

6 PROPOSED REVISIONS TO 2007 TERMS AND CONDITIONS OF SERVICE

The overarching goals in the proposed changes to its terms and conditions — like the rate changes discussed in Section 4 of this Application — are to move towards provisions that are sustainable and therefore contribute to the objective of providing tariff stability and certainty for customers. Most of the changes are intended to clarify and provide transparency and consistency in the AESO’s tariff-related practices. Where a more fundamental change to the Terms and Conditions is proposed (e.g. the contribution policy), it is intended to address the matter in a fundamental way so that it is robust and can endure on a go-forward basis, again with the intent of providing customers with much desired certainty.

Overview of Revisions to the Terms & Conditions of Service

The following is a summary of changes the AESO proposes to its Terms and Conditions of service for 2007:

- (a) **Article 1** – Insert “Substation Fraction” definition as contained in the DTS rate schedule, revise the term “Interconnection Requirements” and replace “RMS” “Reliability Management System” with the term “Reliability Standards”;
- (b) **Article 3** – Revise Article 3.1 to clarify the AESO’s obligation to provide service in excess of a customer’s Contract Capacity;
- (c) **Article 5** – Amend Article 5.1 and insert a new Article 5.2 to reflect the different interconnection processes developed through stakeholder consultation in 2005;
- (d) **Article 7** – Update Article 7.1 and 7.5 to reference the AESO Measurement System Standard;
- (e) **Article 9** – Several revisions to the customer contribution policy, including:
 - **Articles 9.2, 9.7, and 9.9** – Align Tariff and AESO practices regarding which version of the Tariff is applied to system access requests. In summary, this clarifies that when a customer executes the necessary agreements (i.e. signifying commitment as per AESO practices), the approved Tariff at the time of commitment will be applied to new system access requests. This approach will also be applied to DTS Contract Capacity increase requests that require the construction of new transmission facilities;
 - **Article 9.4** – Provision to apply Prepaid Operations and Maintenance charge to only the costs associated with facilities in excess of Standard;
 - **Article 9.5** – Amend the DTS/STS ratio to allocate interconnection costs between multiple services at a point of interconnection;
 - **Article 9.6** – Recommendation of an investment function with a proposed maximum local investment level of (\$54,500/year of contract term multiplied by the Substation Fraction) + (\$35,800/MW/year of DTS contract term up to 7.5MW x Substation Fraction) + (\$8,900/MW/year of DTS contract term greater than 7.5MW) where the TFO provides and owns conventional transformation facilities and (\$32,700/year of contract term multiplied by the Substation Fraction) + (\$21,480/MW/year of DTS contract term up to 7.5MW x Substation Fraction) +

(\$5,340/MW/year of DTS contract term greater than 7.5MW) where the TFO does not provide or own conventional transformation facilities ; DTS contract term = 5 to 20 years as determined by the customer. The term Substation Fraction was also inserted into the formula in order to match the proposed rate design;

- **Article 9.14** – Amend discount rate formula to account for periodic updates of the generic cost of capital issued by the Board;
- (f) **Article 13** – Revise Article title and amend Article 13.4 requesting written notice of contract capacity increases and noting contract capacity increases will be accommodated assuming sufficient transmission capacity is available;
- (g) **Article 14** – Provide details and requirements in relation to the Regulated Generating Unit Connection Costs (RGUCC) charge (specifically in the event of early decommissioning of a regulated generating unit), enhance contract reduction and termination language along with the removal of references to contract increases as these provisions are contemplated in Article 13;
- (h) **Article 15** – Amend Article 15.1 to introduce a financial penalty for non-compliance rather than withholding or suspending System Access Service, and amend Article 15.8 to provide clarity regarding interest treatment on late payment charges; and
- (i) Other minor revisions and simplification throughout the Terms and Conditions.

The specific changes and supporting rationale are described in more detail in the following sections. A black-line copy of the current 2006 Terms and Conditions with the aforementioned changes incorporated is provided in **Appendix H**.

6.1 Article 1 – Definitions & Interpretation

The term “Substation Fraction” was introduced and approved as part of the AESO’s 2005/2006 GTA, specifically in rate schedule DTS. The term has been added to Article 9.6 Determination of Customer Contribution, and is proposed to apply to the fixed component and first demand block of the investment function for sites with multiple system access services at one substation. The proposed definition is the same as provided in the currently approved DTS rate schedule.

Proposed definition

“**Substation Fraction**” means the ratio of the Contract Capacity for the Point of Delivery to the sum of all Contract Capacities (for DTS and STS) at the substation at which the Point of Delivery is interconnected.

The defined term “Interconnection Requirements” has been revised to include the various Transmission Interconnection Requirement documents made available on the AESO’s website.

Currently approved definition

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“Interconnection Requirements” means the requirements contained in the documents titled Technical Requirements for Connecting to the Alberta Interconnected Transmission Grid in either Part 1: Technical Requirements for Connecting Loads or Part 2: Technical Requirements for Connecting Generators to the Alberta Interconnected Electric System, made available by the AESO, as amended from time to time.

Proposed definition

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“Transmission Interconnection Requirements” means the requirements related to matters such as, but not limited to, protection, revenue metering, transmission lines, generators, loads, communications and SCADA, as currently contained in the following documents: Technical Requirements for Connecting to the Alberta Interconnected Transmission Grid; Part 1: Technical Requirements for Connecting Loads Rev. 1.0 (Dec. 29, 1999), Part 2: Technical Requirements for Connecting Generators to the AIES Rev. 1.0 (Dec. 29, 1999); Part 3 Technical Requirements for Connecting Transmission Facilities Rev. 1.0 (Dec. 29, 1999), AESO SCADA Standard Rev. 1.0 (Sept. 6, 2005), AESO Measurement System Standard (July 1, 2004), AIES Protection Standard Rev. 0 (Dec. 1, 2004), Phasor Measurement Unit Requirements Rev. 2.0 (July 6, 2005), Operational Voice Communication Standard Rev. 1.0 (Sept. 7, 2005), Wind Power Facility Technical Requirements Rev. 0 (Nov. 15, 2004), Transmission Modeling Data Rev. 0 (April 29, 2003), Requirements for Model Validation Reporting For Generators and Generator Control Systems Rev. 0 (November 16, 2005), all of which are prepared, published and may be amended or supplemented by the AESO from time to time.

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The term “RMS” or “Reliability Management System” has been replaced with the term “Reliability Standards” to create more alignment between the Tariff and the Transmission Regulation. The proposed wording primarily relies on the definition as provided in the Regulation.

Existing definition

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“RMS” or **“Reliability Management System”** refers to the reliability management system and all mandatory operating criteria required thereby adopted and enforced by the WECC.

Proposed definition

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“Reliability Standards” refers to the reliability standards, agreements, criteria and directives of the WECC and the North American Reliability Council, or their successor organizations, the reliability standards, agreements, criteria or directives of any similar entity recognized by the ISO and reliability standards adopted by the ISO to supplement those standards, criteria or directives thereby adopted and enforced by the WECC or the ISO.

6.2 Article 3 – Provision of System Access Service

5 In the 2005/2006 GTA, the AESO proposed a number of amendments to the Terms and Conditions in the form of simplifying the language and reorganizing Articles. In Decision 2005-096 the EUB approved a number of the proposed changes including Article 3.1 provided below.

3.1 Provision of Service

10 Subject to Article 17, the AESO agrees to provide System Access Service, up to and including the POD or POS, to all Customers who have executed a System Access Service Agreement and abide by this Tariff. The AESO is not obligated to provide service to a Customer in excess of 110% of the Contract Capacity set out in the Customer's System Access Service Agreement.

15 Article 3.1 outlines the general provisions under which the AESO provides service to customers that have executed a System Access Service Agreement. The discussion relating to providing service up to 110% was adapted from the AESO's previously approved Tariff; specifically Article 15.3 provided below.

- 20 15.3 (a) Subject to paragraphs (b) and (c), the Metered Demand for a Customer taking service under Rate Schedule DTS or Rate Schedule STS shall not exceed the lesser of:
- 25 (i) 110% of the Contract Capacity;
 - (ii) the Rated Capacity of any transmission facilities comprising its interconnection; or
 - (iii) the Physical Capacity of any transmission facilities comprising its interconnection.

30 In the event that the foregoing is not complied with, the AESO shall have the right to discontinue the applicable System Access Service until the Customer installs equipment to limit its Metered Demand.

- 35 (b) A DTS Customer may temporarily exceed the level stipulated in subparagraph 15.3(a)(i) to the extent it has in place a System Access Service Agreement for an Opportunity Service at the applicable POD.

40 In the AESO's experience in administering the Tariff, Article 3.1 as currently written appears to be causing unintended confusion regarding the level of service which the AESO provides to its customers, and represents a misalignment between the operational considerations and planning practices the AESO utilizes in managing the Alberta Interconnected Electric System (AIES).

45 Article 3.1 has been misinterpreted to mean the AESO will provide service along with plan and build the AIES to be capable of providing 110% of the customer's contracted capacity regardless of any system operation conditions. The AESO acknowledges that the current

wording may be open to that form of interpretation, but submits that misconstrues the intent of the Article. As such the AESO proposes the following revisions to Article 3.1 (emphasis added) to clarify the level of service provided by the AESO and better align the Tariff with its operational and planning practices.

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Proposed Article 3.1

3.1 Provision of Service

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Subject to Article 17, the AESO agrees to provide System Access Service, up to and including the POD or POS, to all Customers who have executed a System Access Service Agreement and abide by this Tariff. **The AESO will provide service up to the Customer's Contract Capacity as set out in the Customer's System Access Service Agreement contingent upon any applicable ISO Rules, OPPs or Abnormal Operating Conditions as defined in the Transmission Regulation.**

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The AESO submits the proposed wording provides the necessary clarity regarding the provision of service without altering the original intent of the Article. Of additional note are the following points:

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- The sizing of standard transmission facilities continues to inherently allow for some operational flexibility for customers, as was intended by the original reference to the 110% value. However, tying operational flexibility to a specific number is inappropriate when customer interconnections and the AIES are designed in consideration of a number of variables;
- The system planning process does not simply incorporate customer contract capacities by adding 10%, and further does not build transmission facilities to this particular level of service. The AESO takes a number of other considerations into account such as load diversity on the system, actual system load, in addition to contract capacity information when planning the system; and
- The revised wording creates alignment between the Tariff, the AESO's ISO Rules, and OPPs which state the AESO will provide service up to the customer's contracted capacity, notwithstanding that under a number of system contingencies, service may be interrupted.

