

Transmission Planning and Enhancement**9.2 Transmission Loss Factors****9.2.1 Purpose of Rule**

The purpose of this rule is to describe the means by which the ISO determines annual **loss factors** to provide for the reasonable cost recovery of transmission line losses in accordance with the requirements of the Transmission Regulation.

**9.2.2 Establish and Maintain Loss Factors**

- .1 The ISO must establish and maintain for each calendar year **loss factors** in accordance with this Rule.
- .2 Despite Rule 9.2.2.1, if the ISO determines that, in its opinion, an enhancement or upgrade to the transmission system materially affects **loss factors** it may adjust the **loss factors** in accordance with this Rule 9.2.2. A material change for the purpose of this Rule would be any change in loss factor to one or more generating units of 0.25%.
- .3 The ISO must post on its web site and make publicly available the following:
  - a. A list of annual **loss factors** for:
    - all generators directly connected to the interconnected electric system, and
    - firm imports (service not currently available).

The loss factors will be posted by the first week in November prior to them becoming effective.
  - b. A list of **loss factors** for :
    - demand opportunity service, and
    - opportunity import and export transmission service.

The opportunity service loss factors will be posted by the first week in November prior to them becoming effective.
  - c. The effective date of establishment of the **loss factors** and the period of time they are in force pursuant to Rules 9.2.2.2;
  - d. A list of estimated **loss factors** (non-binding) for the fifth year subsequent to the year referenced in the foregoing 9.2.2.3 a. for all generators directly connected to the **interconnected electric system**. They will be published at the same time as the annual loss factors.
  - e. The annual **generic stacking order**.
- .4 The ISO must follow the **loss factor methodology** to determine **loss factors**. Without restricting the foregoing, the **loss factor methodology** must have regard for the following:

- a. **Loss factors** must be determined for each location on the transmission system as if no abnormal operating conditions exist;
  - b. The loss factor methodology should be a long-term signal and relatively stable, to allow it to be factored into investment decisions.
  - c. The loss factor in each location must be representative of the impact on average transmission system losses by each respective generating unit or group of generating units relative to load;
  - d. **Loss factors** must be one number at each location that does not vary, except as a result of revisions referred to in clause 9.2.2.2;
  - e. After determining which **loss factors** result in a charge or credit, every loss factor must be compressed to limit the **loss factors** as follows:
    - (i) **loss factors** associated with a charge must not exceed 2 times the average transmission system loss factor, and
    - (ii) **loss factors** associated with a credit must not exceed one times the average transmission system loss factor.
- .5 The ISO must make rules with respect to the designation of **loss factors** in any place in Alberta where a generating unit is not located, and on request, determine a loss factor with respect to a generating unit that a person proposes to construct.
- .6 A request pursuant to Rule 9.2.2.5 by a market participant must be made by completing and submitting a “Preliminary Loss Factor Calculation Application” available on the ISO’s website as well as paying the fee specified on the foregoing application.
- .7 The ISO may not amend the **loss factor methodology** unless it has posted on its website not less than 3 months prior to the proposed date of amendment, a notice of its intention to do so and has sent a copy of such notice to the address specified for notices in each System Access Agreement then in force for each generating unit. An amendment to this Rule will require the ISO to undertake a formal stakeholder consultation process.
- .8 An amendment to Appendix 7, “Transmission Loss Factor Methodology and Assumptions” will be treated as an amendment to this Rule.

### 9.2.3 Recovery of Costs of Transmission Losses

- .1 The ISO must establish each year with respect to each loss factor, charges or credits which if applied, would result in the recovery of the forecast costs of **transmission system losses** for such year .
- .2 In accordance with the Rules, the ISO will adjust the charges for losses with the application of a **calibration factor** to ensure that the actual cost of losses is

- reasonably recovered through charges and credits under the ISO tariff on an annual basis.
- .3 If the actual cost of losses is over or under recovered in one year, the over or under recovery must be collected or refunded in the next year or subsequent years.
  - .4 The ISO must follow the methodology set forth in the ISO's Tariff, Rider E, to determine the **calibration factor**.
  - .5 Subject to Rule 9.2.4.8, the owner of a generating unit must pay the charges, and is entitled to the credits, determined by the ISO in accordance with this Rule.
  - .6 A market participant importing electric energy under a firm service arrangement, must pay the charges, and is entitled to the credits, as determined by the ISO.
  - .7 A market participant receiving transmission service under an interruptible service arrangement for load, import or export must pay location-based loss charges that recover the full cost of losses required to provide this service.
  - .8 A market participant receiving transmission service for merchant transmission lines connected to the **interconnected electric system**, internally or intra-control area will be treated the same as the existing inter-tie lines from Alberta to Saskatchewan and British Columbia. For merchant lines not connected to the **interconnected electric system** (isolated), no **loss factors** will be accrued.
  - .9 The payment of charges and entitlement to credits pursuant to Rules 9.2.4.7 – 9.2.4.9 inclusive, will be administered in accordance with the ISO Rules.

#### **9.2.4 Loss Factor Modeling and Assumption Details**

A description of the **loss factor methodology** and the assumptions used to calculate **loss factors** are described in Appendix 7 of the ISO Rules.