Alberta Reliability Standard
Facility Ratings
FAC-008-AB-3

1. Purpose

The purpose of this **reliability standard** is to ensure that the **facility ratings** used in the reliable planning and operation of the **transmission system** are determined based on technically sound principles. A **facility rating** is an essential component in the determination of **system operating limits**.

2. Applicability

This **reliability standard** applies to:

(a) the **legal owner** of a **transmission facility**:

(i) that is part of the **bulk electric system**, except for transformers that do not have a primary terminal and at least one (1) secondary terminal engerized at 100 kV or higher;

(ii) that the **ISO**:

(A) determines is necessary for the reliable operation of either the **interconnected electric system** or the City of Medicine Hat electric system; and

(B) publishes on the AESO website and may amend from time to time on notice to **market participants** in accordance with the process set out in Appendix 1;

(iii) who owns a **generating unit** step-up transformer for those generating units listed in subsection (b); or

(iv) who owns a transformer connected to a **blackstart resource**;

(b) the **legal owner** of a **generating unit** that is:

(i) directly connected to the **bulk electric system** and has a **maximum authorized real power rating** greater than 18 MW, unless the **generating unit** is part of an industrial complex;

(ii) within a power plant that:

(A) is not part of an **aggregated generating facility**;

(B) is directly connected to the **bulk electric system**; and

(C) has a combined **maximum authorized real power rating** greater than 67.5 MW,

unless the power plant is part of an industrial complex;

(iii) a **blackstart resource**;

(iv) directly connected to the **bulk electric system** and within an industrial complex with **supply transmission service** greater than 67.5 MW; or

(v) material to this **reliability standard** and to the **reliability** of the **bulk electric system**, regardless of **maximum authorized real power** rating, as the **ISO** determines and publishes on the AESO website and may amend from time to time in accordance with the process set out in Appendix 1; and

(c) the **legal owner** of an **aggregated generating facility** that is:

(i) directly connected to the **bulk electric system** and has a **maximum authorized real power** rating greater than 67.5 MW, unless the **aggregated generating facility** is part of an industrial complex;

(ii) a **blackstart resource**;

(iii) directly connected to the **bulk electric system** and within an industrial complex with **supply transmission service** greater than 67.5 MW; or

(iv) regardless of **maximum authorized real power rating**, material to this **reliability standard** and to the reliability of the **bulk electric system** as the **ISO** determines and publishes on the AESO website and may amend from time to time in accordance with the process set out in Appendix 1.

3. Requirements

R1 Each **legal owner** of a **generating unit** and **legal owner** of an **aggregated generating facility** must have documentation for determining the **facility ratings** of its facilities:

(a) up to the low side terminals of the step-up transformer if the **legal owner** of the **generating unit** or **legal owner** of the **aggregated generating facility** does not own the step-up transformer; or

(b) including the step-up transformer and associated terminal equipment (as applicable based on ownership) if the **legal owner** of the **generating unit** or **legal owner** of the **aggregated generating facility** owns the step-up transformer.

R1.1 The documentation must contain assumptions used to rate the facilities and at least one (1) of the following:

(a) design or construction information such as design criteria, ratings provided by equipment manufacturers, equipment drawings and/or specifications, engineering analyses, method(s) consistent with industry standards (e.g. the American National Standards Institute and the Institute of Electrical and Electronic Engineers (“IEEE”)), or an established engineering practice that has been verified by testing or engineering analysis; or

(b) operational information such as commissioning test results, performance testing or historical performance records, any of which may be supplemented by engineering analyses.

R1.2 The documentation must be consistent with the principle that the **facility ratings** do not exceed the most limiting applicable **equipment rating** of the individual equipment that comprises that facility.

R2 Each **legal owner** of a **generating unit** and **legal owner** of an **aggregated generating facility** must have a documented methodology for determining the **facility ratings** of its facilities connected between the location specified in requirement R1 and the interface with a **transmission facility** (based on equipment ownership) that contains all of the following:

R2.1 the method used to establish the **equipment ratings** of the equipment that comprises the facility must be consistent with at least one (1) of the following:

(a) ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications, such as the nameplate rating;

(b) one (1) or more industry standards developed through an open process such as the IEEE or the International Council on Large Electric Systems ("CIGRE"); or

(c) a practice that has been verified by testing, performance history or engineering analysis;

R2.2 the underlying assumptions, design criteria, and methods used to determine the **equipment ratings** identified in requirement R2.1, including identification of how each of the following were considered:

(a) **equipment rating** standard(s) used in development of this method;

(b) ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications;

(c) ambient conditions (for particular or average conditions or as they vary in real time);

(d) operating limitations; and

(e) both summer and winter season operations, where summer is defined as May 1st at 12:01 AM Alberta Time to October 31st at 12:00 midnight Alberta Time and winter is defined as November 1st at 12:01 AM Alberta Time to April 30th at 12:00 midnight Alberta Time;

R2.3 a statement that a **facility rating** must not exceed the most limiting applicable **equipment rating** of the individual equipment that comprises that facility;

R2.4 the process by which the **equipment ratings** of the equipment that comprises a facility are determined, where:

R2.4.1 the scope of equipment that comprises the facility, addressed in accordance with requirement R2.4 must include (based on equipment ownership), but not be limited to, conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices; and

R2.4.2 the scope of **equipment ratings** addressed in accordance with requirement R2.4 must include, as a minimum, both **normal ratings** and **emergency ratings**, such that:

R2.4.2.1 the **emergency ratings** for equipment comprising power transformers must be specified for a 30 minute duration and the next 3.5 hour duration; and

R2.4.2.2 the **emergency ratings** for transmission lines must be specified for a ten (10) minute duration.