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6.3 Article 5 – System Access Application

During the AESO's stakeholder consultation process for the 2007 GTA, the AESO originally proposed to make a number of revisions to Article 5 to align the interconnection process practices with the Tariff. Since that initial consultation, the AESO has undertaken additional stakeholder consultation relating to business practices in respect of interconnection queue management and compliance milestones which may have an impact on Article 5. As such, the AESO does not propose any major changes at this time. The AESO proposes only minor refinements to Article 5 in this Application, and upon completion of the business

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practice consultation process, the AESO will include any necessary changes to Article 5 in a future update of its Terms and Conditions.

5 The AESO proposes to amend Article 5 in this Application to clarify the requirements for customers applying for new or expanded System Access Service. As noted in the AESO's 2005/2006 GTA and Decision 2005-096, the AESO and industry representatives cooperatively worked together to redesign the interconnection processes to meet the needs of both customers and changes in the legislative landscape in the province. At the time the 2005/2006 GTA was filed, the project teams responsible for the final design, development, 10 and implementation of the redesigned interconnection processes had not yet completed their work. The AESO inserted wording into Article 5 based upon the best information available at the time. Now that the process review has been completed, the language proposed below provides transparency, and more accurately represents the different interconnection processes applicable upon a request for System Access Service.

15 Previously approved Article 5.1 has been separated into two separate Articles (5.1 and 5.2) in an effort to delineate the processes associated with distributor system access expansions within an existing Point of Delivery (POD) versus a new POD, as was developed during the consultation process. Wherever possible, the terminology has also been updated to match 20 the terminology used in the interconnection process business practices as provided on the AESO's website.

Proposed Articles 5.1, 5.2, and 5.3:

25 **5.1 Distributor's Application for System Access Service existing POD**

- 30 a) Subject to Article 5.3, applications for expanded System Access Service within an existing POD shall be made to the TFO. An interconnection proposal for the requested expansion is presented and reviewed by the AESO.
- 35 b) The AESO will work cooperatively with the Distributor and the TFO to determine the most cost effective manner to facilitate System Access Service for the Distributor's request for new System Access Service or for expanded System Access Service within an existing POD.
- c) The AESO will provide the Distributor or the TFO with the necessary approvals, conditional or otherwise, and other interconnection documentation required to facilitate System Access Service.
- 40 d) Subject to Article 5.3, if the Distributor proceeds with the recommended System Access Service solution, the Distributor is expected to provide the information and financial security required by the TFO and to enter into a Construction Commitment Agreement, if required by the TFO.

5.2 Distributor’s Application for New System Access Service

- a) Applications for new System Access Service shall be made to the AESO and include an interconnection proposal, prepared by the Distributor and TFO.
- b) The AESO will work cooperatively with the Distributor and the TFO to determine the most cost effective manner to facilitate System Access Service for the Distributor’s request for new System Access Service or for expanded System Access Service within an existing POD.
- c) The AESO will provide the Distributor or the TFO with the necessary approvals, conditional or otherwise, and other interconnection documentation required to facilitate System Access Service.
- d) Subject to Article 5.3, if the Distributor proceeds with the recommended System Access Service solution, the Distributor is expected to provide the information and financial security required by the TFO and to enter into a Construction Commitment Agreement, if required by the TFO.

5.3 Generator, Industrial Systems, and Industrial Load Applications for Service

Customers may apply for new System Access Service or for expanded System Access Service within an existing POC.

- a) Applications for System Access Service shall be made to the AESO and subject to the associated fee set out in sub-paragraph (c).
- b) The Customer must work with both the AESO and the TFO who will cooperatively determine the most cost effective manner to facilitate System Access Service.
- c) Where required by the AESO, the Customer must pay the following refundable system access application fee. The AESO will refund such fee to the Customer within 90 days of energization of the Customer’s Facilities.

<u>Project Size</u>	<u>Preliminary Assessment Fee</u>
≤ 15 MW	\$10,000
> 15 MW and ≤ 25 MW	\$20,000
> 25 MW	\$50,000

- d) The AESO will provide the Customer and the TFO with the necessary approvals, conditional or otherwise, and other interconnection documentation required to facilitate System Access Service.
- e) Subject to Article 5.3, if the Customer proceeds with the recommended System Access Service solution, the Customer is expected to provide the information and financial security required by the TFO and to enter into a Construction Commitment Agreement with the TFO.

6.4 Article 7 – Metering

5 The AESO proposes that Article 7 should be updated to accurately reflect the details contained in the AESO's Measurement System Standard. The AESO's Measurement System Standard identifies the accountabilities and obligations of the AESO, Metering Service Providers, and Metering Data Providers. The standard applies to anyone who currently has a valid System Access Service agreement with the AESO. The current references to the E&GI Act have been removed and replaced with references to the AESO's Measurement System Standard, as the Standard contains the necessary references and details regarding the customer's obligation to meet requirements of the E&GI Act and the Settlement System Code.

10 The AESO Measurement System Standard is reviewed every five years. The current Standard came into effect July 1, 2004. Prior to proposing and finalizing revisions to the AESO's Measurement System Standard the AESO conducts a consultation process with industry stakeholders to gather content and feedback on the different aspects of the Standard. The Standard is publicly available on the AESO's website.

15 Updating Article 7 is intended to simplify the Tariff language and clarify customers' responsibilities as they pertain to metering standards by referencing the AESO Measurement System Standard which contains all the necessary details and requirements in relation to metering considerations.

Existing Article 7.1:

7.1 Metering Standards

25 All Customers must provide Metering Equipment that measures Metered Demand in fifteen minute intervals or such other interval as the AESO may require. The selection, use and calibration of Metering Equipment must comply with the E&GI Act, except where the AESO requires revenue meters to be accurate to within 0.5% for loads up to 10 MVA and 0.2% for loads above 10 MVA (the "System Accuracy Standard").

Proposed Article 7.1:

7.1 Metering Standards

35 All Customers must provide Metering Equipment that complies with the standards defined in the AESO Measurement System Standard.

Existing Article 7.5:

7.5 Meter Data

40 The Customer will make reasonable efforts to meet the requirements of the E&GI Act, the AESO Measurement System Standard, and the Settlement System Code established by the AESO. Revenue class meters will be used

for billing purposes, energy purchases and sales, and Ancillary Services purchases.

Proposed Article 7.5:

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7.5 Meter Data

All Customers must provide Metering Data that complies with the standards defined in the AESO Settlement System Code and the AESO Measurement System Standard. Metering Data will be used for billing purposes, energy purchases and sales, and Ancillary Services purchases.

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6.5 Article 9 – Customer Contribution Policy

6.5.1 Applicable Tariff for System Access Requests and Customer Contribution Calculations for Increases in Contract Capacity

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The AESO submits additions to Articles 9.2 “Payment of Contributions”, 9.7 “Staged Loads” and 9.9 “Changes to Customer Contribution” are necessary to provide stakeholders transparency and ensure consistent customer contribution treatment.

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Currently Articles 9.7 and 9.9 outline the details and circumstances in which the customer contribution for an interconnection project may be recalculated. The AESO’s current practice when implementing the above mentioned Articles has been to adjust the customer contribution based upon the Tariff which was approved at the time the original interconnection was constructed. The majority of the events identified in Articles 9.9 and 9.10 “Shared Facilities” are largely outside the customer’s control and primarily impact the original interconnection facilities built to accommodate the original system access request. Therefore, the AESO suggests that the current approach of adjusting the original customer contribution using the contribution policy at the time of the original system access request for the events outlined in Articles 9.9 and 9.10 continues to be reasonable.

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The AESO has, however, also encountered situations where a customer requests an increase in contract capacity that is incremental to the original system access request and necessitates the construction of new transmission facilities to accommodate the contract capacity increase. The manner in which these situations are handled is not currently explicitly addressed in the Terms and Conditions. The AESO proposes when a customer requests an increase in contract capacity which necessitates the construction of new transmission facilities, that the approved Tariff at the time of project commitment for the new contract capacity request should be used in order to determine the customer contribution and contract term. While this is not clear in the Terms and Conditions, it is nonetheless consistent with the AESO’s current business practices.

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Accordingly, the AESO proposes to update Articles 9.2, 9.7 and 9.9 to articulate the concepts above.

In general, the updated Terms and Conditions in this Section are intended to capture the following principles:

- 5 • The maximum available investment for facility upgrade construction driven by load increases requested by the customer, should be determined based on the investment policy in effect at the time of the load change request;
- 10 • For load changes not involving construction, customer contributions will be recalculated based on the Tariff that was in place at the time of the initial interconnection project. If the recalculation results in an additional customer contribution amount, the customer may opt to extend the original DTS commitment term to be eligible for further AESO investment; and
- 15 • To be eligible to extend the fixed component of the investment function for additional years, the customer must contract for at least 1.0 MW for each year of the contracted term. The contracted term available will be the difference between the commitment term determined for the original system access request and the maximum 20 year commitment term allowed in the customer contribution policy. For those projects where the original commitment term is not known (i.e. which is often the case with contracts dating back prior to the mid 1990's) the maximum commitment term extension available for the fixed portion of the investment function will be 5 years.
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As noted above the proposed revisions are intended to create transparency, clarity and consistency in customer treatment but are also proposed in response to the following considerations:

- 25 • In Decision 2005-096, the EUB emphasized the need to align the customer contribution policy and rates, and that there should be a tighter link between the principles of cost causation and fair cost recovery among different customers; and
- 30 • Stakeholders expressed concern that the current approach employed by the AESO may unduly harm customers if there is significant disparity in investment levels between different approved Tariffs.

35 In the case of incremental contract capacity requests that drive the need for new transmission facilities that were not contemplated in the original interconnection request, the AESO submits these constitute new commercial decisions which therefore require a new commercial arrangement. On that basis, in such circumstances, the customer contribution calculation in the Tariff in place at the time of the request for additional capacity should be applicable.

