspection for the missing Facilities.
- 2.4.2** The TMIP does not exist or does not include more than three maintenance categories identified in Attachment 1 FAC-501-WECC-1 as required by R.2 but Transmission Owners are performing maintenance and inspection for the missing maintenance categories.
- 2.4.3** Transmission Owners are not performing maintenance and inspection for more than two maintenance categories identified in Attachment 1 FAC-501-WECC-1 as required in R3.

WECC Standard FAC-501-WECC-1 – Transmission Maintenance

Version History – Shows Approval History and Summary of Changes in the Action Field

Version	Date	Action	Change Tracking
1	April 16, 2008	Permanent Replacement Standard for PRC-STD-005-1	
1	April 21, 2011	FERC Order issued approving FAC-501-WECC-1 (approval effective June 27, 2011)	

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WECC Standard FAC-501-WECC-1 – Transmission Maintenance

Attachment 1-FAC-501-WECC-1 Transmission Line and Station Maintenance Details

The maintenance practices in the TMIP may be performance-based, time-based, conditional based, or a combination of all three. The TMIP shall include:

1. A list of Facilities and associated Elements necessary to maintain the SOL for the transfer paths identified in the most current Table titled “Major WECC Transfer Paths in the Bulk Electric System;”
2. The scheduled interval for any time-based maintenance activities and/or a description supporting condition or performance-based maintenance activities including a description of the condition based trigger;
3. Transmission Line Maintenance Details:
 - a. Patrol/Inspection
 - b. Contamination Control
 - c. Tower and wood pole structure management
4. Station Maintenance Details:
 - a. Inspections
 - b. Contamination Control
 - c. Equipment Maintenance for the following:
 - Circuit Breakers
 - Power Transformers (including phase-shifting transformers)
 - Regulators
 - Reactive Devices (including, but not limited to, Shunt Capacitors, Series Capacitors, Synchronous Condensers, Shunt Reactors, and Tertiary Reactors)