Applicability

4.1 This section applies to a **market participant** who has requested or is receiving **system access service** under:

(a) Rate DTS, *Demand Transmission Service*;

(b) Rate PSC, *Primary Service Credit*; or

(c) Rate STS, *Supply Transmission Service*.

Classification of Participant-Related and System-Related Costs

4.2(1) All costs of a connection project must be classified by the **ISO** as either participant-related or system-related.

4.2(2) Participant-related costs are the costs deemed necessary by the **ISO** to accommodate a connection project, when taking into account the **ISO**'s **transmission system** planning obligations, and include costs associated with:

(a) the connection substation for the **point of delivery** or **point of supply**, including all **transmission facilities** to accommodate an in-out line configuration;

(b) a **radial circuit**;

(c) a new additional transmission line for a **point of delivery** or **point of supply** that is served from an additional transmission source and that is either required only to serve the **point of delivery** or **point of supply** or is requested by a **market participant**;

(d) a share of existing **transmission facilities** that were constructed to connect another **market participant**, where the existing facilities originally began **commercial operation** within the past 20 years and where the share is determined in accordance with subsection 5.5 of the **ISO tariff**, *Changes to System Access Service*;

(e) line moves or burials of existing transmission line;

(f) communication enhancements, additions, or both required solely to provide communications service for the connection project;

(g) breakers, changes to protection systems, equipment or settings required for the connection project to an existing substation;

(h) salvage labour required to remove existing **transmission facilities** to allow the installation of new or replacement facilities for a connection project;

(i) changes to protection systems, equipment or settings related to the addition of a **generating unit** or an **aggregated generating facility** on an **electric distribution system** served through the connection substation;

(j) **remedial action schemes**;

(k) a phasor measurement unit;

(l) the replacement cost new, which is the current cost of similar new equipment having the nearest equivalent capability to the equipment being valued, of existing **system**

transmission facilities that have been reclassified as participant-related to meet the requirements of the connection project;

(m) facilities required to connect an isolated community regulated under the *Isolated Generating Units and Customer Choice Regulation,* to the **interconnected electric system**; and

(n) other facilities that are required to complete the **market participant**'s connection, including facilities that, in the **ISO**'s opinion will be required in the future, or that are required to enable the **market participant** to meet all relevant technical requirements for the connection project.

4.2(3) If the **ISO** identifies **system transmission facilities** as being required to accommodate a **market participant**'s new or increased Rate DTS capacity, then the **ISO** must classify the following costs as participant-related:

(a) advancement costs, which are the costs associated with the advancement of **system transmission facilities** required to accommodate the connection project requesting demand transmission service, which the **ISO** calculates, using the discount rate provided in subsection 4.9 below, as:

(i) if the **system transmission facilities** are not included in an approved **needs identification document**, the difference between the cost of the applicable **system transmission facilities** and the calculated future value of the **system transmission facilities,** based on a 5-year period;

(ii) if the **system transmission facilities** are included in an approved **needs identification document** and do not have a set in-service-date, the difference between the cost of the applicable **system transmission facilities** and the calculated future value of the **system transmission facilities,** based on a 5-year period; or

(iii) if the **system transmission facilities** are included in an approved **needs identification document** and have a scheduled in-service date that can be advanced, the difference between the present value of the capital costs of the advanced and the planned facilities for the number of **months** that the in-service date will be advanced;

and

(b) avoidable construction costs, which are the net costs associated with maintaining, at the **market participant**'s request, the in-service date for **system transmission facilities** currently under construction, and which the **ISO** determines could be avoided by delaying the completion of construction.

4.2(4) System-related costs are the costs of the connection project that have not been classified as participant-related in accordance with subsection 4.2(2) and (3) above, and include incremental **transmission facility** costs in excess of the **ISO**'s preferred connection alternative in accordance with subsection 3.4 of the **ISO tariff**, *System Access Service Requests*, to serve the **market participant** where, as determined by the **ISO**, economics or **transmission system** planning support the development of such **transmission facilities**.

Facilities in Excess of Good Electric Industry Practice

4.3 A **market participant** must pay, as part of the **construction contribution**, any participant-related costs of facilities that the **ISO** determines to be in excess of those required by **good electric industry practice**.

Valuation of Facilities for Contribution Determination

4.4(1) The **ISO** may determine connection project costs based on the replacement cost new of equipment, which is the current cost of similar new equipment having the nearest equivalent capability to the equipment being valued.