40 Conversely, continuing to apply the contribution policy in place at the time of the original interconnection for these kinds of additions to a POC would cause a misalignment between rates and the customer contribution, would send the wrong economic signal to the customer, and would be at odds with the efforts to otherwise align evolving policies and rates.

In response to stakeholder perceptions that the apparent historical variability in customer contribution and investment levels will unduly harm customers under this approach, the AESO offers the following. In Section 6.5.3 of this application, a review of the contribution policies over the past several years is provided, and indicates that the concern may be valid for the 2006 Tariff, but if the 2007 proposed investment level is approved, the investment level would return to a level generally on par with previous investment functions. As such, the AESO submits if the investment level stabilizes at the proposed level there should be little to no negative impact to the customer regardless of the Tariff being applied.

The AESO proposes the following revisions to Articles 9.2, 9.7 and 9.9 to address customer commitment, payment of customer contributions, and material increases or decreases in contract capacity:

Existing Article 9.2

9.2 **Payment of Contributions**

All Customer Contributions and System Contributions required under this Article 9 must be paid by the Customer before the start of construction of transmission facilities to provide the requested service. Payment must be made by way of electronic funds transfer or wire transfer to the bank account specified by the AESO.

Proposed Article 9.2 (emphasis added)

9.2 **Payment of Contributions**

All Customer Contributions and System Contributions required under this Article 9 **as determined at the time the Customer executes the necessary agreements signifying commitment as per the AESO's interconnection processes**, must be paid by the Customer before the start of construction of transmission facilities to provide the requested service. Payment must be made by way of electronic funds transfer or wire transfer to the bank account specified by the AESO.

Existing Article 9.7

9.7 **Staged Loads**

- (a) Local investment for projects with expected material increases or decreases in contract load will be determined at the start of the project by taking the present value of the local investment in the incremental load for the remaining contract term.
- (b) If the material increases or decreases in contract load do not occur as expected an adjusted customer contribution may be recalculated in accordance with Article 9.9.
- (c) The discount rate used in the present value calculation of Article 9.7(a) shall be determined in accordance with Article 9.14.

Proposed Article 9.7 (emphasis added)

9.7 Staged Load & Contract Capacity Increases

(a) Where material increases or decreases in Contract Capacity are contemplated at a POC and contracted for in the original System Access Service Agreement then:

- (i) Local investment for projects with expected material increases or decreases in contract load will be determined at the start of the project by taking the present value of the local investment in the incremental load for the remaining contract term.
- (ii) If the material increases or decreases in contract load do not occur as expected an adjusted customer contribution may be recalculated in accordance with Article 9.9.
- (iii) The discount rate used in the present value calculation of Article 9.7(a) shall be determined in accordance with Article 9.14.

(b) For increases in Contract Capacity contracted prior to the expiration of the original System Access Service Agreement which require the construction of new transmission facilities after the original interconnection then:

- (i) The approved Tariff at the time the Customer executes the necessary agreements signifying commitment for the new Contract Capacity will be used in the customer contribution calculation;
- (ii) Only the incremental contracted capacity will be used in the customer contribution calculation.

Existing Article 9.9

9.9 Changes to Customer Contribution

Certain material events may, in the AESO's sole opinion, result in an adjusted Customer Contribution and as appropriate, payments by the AESO to the Customer or by the Customer to the AESO. Either the Customer or the AESO may initiate a recalculation of the Customer Contribution at any time prior to the expiration of the twenty year refund period as set out in Article 9.10. The circumstances giving rise to contribution adjustments include, but are not limited to, those in which:

- (a) a Customer materially increases or decreases its Contract Capacity or contract term prior to the expiration of its original DTS System Access Service Agreement;
- (b) the actual Contract Capacities and/or incremental revenues turn out to be materially different, on a sustained basis, than originally projected;
- (c) a facility that had been classified as system-related under Article 9.3(c) is reclassified as Customer-related due to load growth or the addition of a new POC;

- (d) a material error is detected in the original calculation;
- (e) there is a material difference between the estimated costs of the project and the actual costs of the project;
- (f) the AESO subsequently deems that all or part of a Customer's Facilities have subsequently become system-related; or
- (g) the period of advancement as set out in Article 9.3(c) is materially reduced.

Proposed Article 9.9 (emphasis added)

Certain material events may, in the AESO's sole opinion, result in an adjustment to the Customer Contribution and as appropriate, payments by the AESO to the Customer or by the Customer to the AESO.

Adjustment calculations will rely on the tariff in effect at the time of the request for System Access Service (which may differ from this tariff).

Either the Customer or the AESO may initiate an adjustment of the Customer Contribution at any time prior to the expiration of the twenty year refund period as set out in Article 9.10. The circumstances giving rise to contribution adjustments include, but are not limited to, those in which:

- (a) **a Customer materially increases its Contract Capacity or contract term prior to the expiration of its original DTS System Access Service Agreement and does not necessitate the construction of new transmission facilities;**
- (b) **a Customer materially decreases its Contract Capacity or contract term prior to the expiration of its original DTS System Access Service Agreement;**
- (c) the actual Contract Capacities and/or incremental revenues turn out to be materially different, on a sustained basis, than originally projected;
- (d) a facility that had been classified as system-related under Article 9.3(c) is reclassified as Customer-related due to load growth or the addition of a new POC;
- (e) a material error is detected in the original calculation;
- (f) there is a material difference between the estimated costs of the project and the actual costs of the project;
- (g) the AESO subsequently deems that all or part of a Customer's Facilities have subsequently become system-related; or
- (h) the period of advancement as set out in Article 9.3(c) is materially reduced.

6.5.2 Prepaid Operations and Maintenance

The application of a 12% prepaid Operations and Maintenance (O&M) charge on costs of AESO Standard Facilities and facilities in excess of standard was approved in Decision 2005-096. The AESO submits the charge on facilities in excess of standard should be maintained, but proposes the 12% charge on AESO Standard Facilities be removed.

The Board cited two primary considerations in determining that the O&M charge could be applied to both standard facilities and facilities in excess of standard for DTS customers. On pages 66 and 67 of Decision 2005-096 the EUB highlighted the following considerations:

5 *"...the Board considers that the prepaid O&M charge may be beneficial from the standpoint of economic efficiency and from the standpoint of the desire to send appropriate economic siting and facility development signals through the contribution policy." (page 68)*

10 *"The Board is particularly concerned that, in applying the proposed DTS customer pre-paid O&M charge only to the deemed "optional facility costs" of a new interconnection, the AESO appears to be implicitly assuming that the combined amount of the pre-paid O&M costs associated with the "non-optional" local interconnection facilities and the cost of the non-optional facilities themselves will fall*
15 *below the level permitted under the maximum investment allowance. However, the Board considers that this should not be presumed, particularly in light of the adjustments to the maximum investment function ordered by the Board in Section 6.1.4 above." (page 68-69)*

20 The Board noted above that it was inappropriate for the AESO to presume that the combination of standard facility costs and the O&M charge would be covered by the investment level. The AESO acknowledges the Board's position but suggests that such a principle only applies if the customer contribution policy has a set investment level. If the investment level was set at a specific value and was not based upon the number of projects
25 that are not required to pay a contribution – which is not how the current and proposed investment policies are structured (i.e. 80% of projects are not to pay a contribution per Board Directive 13A in Decision 2005-056, and further described below) – the number of customers that would be required to pay a contribution would increase. But as noted the investment level is required to meet the criterion that 80% of projects do not pay a
30 contribution. If the O&M charge was to continue to be applied to standard facilities, the cost function would increase but so would the investment level function so as to maintain the target of 80% of projects not having to pay a customer contribution. As such, the AESO is of the view that the benefit to economic siting and facility development originally intended by the Board by including the O&M charge is very limited.

35 The AESO also suggests that the O&M charge on standard facilities does not achieve the economic efficiencies intended by the Board. The O&M charge would create additional accounting treatment concerns and infrastructure requirements for Transmission Facility Owners (TFOs). Additional time and resources will be required to modify current processes
40 and accounting infrastructure to effectively separate and track capital costs of the transmission facilities as compared to traditional expense treatment for O&M. New procedures and processes would also be required to ensure O&M costs are being recovered correctly and are not recovered in other components of the TFOs revenue requirement.

The AESO is concerned it will also reduce the efficiencies and harmonization efforts undertaken by the AESO and the Distribution Companies (DISCOs). The DISCOs include an O&M charge only on optional facilities; the application of the O&M charge on standard facilities by the AESO creates misalignment between the AESO and the DISCO Tariffs.

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Other considerations supporting the removal of the O&M charge include:

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- Avoids intergenerational inequity, as customers prior to 2006 were not required to pay for such a charge yet all transmission customers pay the same DTS rate;
- Prevents additional Tariff complexity, i.e. additional articles required to clarify the application of the charge in circumstances where the customer's contract terms may be less than 20 years; and
- AESO stakeholder consultation suggests that stakeholders are opposed to the charge on standard facilities and have asked the AESO to remove the provision citing similar reasons as outlined above.

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Based upon the above rationale, the AESO proposes the O&M charge only apply to facilities in excess of standard. The proposed changes to Article 9.4 along with the currently approved Article 9.4 are provided below.

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Existing Article 9.4:

9.4 Prepaid Operations and Maintenance

For customers taking service under Rate DTS, a prepaid operations and maintenance charge of 12% will be added separately to the costs of:

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- (a) AESO Standard Facilities required to provide service to the customer where these costs are eligible for Local Investment determined in accordance with Article 9.6; and
- (b) Facilities which exceed the AESO Standard Facilities required to provide service to the Customer.

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Proposed Article 9.4:

9.4 Prepaid Operations and Maintenance

For customers taking service under Rate DTS, a prepaid operations and maintenance charge of 12% will be added to the costs of facilities which exceed the AESO Standard Facilities required to provide service to the Customer.

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6.5.3 Determination of Customer Contribution

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The AESO proposes to amend the Customer Contribution Policy. The proposal is primarily the result of responding to the EUB's directions in Decision 2005-096.