R3 Each **legal owner** of a **transmission facility** must have a documented methodology for determining the **facility ratings** of its facilities (except for those facilities associated with a **generating unit** or **aggregated generating facility** addressed in requirements R1 and R2) that contains all of the following:

R3.1 the method used to establish the **equipment ratings** of the equipment that comprises the facility must be consistent with at least one (1) of the following:

(a) ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications, such as the nameplate rating;

(b) one (1) or more industry standards developed through an open process such as the IEEE or CIGRE; or

(c) a practice that has been verified by testing, performance history or engineering analysis;

R3.2 the underlying assumptions, design criteria, and methods used to determine the **equipment ratings** identified in requirement R3.1, including identification of how each of the following were considered:

(a) **equipment rating** standard(s) used in development of this method;

(b) ratings provided by equipment manufacturers or obtained from equipment manufacturer specifications;

(c) ambient conditions (for particular or average conditions or as they vary in);

(d) operating limitations; and

(e) both summer and winter season operations, where summer is defined as May 1st at 12:01 AM Alberta Time to October 31st at 12:00 midnight Alberta Time and winter is defined as November 1st at 12:01 AM Alberta Time to April 30th at 12:00 midnight Alberta Time;

R3.3 a statement that a **facility rating** must not exceed the most limiting applicable **equipment rating** of the individual equipment that comprises that facility; and

R3.4 the process by which the **equipment ratings** of the equipment that comprises a facility are determined, where:

R3.4.1 the scope of equipment that comprises the facility, addressed in accordance with requirement R3.4, must include, but not be limited to, conductors, transformers, relay protective devices, terminal equipment, and series and shunt compensation devices; and

R3.4.2 the scope of **equipment ratings** addressed in accordance with requirement R3.4 must include, at a minimum, both **normal ratings** and **emergency ratings**, such that:

R3.4.2.1 the **emergency ratings** for equipment comprising power transformers must be specified for a 30 minute duration and the next 3.5 hour duration; and

R3.4.2.2 the **emergency ratings** for transmission lines must be specified for a ten (10) minute duration.

R4 Intentionally left blank.

R5 Intentionally left blank.

R6 Each **legal owner** of a **transmission facility**, **legal owner** of a **generating unit** and **legal owner** of an **aggregated generating facility** must have **facility ratings** for its facilities that are consistent with:

(a) the **facility ratings** methodology in accordance with requirements R2 or R3, for a **transmission facility**, a **generating unit** and an **aggregated generating facility**; and

(b) the documentation in accordance with requirement R1, for a **generating unit** and an **aggregated generating facility**.

R7 Intentionally left blank.

R8 Intentionally left blank.

4. Measures

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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 documentation for determining the **facility ratings** as required in requirements R1, R1.1 and R1.2 exists.

MR2 Evidence of having a documented **facility ratings** methodology as described in requirement R2 exists.

MR3 Evidence of having a documented **facility ratings** methodology as described in requirement R3 exists.

MR4 Intentionally left blank.

MR5 Intentionally left blank.

MR6 Evidence of having **facility ratings** that are consistent with the **facility ratings** methodology in accordance with requirements R2 and R3, and the documentation in accordance with requirement R1 exists.

MR7 Intentionally left blank.

MR8 Intentionally left blank.

5. Appendices

Appendix1 – Amending Process for List of Facilities

Revision History

Date	Description
2026-11-01	Administrative amendments to update Requirement R2.2(e) and Requirement R3.2(e) for Alberta Time.
2019-12-01	Unbolded “real time”
2019-01-01	Initial release

Appendix 1

Amending Process for List of Facilities

In order to amend a list referenced in subsections (a)(ii), (b)(iv) and (c)(iii) of section 2, Applicability, the **ISO** must:

(a) upon determining that a **transmission facility**, **generating unit** or **aggregated generating facility** is to be added, notify the **legal owner** and **operator** in writing and determine an effective date, which must be no less than:

  (i) eight (8) full calendar quarters after the date of notice, where the **transmission facility**, **generating unit** or **aggregated generating facility** is commissioned prior to the date of notice; and

  (ii) no less than four (4) full calendar quarters after the date of notice, where the **transmission facility**, **generating unit** or **aggregated generating facility** is commissioned on or after the date of notice;

(b) upon determining that a **transmission facility**, **generating unit** or **aggregated generating facility** is to be deleted, notify the **legal owner** and **operator** in writing and determine an effective date on which the **legal owner** and **operator** will no longer be required to meet the applicable requirements; and

(c) publish the amended list with effective dates on the AESO website.