

An information document is for information purposes only and is intended to provide guidance. In the event of any discrepancy between the information document and a related authoritative document in effect, the authoritative document governs. Please submit any questions or comments regarding this information document to informationdocuments@aeso.ca.

1 Purpose

The AESO issues information documents to provide additional information and interpretation regarding certain subject matters set out in the AESO's authoritative documents.

The purpose of this information document is to provide the discount rate primarily used, when applicable, in calculations relating to a construction contribution for system access service under Rate DTS. Section 8 of the 2011 ISO tariff describes the discount rate in subsection 11.

2 Related Authoritative Documents

The AESO's authoritative documents consist of ISO rules, the ISO tariff and reliability standards. Authoritative documents contain binding rights, requirements and obligations for market participants and the ISO. Market participants and the ISO are required to comply with provisions set out in authoritative documents.

Market participants are encouraged to review the authoritative documents related to this information document, which include:

- *ISO Tariff – Section 8: Construction Contributions for Connection Projects*
- *ISO Tariff – Section 9: Changes to System Access Service After Energization*

3 Applicability of Discount Rate

The ISO tariff specifies the use of the discount rate to reflect the time value of money in the determination of four amounts:

- (1) costs associated with the advancement of transmission facilities related to a connection project, in subsection 3(2)(l) of section 8 of the ISO tariff;
- (2) local investment when a market participant includes increases or decreases to contract capacity over the investment term for a connection project, in subsection 8(6) of section 8 of the ISO tariff;
- (3) an operations and maintenance charge estimated by a market participant, in subsection 9 of section 8 of the ISO tariff; and
- (4) a lump sum payment in lieu of all or a portion of the 5-year notice period required for reductions or terminations of contract capacity, in subsections 5(3) and 5(4) of section 9 of the ISO tariff.

For the first three amounts (those specified in section 8 of the ISO tariff), the discount rate to be used is for the month in which the Alberta Utilities Commission issues permit and licence for the connection project, consistent with the construction contribution provisions specified in subsection 7(1) of section 8 of the ISO tariff. If the Commission has not yet issued permit and licence for the project, the discount rate to be used is the most recent rate available.

For the payment in lieu of notice (specified in section 9 of the ISO tariff), the discount rate to be used is for the month in which the market participant makes the payment in lieu of notice.

4 Calculation

As described in subsection 11(1) of section 8 of the ISO tariff, the discount rate is calculated as:

$$\text{discount rate} = [(1 - E) \times (\text{YLD} + 1\%)] + \left(\frac{E \times \text{ROE}}{1 - T} \right)$$

where:

- (a) E is equal to the Commission-approved equity ratio applicable to the owner of the transmission facilities, as amended from time to time;
- (b) YLD is equal to the yield on 30-year Government of Canada bonds;
- (c) ROE is equal to the Commission-approved rate of return on equity applicable to the owner of the transmission facilities, as amended from time to time; and
- (d) T is equal to the combined federal and provincial income tax rate applicable to the owner of the transmission facilities.

Where an owner of transmission facilities does not pay income tax, including a non-income tax paying municipal owner of transmission facilities, the tax rate T is 0% in the discount rate calculation. For the discount rate calculation, an owner of transmission facilities is considered to be non-income tax paying if income tax is not included in its revenue requirement as approved by the Commission. Income tax is not included in the approved revenue requirements of ENMAX, EPCOR, the City of Lethbridge and the City of Red Deer, and the tax rate T is 0% for the calculation of discount rates applicable to those owners.

The AESO provides the discount rates calculated for each of these owners of transmission facilities in the attachment to this information document.

5 Information Sources

The Commission generally establishes the equity ratio (E) and return on equity (ROE) for each owner of transmission facilities in a decision resulting from a generic cost of capital proceeding. The Commission may also adjust those amounts in a decision on the tariff application of an owner of transmission facilities.

The yield on 30-year Government of Canada bonds (YLD) is available from the Bank of Canada, accessible from its website by following the path www.bankofcanada.ca ► Rates and Statistics ► Interest Rates ► Canadian bond yields: 10-year lookup. The relevant bond yield is provided by the monthly series for Government of Canada benchmark bond yields - long-term (CANSIM identifier V122544).