5 In the AESO's 2005/2006 GTA, the AESO proposed a change to the investment level and form as outlined in Article 9, on the basis that the investment level was not meeting the intended goals as outlined by the EUB in Decision 2001-06. Following extensive discussion during the hearing process, in Decision 2005-096 the Board provided direction on the form and level of the maximum Local Investment function as outlined in Direction 13, and provided below.

Direction 13 – Amend Maximum Local Investment Formula

10 *Notwithstanding the Board's suggestion to review the merits of a non-linear maximum investment function and provide its findings at the next GRA, the Board notes that the notion of a non-linear function was discussed only at a conceptual level during the Application proceeding. As such, the Board considers that a linear maximum investment function must continue to be utilized in the short term.*
15 *Accordingly, the Board hereby directs the AESO to amend Article 9.4 of the Terms and Conditions proposed for the Application such that a minimum investment allowance reflects:*

- *A minimum investment allowance of \$2.5 million; and*
- *An additional investment of \$100,000 per MW of project capacity [pp. 57-58]*

20 In Decision 2005-096 the Board also instructed the AESO to conduct further research on the topic of customer contribution investment levels and present a proposal by its 2008 GTA as outlined in Direction 13A provided below.

Direction 13A – Conduct Further Study for Investment Function Proposal

25 *In respect of the longer term beyond 2006, the Board directs the AESO to conduct further study so that it may devise a more comprehensive investment function proposal which avoids the Board's concerns with the AESO's 2006 Application and reflects the design principles described by the Board in this Decision. The Board considers that this task will involve several distinct steps, as reflected in the following list of Board directions:*

- 35 *1. The Board hereby directs the AESO to conduct a study for the purpose of devising a simplified maximum investment function. Such study to be completed in time for review no later than the 2008 GTA proceeding. The study should incorporate a sufficient number and diversity of data points to enable the study to consider the current costs of several different interconnection project sizes. Interconnection project costs for the purposes of the investment function study should only reflect the costs of standard facilities as described in the AESO Standard Facilities definition approved by the Board in this decision.*
- 40 *2. On the basis of the results of the study described in the preceding direction, the AESO shall recommend an investment function that represents the average cost per MW of capacity. The Board expects that the resulting interconnection cost*
45

5 *function derived will exhibit significant economies of scale and, as a result, may be non-linear in nature. For the purposes of the remaining steps of the Board's maximum investment function directions, the average cost function derived in accordance with this step will be referred to as the "Raw Interconnection Project Cost Function".*

- 10 3. *In accordance with the notion of a tolerance as discussed in the argument of IPCAA, the Board directs the AESO to analyze the results of the above study for the purposes of determining an appropriate multiplier such that approximately 80% of the projects included have a cost greater than implied by the Raw Interconnection Project Cost Function fall within the selected tolerance multiplier.*

15 *The Board directs the AESO to present the results of the above analysis for review no later than the time of filing its 2008 GTA, along with its proposal for an appropriate maximum investment formula. [p. 58]*

20 As described in Section 3 of this Application, the AESO conducted extensive stakeholder consultation for the 2007 GTA, a large component of which was to address the refinement of the contribution policy and achieve compliance with Direction 13A. During this consultation, stakeholders expressed their concerns regarding the change in the investment function in 2006 and its impact on customers, but were not willing to support the proposed changes in the AESO's 2005/2006 refiling as there were concerns regarding the validity of the data used in the refiling analysis. The AESO understood from stakeholders it was important to set the contribution policy at the appropriate level sooner rather than later.

25 To that end, the AESO embarked on the development of a Customer Contribution Policy Study, which was to form the basis for its next proposed maximum investment function. In this study, in accordance with Directive 13A, the AESO endeavored to:

- 30 1. *Incorporate a sufficient number and diversity of data points*
2. *Determine the Raw Interconnection Project Cost Function*
3. *Determine an appropriate multiplier such that 80% of projects do not pay a contribution.*

35 Prior to initiating the study the AESO distributed Terms of Reference outlining the scope of the study and requested input from stakeholders. To comply with the first requirement of Directive 13A, three approaches were offered:

- 40 a. Gather and deconstruct data on substations constructed for the years 2000 through 2006
b. Gather a random sample of existing substations and attempt to deconstruct project costs, or
c. Develop a number of generic substation configurations of varying load sizes and estimate the cost of each component of the project.

While some stakeholders saw value in investigating b and c above, a majority of stakeholders supported the gathering of data from projects constructed in 2000 through 2006. The AESO supported this position based on the following rationale:

- 5 • The AESO's Customer Contribution Policy is forward looking in nature as it is applied to projects that are going to be constructed in the future. Reviewing project data from the recent past (i.e. previous five or six years) should provide a suitable representation of projects that will be constructed in the near future.
- 10 • The AESO's Customer Contribution Policy is applied to projects that no longer fall under the vertically-integrated utility regime that existed before 1996. As such, reviewing and basing a forward looking policy on historical projects that were developed under that regime would be an inappropriate foundation for the contribution policy.
- 15 • The 2000-2006 sample data should provide more accurate information rather than relying on pre-deregulation practices and policies.
- 20 • The Customer Contribution Policy is a shorter term forward looking mechanism, while the AESO's rates continue to manage both historical and current transmission system cost recovery. As long as there is general alignment between the investment function and rates, key principles such as cost recovery and economic signaling are maintained.
- Continuing to apply the "80/20 rule" in determining the investment level will ensure intergenerational equity.

25 The AESO issued the preliminary results of the Customer Contribution Study to stakeholders on May 12, 2006. The preliminary results addressed the first two components of Direction 13A. Stakeholders raised several concerns and the AESO endeavored to address those concerns in the next version of the study. For instance, the AESO:

- 30 • conducted a review of the data and determined several data points contained some anomalies and were corrected;
- replaced the existing Transmission Construction Price Index with the Alberta Consumer Price Index for project cost inflation rates in an effort to recognize Alberta's economic activity;
- 35 • conducted further analysis of the transmission line information to reflect only transmission line costs associated with project construction, and revision of DTS contract capacities at some substations to reflect the current contracted amount, which would account for staged load contracts or contract increases resulting from load growth;
- 40 • included the collection of additional data ("Upgrade" facilities) and extensive detailed analysis in an attempt to develop the final average cost function and multiplier to achieve the Board directed "80/20 rule of thumb; and
- collected further information on projects with DTS contracts less than 7.5 MW in capacity to address stakeholder concerns.

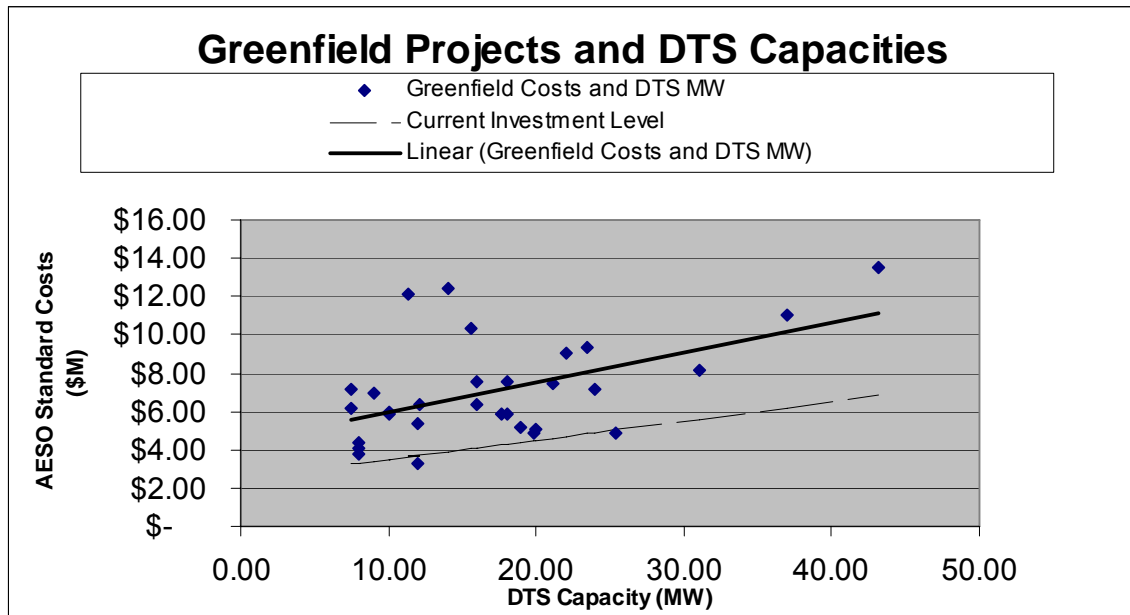
The AESO presented a revised cost function to stakeholders and subsequently extended the consultation period at the request of stakeholders so as to allow parties to comment on the proposed changes. Based on comments received from stakeholders the AESO developed and presented another investment proposal in September 2006. The AESO then analyzed the comments received from the September session and attempted to incorporate concerns raised in the proposed investment discussion outlined below. The following is an excerpt from the 2007 Customer Contribution Study, attached as Appendix F to this Application.

As a result of extensive consultation with stakeholders, the investment cost function was determined by taking into account a number of factors. The AESO relied primarily on data from “greenfield” projects that were constructed between 1999 through 2006. However, since this data represented only loads above 7.5 MW, the AESO incorporated additional data collected from the Transmission Cost Causation Study to ensure the proposed function properly reflected costs for the full range of loads.

Raw Cost Function

Greenfield projects involve the construction of substations and transmission lines. For a new customer wishing to interconnect, a minimum investment amount should be related to the costs of the construction of the substation and associated lines. Figure 1 below reproduces the greenfield data from projects spanning 2000 to 2006 and the corresponding average cost function, and compares it to the current investment function of \$2.5 million investment allowance for new PODs, and the additional \$100,000 per MW of project capacity.

Figure 1



Note that under the current investment policy as set by the EUB, only 2 of 30, or 6% of projects would be fully covered by investment.