4.4(2) The **ISO** must, when a connection project involves the installation of a transformer that replaces a smaller transformer which was removed from service at a substation, determine connection project costs by:

(a) reducing the participant-related costs for the connection project by the replacement cost new of the removed transformer when the **legal owner** of the **transmission facility** either:

(i) deems the transformer which is removed to be re-deployable for use at another substation or suitable for use as an operating spare; or

(ii) identifies the cost of the transformer, including the cost to remove the transformer as part of its approved capital maintenance;

or

(b) not reducing the participant-related costs in any other circumstances including when the **legal owner** of the **transmission facility** scraps the transformer.

Allocation of Costs to Market Participants

4.5(1) The **ISO** must allocate to the **market participant** at the substation at which **system access service** is provided the balance of participant-related costs remaining after:

(a) the exclusion of costs, if any, under subsection 4.3 above reflecting facilities in excess of those required by **good electric industry practice**; and

(b) the reduction of costs, if any, under subsection 4.4(2) above reflecting replacement of a transformer removed from service.

4.5(2) The **ISO** must allocate the participant-related costs referred to in subsection 4.5(1) above among **market participants** receiving **system access service** at a single substation, which services may be solely under Rate DTS, solely under Rate STS or under a combination of both.

4.5(3) The **ISO** must allocate the participant-related costs referred to in subsections 4.5(1) and (2) above to each **market participant** by multiplying those costs by the average **substation fraction** for the **market participant** determined in accordance with subsections 5.5(3) and (4) of the **ISO tariff**, *Changes to System Access Service*.

4.5(4) The **ISO** must deem costs allocated to a **market participant** taking service under Rate DTS to be demand-related costs.

4.5(5) The **ISO** must deem costs allocated to a **market participant** taking service under Rate STS to be:

(a) for a **market participant** that is not the **legal owner** of an **electric distribution system**, supply-related costs; and

(b) for a **market participant** that is the **legal owner** of an **electric distribution system**, zero (0).

Determination of Construction Contribution

4.6(1) The **ISO** must calculate the **construction contribution** in accordance with the **construction contribution** provisions of the **ISO tariff** in effect on the date on which the **market participant** executes a *System Access Service Agreement*.

4.6(2) Subject to subsection 4.6(5) below, a **market participant** must pay the **construction contribution** amounts to the **legal owner** of the **transmission facility** in accordance with the **financial obligation** provisions of section 6 of the **ISO tariff**, *Financial Obligations for Connection Projects*.

4.6(3) The **ISO** must calculate the **construction contribution**:

(a) for a **market participant** receiving service under Rate DTS, as the demand-related costs less the local investment determined under subsection 4.7 below.

(b) for a **market participant** receiving service under Rate STS, as the supply-related costs.

4.6(4) A **market participant** must inform the **ISO**, in writing, and in a timely manner, of any disagreement with the **ISO**'s determination of the **construction contribution**.

4.6(5) Subsection 4.6(2) above does not apply to a connection project in respect of which a **market participant** has submitted a proposal to the **ISO** for the construction and temporary operation of a transmission facility in accordance with section 5 of the *Transmission Deficiency Regulation*.

Determination of Local Investment

4.7(1) The **ISO** must calculate the maximum local investment:

(a) based on the **contract capacity** and investment term set out in the *System Access Service Agreement* for a connection project for a **market participant** taking service under Rate DTS or under Rate DTS with Rate PSC;

(b) excluding any **contract capacity** transferred from another **point of delivery**; and

(c) using an investment term from 5 to 20 years inclusive, commencing on the date of **commercial operation**.

4.7(2) The **ISO** must calculate the maximum local investment for a connection project for a new **point of delivery** as the sum of annual amounts for each year in the investment term by adding the products of the values from each of rows (c) through (g) of the table below, where the product for a row is calculated by multiplying:

(a) the **substation fraction** or **contract capacity**, as applicable, from column A; and

(b) the investment amounts from column B or column C, as applicable.

Column A	Column B	Column C
Tier	Investment for Service Under Rate DTS	Investment for Service Under Rate DTS with Rate PSC
(c) **Substation fraction** (for new **points of delivery** only)	$106,850/year	$22,440/year

Column A	Column B	Column C
(d) First (7.5 × **substation fraction**) MW of **contract capacity**	$35,150/MW/year	$7,380/MW/year
(e) Next (9.5 × **substation fraction**) MW of **contract capacity**	$20,850/MW/year	$4,380/MW/year
(f) Next (23 × **substation fraction**) MW of **contract capacity**	$14,000/MW/year	$2,940/MW/year
(g) All remaining MW of **contract capacity**	$8,550/MW/year	$0/MW/year

4.7(3) The **ISO** must calculate the maximum local investment for a connection project that accommodates a **contract capacity** increase at an existing **point of delivery** using:

(a) the **contract capacity** representing the incremental **contract capacity** since the most recent change in **construction contribution** at the **point of delivery**;

(b) the **substation fraction** based on **contract capacities** after the increase;

(c) the existing **contract capacity** to establish the initial tier in which investment becomes available for the incremental **contract capacity**; and

(d) investment available from subsequent tiers, as appropriate, where the sum of existing and incremental **contract capacities** exceeds the remaining MW in the initial tier.