The federal income tax rate is available from the Canada Revenue Agency, accessible from its website by following the path www.cra-arc.gc.ca ► Information for: Business ► All rates ► Corporation tax rates. The provincial income tax rate is available from Alberta Finance and Enterprise, accessible from its website by following the path www.finance.alberta.ca ► About the Ministry ► Legislation ► Alberta Corporate Tax Act (section 21(o)). The combined tax rate (T) is the sum of the federal and provincial income tax rates.

Revision History

| Effective | Description |
|------------|-------------------------|
| 2011-10-07 | Released final version. |

Attachment: Discount Rates Determined Under Subsection 11 of Section 8 of 2011 ISO Tariff

Last Updated
February 1, 2012

| | | | Tax-Applicable Owners (Tax Rate as in 3rd Column) | | | | | | Non-Tax Applicable Owners of Transmission Facilities (Tax Rate = 0%) | | | | | | | | | | | |
|----------|------------------|--------------|---|------------------|---------------|------------------------|------------------|---------------|--|------------------|---------------|------------------------|------------------|---------------|------------------------|------------------|---------------|------------------------|------------------|---------------|
| | | | AltaLink | | | ATCO Electric | | | ENMAX | | | EPCOR | | | City of Lethbridge | | | City of Red Deer | | |
| Month | Bond Yield [YLD] | Tax Rate [T] | Return on Equity [ROE] | Equity Ratio [E] | Discount Rate | Return on Equity [ROE] | Equity Ratio [E] | Discount Rate | Return on Equity [ROE] | Equity Ratio [E] | Discount Rate | Return on Equity [ROE] | Equity Ratio [E] | Discount Rate | Return on Equity [ROE] | Equity Ratio [E] | Discount Rate | Return on Equity [ROE] | Equity Ratio [E] | Discount Rate |
| Feb 2012 | 2.64% | 25.00% | 8.75% | 37.00% | 6.61% | 8.75% | 37.00% | 6.61% | 8.75% | 37.00% | 5.53% | 8.75% | 37.00% | 5.53% | 8.75% | 37.00% | 5.53% | 8.75% | 37.00% | 5.53% |
| Jan 2012 | 2.50% | 25.00% | 8.75% | 37.00% | 6.52% | 8.75% | 37.00% | 6.52% | 8.75% | 37.00% | 5.44% | 8.75% | 37.00% | 5.44% | 8.75% | 37.00% | 5.44% | 8.75% | 37.00% | 5.44% |
| Dec 2011 | 2.69% | 26.50% | 8.75% | 37.00% | 6.73% | 8.75% | 37.00% | 6.73% | 8.75% | 37.00% | 5.56% | 8.75% | 37.00% | 5.56% | 8.75% | 37.00% | 5.56% | 8.75% | 37.00% | 5.56% |
| Nov 2011 | 3.02% | 26.50% | 8.75% | 37.00% | 6.94% | 8.75% | 37.00% | 6.94% | 8.75% | 37.00% | 5.77% | 8.75% | 37.00% | 5.77% | 8.75% | 37.00% | 5.77% | 8.75% | 37.00% | 5.77% |
| Oct 2011 | 2.83% | 26.50% | 8.75% | 37.00% | 6.82% | 8.75% | 37.00% | 6.82% | 8.75% | 37.00% | 5.65% | 8.75% | 37.00% | 5.65% | 8.75% | 37.00% | 5.65% | 8.75% | 37.00% | 5.65% |
| Sep 2011 | 3.10% | 26.50% | 8.75% | 37.00% | 6.99% | 8.75% | 37.00% | 6.99% | 8.75% | 37.00% | 5.82% | 8.75% | 37.00% | 5.82% | 8.75% | 37.00% | 5.82% | 8.75% | 37.00% | 5.82% |
| Aug 2011 | 3.35% | 26.50% | 8.75% | 37.00% | 7.15% | 8.75% | 37.00% | 7.15% | 8.75% | 37.00% | 5.98% | 8.75% | 37.00% | 5.98% | 8.75% | 37.00% | 5.98% | 8.75% | 37.00% | 5.98% |
| Jul 2011 | 3.53% | 26.50% | 8.75% | 37.00% | 7.26% | 8.75% | 37.00% | 7.26% | 8.75% | 37.00% | 6.09% | 8.75% | 37.00% | 6.09% | 8.75% | 37.00% | 6.09% | 8.75% | 37.00% | 6.09% |