5 The data in Figure 1 has a regression coefficient of 0.26, which indicates moderate positive correlation between project costs and DTS capacity. To assess whether projects of different sizes exhibited different cost functions, the AESO analyzed data subsets by dividing the 30 projects using different DTS capacity thresholds. The AESO found no threshold which provided regression coefficients better than 0.26 for both data subsets. (This analysis was somewhat limited by the number of projects in the total data set, since sample sizes of less than 30 generally provide lower-confidence representations of a total population.) Non-linear regression analysis was also completed, but similarly did not provide better regression coefficients than the linear analysis. The AESO therefore considers that the single straight-line average cost function revealed in the graph above provides the best representation of the 30 greenfield project costs, as follows:

15 Greenfield construction costs = \$4.451 + (\$0.154 million x DTS)

20 Although the variability of costs within the data set is significant, the projects nevertheless exhibit a clear trend of cost increasing as capacity increases. Combined with the moderate regression coefficient, the AESO concludes this equation is a reasonable average cost function for recent transmission interconnections.

25 Some stakeholders voiced concerns that the data set used to develop the average cost function did not include any interconnection projects with DTS capacities less than 7.5MW, although 166 DTS PODs – about one-third of all DTS PODs – currently have capacities in that range. Even though it appears from the last 6 years that transmission PODs are generally not being built to supply loads less than 7.5 MW, the AESO agrees with the stakeholders' concerns, particularly since the AESO in this Application also uses the cost function as the basis for the Point of Delivery charge in the DTS rate that applies to all DTS services (including smaller capacity PODs), not just as the basis for the contribution policy that will apply going forward.

30 Consequently, the AESO undertook to provide a sample of projects of less than 7.5 MW. The AESO examined the POD cost information included in the *Transmission Cost Causation Study*. The AESO found 13 load-only projects in the original TFO data used in the *Transmission Cost Causation Study* that had vintage information which would allow escalation to current costs and which were relatively recent (constructed in the last 20 years). Costs for these 13 projects were used to determine the fixed component of the cost function using a minimum-intercept method. The minimum intercept was determined by multiplying the average cost function developed from the 30-project data set by a fraction such that it was equal to or less than the cost of each of the 13 TFO data projects, and then extending that function to intercept the y-axis. The y-axis intercept defines the no-load or absolute minimum cost, which was \$0.947 million.

45 The following table illustrates the data drawn from the Cost Causation Study.

Table 1

Project Reference	In-Service Date	DTS Capacity MW	Cost Estimate 2007 \$000,000
TFO Project #1	1990	0.1	1.71
TFO Project #2	1987	1.5	0.93
TFO Project #3	1990	4.1	1.33
TFO Project #4	1991	4.2	6.15
TFO Project #5	1988	4.8	2.56
TFO Project #6	1989	5.1	6.32
TFO Project #7	1997	5.6	4.24
TFO Project #8	1987	5.8	3.96
TFO Project #9	1997	6.0	2.48
TFO Project #10	1990	6.1	9.24
TFO Project #11	1987	6.3	1.81
TFO Project #12	1993	6.4	7.72
TFO Project #13	1990	6.6	4.08

To derive a function that connects the minimum cost with the average cost function, a linear interpolation establishes the cost function up to 7.5 MW to be:

$$\text{Interpolated Function} = \$0.947 \text{ million} + (\$0.621 \text{ million/MW} \times \text{first 7.5 MW of DTS Capacity})$$

Based on the discussion above, the AESO recommends the complete proposed raw cost function arrived at by combining the average cost function for the greenfield data, with the interpolated function developed from small projects as identified above. More specifically, the AESO recommends that the **interpolated** function be used to represent the costs of projects **up to 7.5 MW** of capacity, and the **average cost** function be used to represent the costs of projects **above 7.5 MW** of capacity.

The AESO recognizes that such a two-part function, if applied mechanically to all project capacities, would not total the sum of all project costs since the interpolated function would under-represent the costs of smaller projects. However, the cost function will be scaled to represent total costs whether used to set an investment level or in rate design, and total costs will therefore ultimately be fully represented.

The complete derivation of the proposed POD cost function is summarized as follows:

(a) As discussed above, the average cost function for the 30 “Greenfield” project data is:

Equation 1
Average Cost = \$4.451 million + (\$0.154 million/MW × DTS Capacity)

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- (b) The minimum cost function is calculated using the data collected on small projects from the Cost Causation Study (referred to as “Small TFO Projects”). The average cost function is reduced to a level that represents the lowest threshold below which no project costs are recorded. This was accomplished by multiplying the average cost function by a single factor of 0.21275. The y-intercept of this minimum cost function is considered to represent the minimum fixed cost for any projects. The resulting equation is:

Equation 2

$$\text{Minimum Cost} = \$0.947 \text{ million} + (\$0.033 \text{ million/MW} \times \text{DTS Capacity})$$

- (c) Interpolating between the 7.5 MW point on the average cost function (Equation 1), and the y-intercept of \$0.947 million (from Equation 2), generates a linear function (\$/MW) as provided in Equation 4 below. This function represents the interpolated costs for projects ranging from 0-7.5 MW.

Equation 3

$$\begin{aligned} \text{Cost at 7.5 MW} &= \$4.451 \text{ million} + (\$0.154 \text{ million} \times 7.5 \text{ MW}) \\ &= \$5.607 \text{ million} \end{aligned}$$

The slope of this line is then calculated:

Equation 4

$$\begin{aligned} \text{Slope of line 0 MW to 7.5 MW} &= (\$5.607 \text{ million} - \$0.947 \text{ million}) / 7.5 \text{ MW} \\ &= \$0.621 \text{ million/MW} \end{aligned}$$

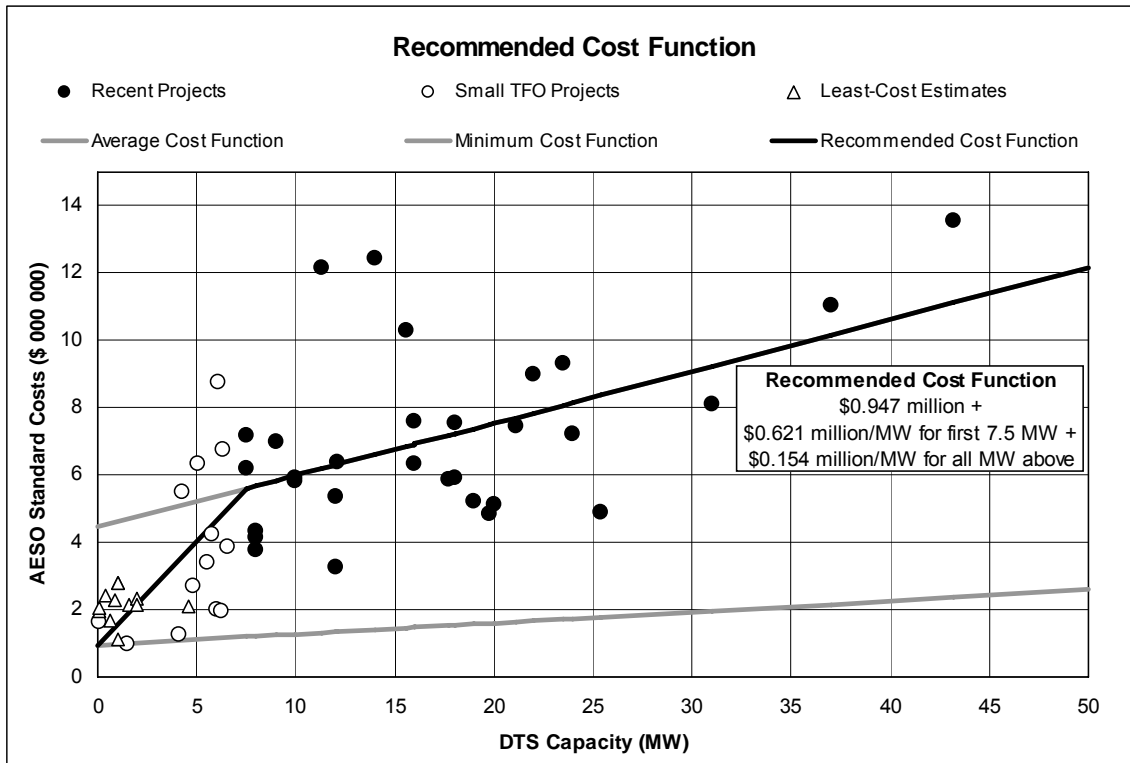
- (d) The AESO therefore recommends the following cost function:

Equation 5

$$\begin{aligned} \text{Recommended Cost} &= \$0.947 \text{ million} \\ &+ (\$0.621 \text{ million/MW} \times \text{first 7.5 MW of DTS Capacity}) \\ &+ (\$0.154 \text{ million/MW} \times \text{DTS Capacity above 7.5 MW}) \end{aligned}$$

The AESO considers the recommended cost function (Equation 5) to appropriately reflect project costs for the purposes of establishing investment levels and for rate design in the AESO’s Tariff.

Figure 2



5 The final effect of the recommended cost function is a smaller fixed component and a larger demand component in the cost function relative to the current tariff structure, which aligns better with cost functions inherent in the design of investment levels and rates of the AESO prior to 2006, of other utilities in Alberta, and of transmission system operators in other jurisdictions.

10 The recommended cost function was developed using data for load-only projects. Where a project provided interconnection of both load and generation or of multiple loads, the cost function must be adjusted to reflect the “substation fraction” approach established by the EUB during the course of the AESO’s 2005-2006 GTA. The AESO notes that all but two transmission substations serving multiple services (either load and generation or multiple loads) have more than 7.5 MW of total contract capacity. Such substations are therefore best represented by Equation 1, which indicates that such substations have a minimum average cost of \$4.451 million to be shared between the interconnected services using the substation fraction. In the recommended cost function, this minimum average cost is replaced by the interpolated function provided in Equation 3, and the interpolated function should likewise be shared between services using the substation fraction. The AESO therefore proposes that the recommended cost function incorporate the substation fraction (“SF”) into its first two components as follows:

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20

Equation 6

$$\begin{aligned} \text{DTS POD Costs} &= \$0.947 \text{ million} \times \text{SF} \\ &+ (\$0.621 \text{ million/MW} \times \text{SF} \times \text{first 7.5 MW of DTS Capacity}) \\ &+ (\$0.154 \text{ million/MW} \times \text{DTS Capacity above 7.5 MW}) \end{aligned}$$

5

The third component represents the average POD cost increase per MW of DTS capacity, and should not include the substation fraction.