4.7(4) The **ISO** must calculate the maximum local investment for a connection project that includes increases or decreases to **contract capacity** over the investment term as the sum of the investment for each incremental amount of **contract capacity**, to be:

(a) calculated in accordance with subsections 4.7(2) and (3) above, based on each increment of **contract capacity** and the years for which each increment is contracted, and

(b) discounted from the beginning of the first **month** in which the increment of **contract capacity** exists back to the date of **commercial operation** of the connection project, using the discount rate provided in subsection 4.9 below.

4.7(5) The **ISO** must determine the maximum local investment as the lesser of:

(a) the amount calculated in subsection 4.7(2), (3) or (4) above; or

(b) the demand-related costs.

Operations and Maintenance

4.8(1) A **market participant** taking service under Rate DTS must pay, as part of the **construction contribution**, an operations and maintenance charge to be added to any participant-related costs of facilities which are deemed to be in excess of those required by **good electric industry practice** in subsection 4.3 above.

4.8(2) The **market participant** must estimate and the **ISO** must agree to the operations and maintenance charge calculated:

(a) as the present value of the full incremental maintenance cost, incremental operations cost and overheads associated with the operations and maintenance of the facilities which are deemed to be in excess of those required by **good electric industry practice**; and

(b) over the useful life of those facilities or 20 years, whichever is less.

4.8(3) The **market participant** must use the discount rate provided in subsection 4.9 below in the present value calculation.

Discount Rate

4.9(1) The **ISO** must determine the discount rate as:

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

where:

(a) E is equal to the **Commission**-approved equity ratio applicable to the **legal owner** of **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 **legal 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 **legal owner** of the **transmission facilities**.

4.9(2) The **ISO** must use zero as the tax rate T in subsection 4.9(1) above for a **legal owner** of **transmission facilities** that does not pay income tax, including a non-income tax paying municipal **legal owner** of **transmission facilities**.

Miscellaneous

4.10(1) The **ISO** must make reasonable efforts to ensure that, where **transmission facilities** must be relocated, the party causing the relocation pays all reasonable costs associated with the relocation.

4.10(2) The **ISO** must, where new facilities between adjacent **balancing authority areas** are required, allocate the costs of such facilities to the **ISO** and to the party responsible for costs in the other **balancing authority area** based on the extent to which each benefits directly from the facilities.

4.10(3) The **ISO** may exercise discretion in the application of the **construction contribution** provisions in the **ISO tariff**, including the determination of costs to be system-related in certain circumstances that might, under strict application of the **construction contribution** provisions, have been classified as participant-related.

Revision History

Effective	Description
2023-XX-XX	Revised as applied for in the AESO 2022 ISO Tariff Modernization Application.

2021-07-01	Revisions to provisions regarding the deeming of costs per **Commission** Decision 26215-D01-2021 issued on April 29, 2021, as varied in **Commission** Decision 26215-D02-2021 issued on June 3, 2021.
2021-01-01	Revised and reformatted subsections as approved in **Commission** Decision 25175-D02-2020 issued on November 30, 2020 and updated investment levels, as approved in **Commission** Decision 26054-D01-2020 issued on December 18, 2020.
2019-01-01	Updated investment levels, as approved in **Commission** Decision 24036-D01-2018 issued on December 18, 2018.
2018-01-01	Updated investment levels, as approved in **Commission** Decision 23065-D01-2017 issued on November 28, 2017.
2017-01-01	Updated investment levels, as approved on an interim refundable basis in **Commission** Decision 22093-D01-2016 issued on December 2, 2016.
2016-04-01	Updated investment levels, as approved in **Commission** Decision 21302-D01-2016 issued on March 31, 2016.
2016-01-01	Updated investment levels, as approved in **Commission** Decision 20753-D02-2015 issued on December 21, 2015.
2015-07-01	Updated investment levels, as approved in **Commission** Decision 3473-D01-2015 issued on June 17, 2015 except for subsection 3 which remains as approved in **Commission** Decision 2011-275 issued on June 24, 2011
2013-10-01	Updated investment levels, as approved on an interim refundable basis in **Commission** Decision 2013-325 issued on August 28, 2013 and on a final basis in **Commission** Decision 2014-242 issued on August 21, 2014 except for subsection 3 which remains as approved in **Commission** Decision 2011-275 issued on June 24, 2011.
2011-07-01	Revised and reformatted all subsections, as approved in **Commission** Decision 2011-275 issued on June 24, 2011.