Data Reasonableness Assessment

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In addition to utilizing the Transmission Cost Causation Study data, the AESO tested the reasonableness of these results as outlined below.

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The first test involved a review of the average cost function of the Transmission Cost Causation Study. The AESO first reduced the TFO POD data collected for the *Transmission Cost Causation Study* to only those PODs where the vintage was known (approximately 109 PODs). The project costs were then escalated to current day dollars. Although the data did not include enough detail to validate that only standard facilities were included or that interconnections were reasonably representative of current standards, the AESO performed a simple linear regression analysis of the interconnection projects included. The resulting average costs equation was:

20

$$\text{Average TFO Data Costs} = \$5.074 \text{ million} + (\$0.115 \text{ million/MW} \times \text{DTS Capacity})$$

25

The TFO data set represented by the equation above has a regression coefficient of 0.18, less than that of the 30-greenfield project data set. However, this equation is reasonably close to the greenfield project equation (Equation 1), which the AESO submits provides support for the cost function derived above.

30

The second test involved the review of some material presented in the AESO's 2005-2006 General Tariff Application. The AESO prepared least cost estimates for several stand-alone DTS services as part of its analysis of Customer-Owned Substation Credits. The AESO compared the least cost estimates (escalated to 2007 dollars) for the 12 stand-alone DTS services of 5 MW or less from that analysis to the minimum cost function developed through the Transmission Cost Study as discussed above, and found that the minimum cost function was equal to or less than each of the least-cost estimates. This suggests the minimum cost function is a reasonable representation of minimum costs for small DTS interconnections.

35

The following table presents data for the estimated projects with DTS capacity of 5 MW or less, as provided in the AESO 2005-2006 GTA IR response for FIRM.AESO-234(b).

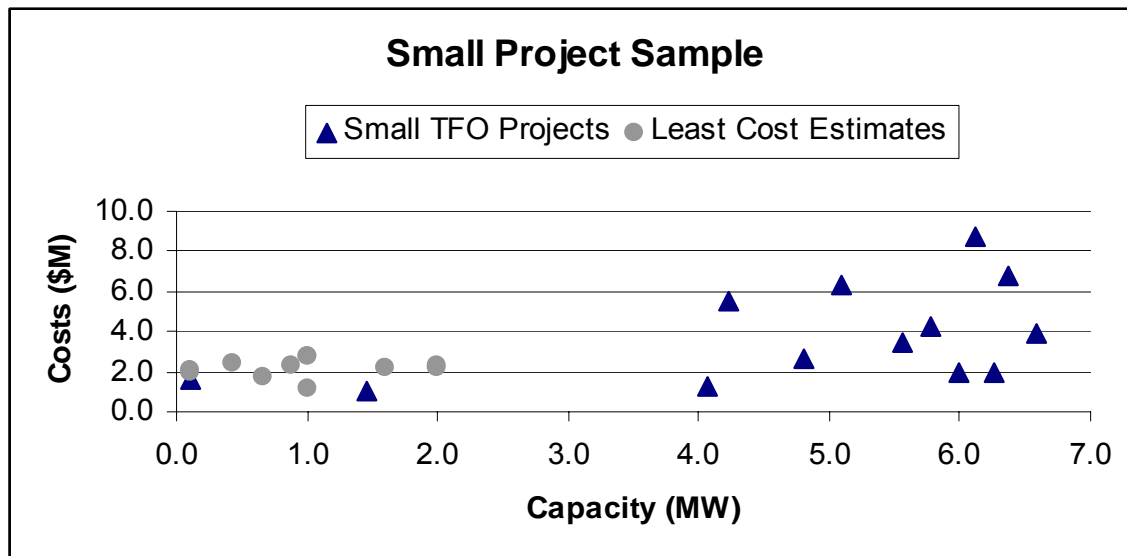
Table 2

Substation Name	In-Service Date	DTS Capacity MW	Least Cost Estimate \$000,000	Least Cost Estimate 2007 \$000,000
Bear Creek	Nov 2002	0.1	1.75	1.98
Carseland Cogen	Jul 2001	0.1	1.75	2.04
Namaka	Jul 2001	2.0	1.98	2.31
Nexen #1	Sep 2001	2.0	1.83	2.14
Foster Creek	Jan 2003	1.6	1.98	2.14
Cowley Ridge	Jul 2003	0.66	1.55	1.68
Oldman River	Jul 2003	1.0	2.58	2.79
Magrath 226S	Jul 2004	0.43	2.29	2.44
McBride Lake	Feb 2003	0.88	2.13	2.30
Eyehill 514S BP Hayter	Aug 2000	1.0	2.32	2.77
Express Hardisty	Aug 2000	4.6	1.74	2.08
Wabamun Standby	Oct 2004	1.0	1.05	1.12
Average		1.28	1.91	2.15

The “Small TFO Projects” and “Least Cost Estimate Projects” are displayed graphically below.

5

Figure 3



10

Satisfied that the data passed the reasonableness tests outlined above, the AESO performed a simple linear regression analysis of the 13 TFO data projects of less than 7.5 MW capacity, that were used in the minimum-intercept analysis. The resulting average cost equation for these small projects was:

Average Small Project Costs = \$0.940 million + (\$0.595 million/MW × DTS Capacity)

5 The 13-project data set represented by this equation has a regression coefficient of 0.24, which indicates moderate positive correlation between project costs and DTS capacity. This equation is also quite close to the interpolated Small TFO Project cost function provided earlier (Equation 2), and suggests this equation is both a transition from minimum to average costs and a reasonable representation of average Point of Delivery costs for small interconnections up to 7.5 MW capacity.

10 Although the AESO analyzed the TFO data used in the *Transmission Cost Causation Study* and least-cost estimates provided in the AESO's 2005-2006 GTA to assess the reasonableness of the recommended cost function, these additional sources were not subject to the same detailed investigation and rigorous analysis as the 30 recent projects on which the recommended cost function was primarily based. The use of recent projects
15 allows data to be examined and validated, whereas data from the additional sources does not provide the detail needed for full validation. The AESO therefore considers the 30-project data set to represent the best data available upon which to base the cost function.

Applying the 80/20 Multiplier to derive the Maximum Investment Function

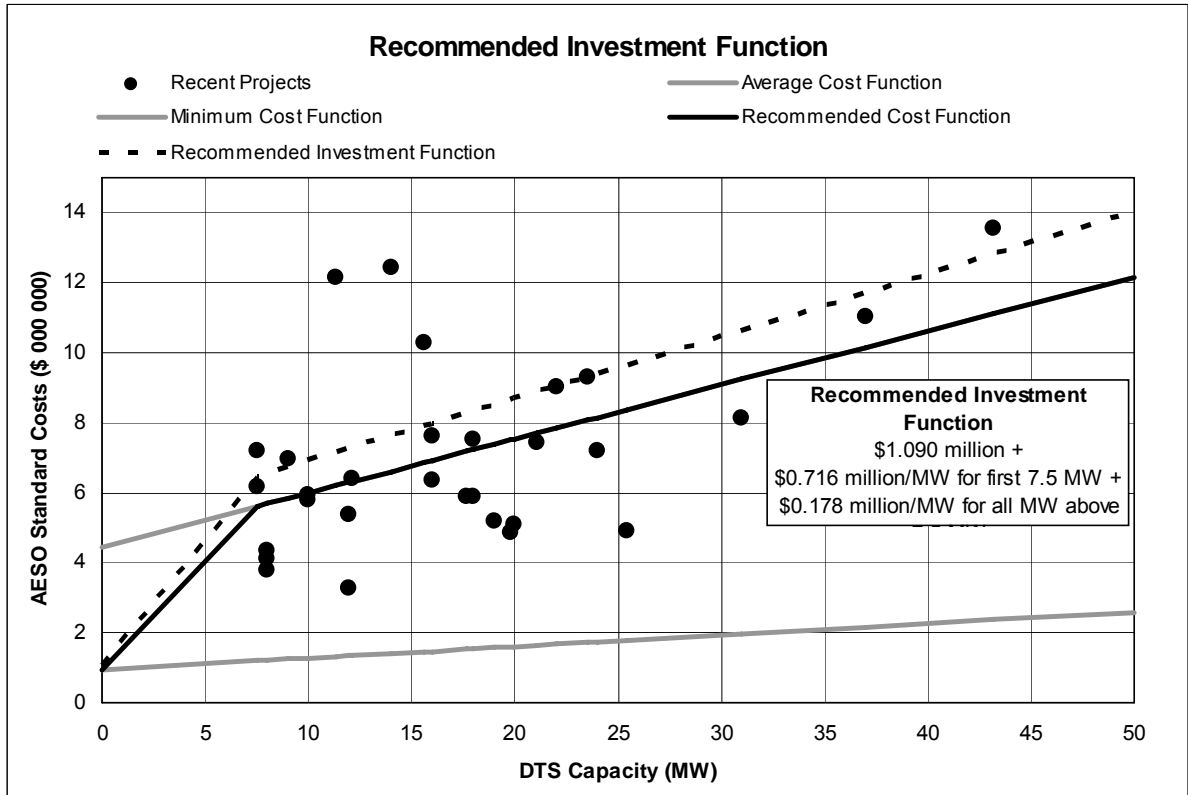
20 The final analysis of the study, as identified in Direction 13A, is meant to address the third component of the Direction:

Determine an appropriate multiplier such that 80% of projects do not pay a contribution.

25 The AESO notes that the EUB agrees that the 80/20 criterion is appropriate for the design of the maximum investment formula. In EUB Decision 2001-6, the AESO's predecessor (EAL) introduced this criterion, noting that setting an investment level in this manner would have the effect of minimizing intergenerational inequities. The AESO continues to agree that the 80/20 rule is adopted in order to best harmonize with DISCO contribution policies, and to
30 preserve the balance between the need of new customers for service and for service without a need for subsidy from existing customers. The criterion supports the principle that most new customers will not see a different cost of system connection than existing customers, and existing customers should not bear any extraordinary costs of system expansion.

35 Using the current sample data from the original study and the data on smaller projects, a proposed investment function is depicted below.

Figure 4



This illustrates the effect of applying a multiplier of 1.15149 to the cost function of:

5

Equation 6

$$y = \$0.947 \text{ million} \times SF + (\$0.621 \text{ million/MW} \times SF \times \text{first 7.5 MW of DTS Capacity}) + (\$0.154 \text{ million/MW} \times \text{DTS Capacity above 7.5 MW})$$

10

which generates a maximum investment function of:

Equation 7

$$y = \$1.090 \text{ million} \times SF + (\$0.716 \text{ million/MW} \times SF \times \text{first 7.5 MW of DTS Capacity}) + (\$0.178 \text{ million/MW} \times \text{DTS Capacity above 7.5 MW})$$

15

With this function, 24 of the 30 (or 80%) of projects from the Customer Contribution Study, are fully covered by investment as demonstrated in the figure above.

20

The resulting equation assumes contract terms of 20 years. Therefore, the complete proposed maximum investment function per year is:

Equation 8

$$y = \$54,500/\text{year of contract term} \times \text{SF} + (\$35,800/\text{MW}/\text{year of contract term up to } 7.5\text{MW} \times \text{SF}) + (\$8,900/\text{MW}/\text{year of contract term greater than } 7.5\text{MW})$$

5 The AESO submits the proposed maximum investment function effectively manages the inter-generational equity concerns by returning customer contribution results on par with predecessor policies. The proposed policy also re-establishes rate stability all the while adhering to principles such as the 80/20 rule of thumb and customer fairness that were considered appropriate by the Board in previous decisions.

10 The following review of the investment policies employed by Gridco, ESBI / the Transmission Administrator of Alberta and the AESO over the period of 1999 to present day supports these conclusions.

15 The following table provides the 1999 to 2000 approved customer contribution policy where investment was based upon \$/KW of Contract Capacity/year formula.

Table 3

Capital Credit per KW of Minimum Capacity	Minimum Term
\$115	5 years
\$200	10 years
\$265	15 years
\$310	20 years

20 From 2001 to 2005 AESO's investment or "roll-in" policy comprised two components: a commitment term amount and a revenue-related amount. The commitment term amount was \$400,000 for every one-year commitment term past the first five-year period, up to a maximum of \$6 million. The revenue-related amount was equal to three times the levelized annual revenue (based on contract capacity at the time of the calculation).

25 On January 1, 2006, the AESO's approved investment policy changed to \$125,000 per year for new PODs, and \$5,000/MW/year for incremental capacity.

30 To demonstrate the effect of the different investment policies, the AESO considered a new project and applied each of the policies to determine the effect on the customer contribution required.

35 The table illustrates the effect on a new project incurring \$7.5 million dollars in construction costs, with a DTS contract of 15 MW for 20 year contract terms. This example considers a new Point of Delivery substation for a single customer, indicating a Substation Fraction of 1.0:

Table 4

	Policy A (1999)	Policy B (2001-2005)	Current Policy (2006)	Proposed Policy (2007)
Project Costs	\$7.5M	\$7.5M	\$7.5M	\$7.5M
AESO Investment	(\$310,000/MW x 15 MW) =\$4.65M	(\$6.00M + \$1.83M revenue- related amount) =\$7.83M	(\$2.50M + \$1.50M) =\$4.00M	(\$1.090M x SF + \$0.716M/MW x SF +\$0.178/MW) =\$7.80m
Customer Contribution	\$2.85M	\$0.0M	\$3.50M	\$0.0

The above table appears to support customer concerns over the substantial instability in the Tariff, since in some years, a contribution of \$2.8M or more would be required, while in other years no customer contribution would be required. However, if the same analysis was done taking into account inflation – i.e. the cost of the same project would increase and not remain constant over time – the outcome changes with only the current 2006 investment function showing a significant departure from all the other investment functions. The original \$7.5M project costs were inflated using the Alberta CPI as provided by Stats Can. For the years 2006 and 2007, the AESO utilized inflation as accepted by the Board in EUB Decision 2006-004 (ATCO Gas). The index values are shown below:

Present Value Index		
Year	Index	% Change
1999	113.40	0.04
2000	117.40	0.02
2001	120.10	0.03
2002	124.20	0.04
2003	129.70	0.01
2004	131.50	0.02
2005	134.30	0.02
2006	137.25	0.02
2007	140.30	0.02
source: CPI by Province www.statcan.ca		

Using these inflation rates, the AESO determined projects costs to be inflated as identified in the following table:

Table 5

	Policy A (1999)	Policy B (2001-2005)	Current Policy (2006)	Proposed Policy (2007)
Project Costs	\$7.5M	\$8.6M	\$9.1M	\$9.3M
AESO Investment	\$4.6M	\$7.8M	\$4.0M	\$7.8M
Customer Contribution	\$2.8M	\$0.8M	\$5.1M	\$1.5M

Along with the proposed maximum investment function, Article 9.6 has been revised to include a provision to allocate appropriate components of the Local Investment function between multiple services at one substation. Inclusion of the “Substation Fraction” in the investment function was necessary to reflect the alignment between the investment available at the multiple-service substation and the Point of Delivery portion of the rate paid by the customer in rate schedule DTS.

Article 9.6 has been modified with the proposed investment levels discussed above along with the proposed investment level where the TFO does not provide or own conventional transformation facilities as discussed in Section 4.10 - Primary Service Credit.

Existing Article 9.6:

9.6 Determination of Customer Contribution

Customers may be required to contribute toward demand-related costs. The Customer’s contribution to demand-related costs will be determined in accordance with this Article 9.6. Otherwise, the Customer must pay all demand-related costs.

The Customer’s contribution to the demand-related costs will be calculated as follows:

Customer Contribution = Demand-related costs less the Local Investment

Where:

- (a) for a Customer taking service under Rate DTS:
 - (i) the maximum Local Investment =
 - \$125,000/year of DTS contract term for new PODs; plus
 - \$5,000/MW of DTS Contract Capacity/year of DTS contract term for both new PODs and increases in capacity of or improvements to the service to an existing POD;
 - (ii) the Local Investment will not exceed the demand-related costs determined in Article 9.5(b) or, if applicable, the cost of the most economic option determined in Article 9.1(b); and
 - (iii) the DTS contract term = 5 to 20 years, as determined by the Customer;

and

- (b) for a Customer taking service under any other rate, the maximum Local Investment = \$0.

Proposed Article 9.6:

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9.6 Determination of Customer Contribution

Customers may be required to contribute toward demand-related costs. The Customer's contribution to demand-related costs will be determined in accordance with this Article 9.6. Otherwise, the Customer must pay all demand-related costs.

10

The Customer's contribution to the demand-related costs will be calculated as follows:

Customer Contribution = Demand-related costs less the Local Investment

15

Where:

- (a) for a Customer taking service under Rate DTS:

20

- (i) the maximum Local Investment where the TFO provides and owns conventional transformation facilities =
- \$54,500.00/year of DTS contract term for new PODs, multiplied by the Substation Fraction; plus
 - \$35,800.00/MW of DTS Contract Capacity/year of DTS contract term for the first 7.5 MW of Contract Capacity for both new PODs and increases in capacity of or improvements to the service at an existing POD, multiplied by the Substation Fraction; plus
 - \$8,900.00/MW of DTS Contract Capacity/year of DTS contract term for all Contract Capacity over 7.5 MW for both new PODs and increases in capacity of or improvements to the service at an existing POD.

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- (ii) the maximum Local Investment where the TFO does not provide or own conventional transformation facilities =
- \$32,700.00/year of DTS contract term for new PODs, multiplied by the Substation Fraction; plus
 - \$21,480.00/MW of DTS Contract Capacity/year of DTS contract term for the first 7.5 MW of Contract Capacity for both new PODs and increases in capacity of or improvements to the service at an existing POD, multiplied by the Substation Fraction; plus
 - \$5,340.00/MW of DTS Contract Capacity/year of DTS contract term for all Contract Capacity over 7.5 MW for both new PODs and increases in capacity of or improvements to the service at an existing POD.

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- (iii) the Local Investment will not exceed the demand-related costs determined in Article 9.5(b) or, if applicable, the cost of the most economic option determined in Article 9.1(b); and
- (iv) the DTS contract term = 5 to 20 years, as determined by the Customer;

and

- (b) for a Customer taking service under any other rate, the maximum Local Investment = \$0.

6.5.4 Discount Rate

The AESO proposes to modify the discount rate formula set out in Article 9.14(a) to accommodate the Board’s annual generic return on equity orders that may vary from time to time.

Proposed Article 9.14(a):

9.14 Discount Rate

The discount rate applicable to payments due under this Article 9 will be determined as follows:

- (a) For unassigned transmission facilities, for transmission facilities supplied to the AESO by an investor owned Transmission Facility Owner or for facilities supplied to the AESO by an income tax paying municipally owned Transmission Facility Owner:

$$[0.67 \times (\text{GCB} + 1\%)] + [(0.33 \times \mathbf{R}) \div (1-T)]$$

where GCB is equal to the yield on 30-year Government of Canada bonds; R is equal to the EUB approved generic rate of return on common equity, as amended from time to time; and T is equal to the combined federal and provincial income tax rate for investor owned TFOs.

- (b) For transmission facilities supplied to the AESO by a non income tax paying municipally owned Transmission Facility Owner:

the yield on 30-year Government of Canada bonds plus 1.9 percent.

6.5.5 Dual-Use Ratio

The AESO complied with Board Direction 14 (in Decision 2005-096) by implementing the dual-use ratio in Article 9.5. While the dual-use ratio was originally designed to apportion Point of Connection (POC) installation costs between supply and demand customers at one

site, the AESO is proposing that it also apply to other multiple use substation (i.e. POD and / or POS) situations, for example, where two demand customers or one dual-use customer and one demand customer share a substation.

Proposed Article 9.5

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9.5 Determination of Supply-Related and Demand-Related Costs

For each Customer at a substation, Customer-related costs will be classified as either supply-related or demand-related as follows:

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(a) supply-related costs shall be calculated as $STS_{customer} / (STS_{total} + DTS_{total})$,
and

(b) demand-related costs shall be calculated as $DTS_{customer} / (STS_{total} + DTS_{total})$

15

where STS and DTS are the STS and DTS Contract Capacities, respectively, at the substation. All supply related costs shall be paid by the Customer. The Customer's contribution to demand related costs shall be in accordance with Article 9.6.

6.6 Article 13 – Contract Capacity Increases & Allocation

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During the AESO's stakeholder consultation process for the 2007 GTA, the AESO had initially proposed to make a number of revisions to Article 13 to align AESO business practices with the Tariff. Since that initial consultation the AESO has undertaken an additional stakeholder consultation process relating to business practices in respect of interconnection queue management and compliance milestones which may have an impact on Article 13. As such the AESO does not propose any major changes to this Article at this time. The AESO proposes only two minor revisions to Article 13, and upon completion of the business practice consultation process, the AESO will propose any further changes to Article 13 in a future update of its Terms and Conditions.

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30

Article 13 has been renamed to **Contract Capacity Increases & Allocation** which more closely represents the contents of the Article.

35

The provisions associated with contract capacity increases outlined in Article 13.4 have also been amended, requesting written notice for contract capacity increases and notes that contract capacity increases will be granted as long there is sufficient transmission capacity and no operational concerns accompany the request.

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The AESO's ability to meet the customer's requested contract capacity is dependent upon the capacity of the existing transmission system. Although the AESO does not require five year notice for contract capacity increases in practical terms, the greater the notice provided by a customer, the greater the chance the request can be accommodated. This allows the AESO to effectively plan for contracted load additions, and ensure long lead time transmission facilities are constructed to meet customers' In Service Date (ISD) requests.

Existing Article 13.4

13.4 Increase of Contract Capacity

In the event that a Customer desires to increase the Contract Capacity at an existing POD or POS, the Customer must execute an amended System Access Service Agreement. If new facilities or upgrades are required to provide the new service or to provide the amended service level, the requirements for a Customer Contribution and Security will apply.

Proposed Article 13.4

13.4 Notice of Contract Capacity Increases

- a) In the event that a Customer desires to increase the Contract Capacity at an existing POD or POS, the Customer must provide written notice to the AESO and execute an amended System Access Service Agreement.
- b) If new facilities or upgrades are required to provide the requested new service or to provide the incremental service level, the requirements for a Customer Contribution and project security as outlined in Articles 9 & 6 respectively will apply.
- c) Increases will be effective upon execution of the System Access Service agreement assuming sufficient transmission capacity can accommodate the requested Contract Capacity increase.

6.7 Article 14 - Reductions or Termination of Contract Capacity

The AESO submits further clarity for situations where customers reduce their contract capacity or terminate their System Access Service is required. The proposed changes to this Article include:

- a) details on how a lump sum payment for a reduction or termination of service are to be calculated;
- b) the lump sum payment charge will include the system charge but exclude the Point of Delivery (POD) related portion of the DTS rate schedule;
- c) the discount rate used in the calculation will be the same as outlined in Article 9.14;
- d) the opportunity for the AESO to revisit the calculation if there are material differences between the requested contract capacity and actual contract capacity

During the stakeholder consultation process for the 2007 GTA, the AESO proposed to include extension provisions in cases where customers have requested an extension to their 5 year notice period. Due to limited stakeholder support the proposed provisions have been withdrawn. The AESO will continue its current practice of reviewing such requests on a case by case basis and, acting reasonably, will exercise discretion in the application of the Tariff where considered appropriate.

Prior to finalizing the revisions to Article 14 the AESO reviewed Article 14 in conjunction with the five year notice period. The AESO submits the principles, rationale and importance of the five notice period as discussed and supported by the EUB in Decision 2005-096 respecting the 2005/2006 GTA continue to be reasonable and therefore proposes the notice provisions for any reductions or terminations in contract capacity be maintained.

The AESO proposes to provide additional clarity regarding the components that should be included in the lump sum payment. As noted in point b) above the AESO proposes the lump sum payment calculation include only the System Charge contained in the proposed DTS rate schedule and exclude the Point of Delivery (POD) related charge. Since the POD related portion of the charge is effectively captured by the provisions in Article 9.9 Changes to Customer Contribution the POD portion of the DTS rate is not necessary to include in the lump sum payment in lieu of providing notice. As provided for in Article 9.9, if there is a material reduction in the customer's contract capacity, the AESO will revisit the customer's contribution calculation and may charge an additional contribution to reflect the reduced investment available for the reduced contract capacity.

The AESO proposes to rewrite Article 14 as follows:

Proposed Articles 14.1 through 14.4

14.1 Eligibility

In order to reduce the Contract Capacity at an existing POD or POS, a Customer must execute an amended System Access Service Agreement and pay any associated Customer Contribution, as determined by the AESO.

14.2 Notice of Reduction or Termination

In order to terminate or reduce the Contract Capacity, a Customer must provide written notice to the AESO. Terminations or reductions in Contract Capacity will be effective 5 years from the notification date.

14.3 Excursions During the Notice Period

The Contract Capacity immediately following the five year notice period will be the maximum of:

- (a) the pre-notice Contract Capacity less the reduction of Contract Capacity requested by the Customer; or
- (b) the highest Metered Demand during the five year notice period less the reduction of Contract Capacity requested by the Customer.

Customers may provide an additional notice of reduction after an excursion so Contract Capacity will be reduced to previous notice levels.

Separate written notice must be provided reductions or terminations of Contract Capacity at each respective POD and POS at a single transmission station; no net reductions will be accepted or effected.

14.4 Payments in Lieu of Notice

Customers reducing or terminating their System Access Service Agreements may choose to pay out the Contract Capacity as a lump sum payment:

- a) Contract Capacity reduction or termination lump sum payment charges will be based upon the present value of the System Charge as provided in the rate schedule DTS;
- b) The discount rate is as outlined in Article 9.14;
- c) The AESO may re-assess the payment if there are material differences between the requested Contract Capacity and actual capacity.

The following is a sample calculation used to determine the lump sum payment required as a result of a reduction in a customer's Contract Capacity.

A customer notifies the AESO of a 4.0 MW contract capacity reduction (i.e. from 8.0 MW to 4.0 MW) at a specified Metering point. The notice date of the reduction was January 1, 2006 and the effective date of the reduction is January 1, 2011. To determine the lump-sum payment, the AESO calculates the present value of the Billing Capacity charges using the following information:

Notice Provided: 1-January-2006
Reduction Effective: 1-January-2011
Buy-down Effective: 1-July -2007

Tariff Applied: Proposed 2007 GTA

Pre-Notice Capacity: 8.00 MW
Post-Notice Capacity: 4.00 MW
Reduction: 4.00 MW
Metered Demand July 1, 2007: 4.00 MW
Discount Rate: 7.92%
No ratchet incurred prior to notification of termination

Assumed Billing Capacity Charge: \$1,395/MW/month

The lump-sum payment is the present value of Billing Capacity charges for the 42 month period beginning 1-July-2007, the last month in the period being December 2011. The difference between the notice period Billing Capacity versus the early buy-down Billing Capacity multiplied by the billing demand component of the DTS system charge will determine the lump sum payment. In this case the Billing Capacity used in the calculation is:

notice period Billing Capacity (90% of 8.0 MW = 7.2 MW)

less early buy down period Billing Capacity
(highest 15 minute Metered Demand = 4MW)

= 3.2 MW

5 In this case, the customer would be required to pay a lump-sum payment of approximately \$141,000 (excluding GST). As noted above there are no ratchets incurred during the notice period. If there was a ratchet incurred during the notice period, the ratchet would also be accounted for in the lump sum payment.

10 As noted in the proposed Article 14.4 the AESO reserves the right to recalculate the lump-sum payment and collect any difference from the customer if actual demand differs materially from the demands used in the buy down calculation.

15 There are no proposed changes for the current Article 14.4 Review of STS Contract Capacity, however it will now be renumbered to Article 14.5.

20 The AESO also proposes additional clarification to the existing Article 14.5 (to be renumbered as Article 14.6) regarding the applicability of the Regulated Generating Unit Connection Cost (RGUCC) in the STS rate for situations where a Regulated Generating Unit terminates service prior to the date defined as the Base Life in the Appendix to the AESO's rates.

25 The genesis of the RGUCC is primarily contained in two EUB Decisions (2000-1 and 2002-048), which established the RGUCC to recognize that new generators were subject to full interconnection costs, while incumbent, previously regulated generators' interconnection costs were embedded in transmission costs. The RGUCC was therefore introduced as a proxy interconnection cost for previously regulated units, to "level the playing field" for the competitive energy market, which all generators are required to operate in. The AESO suggests that the RGUCC therefore serves no economic purpose after a previously regulated generator is no longer producing energy and selling to the energy market, or pool.

30 Based on the AESO's understanding of the original intent of the RGUCC, the AESO believes the RGUCC should not continue to apply after a unit has been decommissioned and is no longer providing energy to the market, and thus proposes to clarify this in the Tariff.

35 The AESO proposes a new Article 14.6 which provides for the following:

- The RGUCC will no longer have to be paid if a unit stops generating energy;
- In order for the charge not to apply the facility has to be physically dismantled, not simply shut down; and
- In case the regulated unit is powered up again, or a new unit on the same site using the same interconnection facilities powers up, the RGUCC will be applied up to the Base Year as in the Rate Schedule Appendix

45 Currently approved Article 14.5

14.5 Regulated Generating Units

- 5 (a) System Access Service Agreements between the AESO and Customers who operate Regulated Generating Units will terminate on the PPA Effective Date, with the exception of Regulated Generating Units that are not sold at the PPA auction and the Regulated Hydro Generating Units outlined in Appendix B.
- 10 (b) System Access Service Agreements with an effective date after the PPA Effective Date between the AESO and Customers who operate Regulated Generating Units or who have entered into a Power Purchase Arrangement with the owner of a Regulated Generating Unit will terminate at the end of the base life year of the Regulated Generating Unit as outlined in Appendix B with the exception of the following Regulated Generating Units listed below:
- 15 (i) Rossdale Units 8, 9 and 10's deemed base life year shall be 2003; and
- (ii) Rainbow Units 1, 2 and 3's deemed base life year shall be 2005.

Proposed Article 14.6 (previously Article 14.5) – emphasis added

20 14.6 Regulated Generating Units

- 25 (a) System Access Service Agreements between the AESO and Customers who operate Regulated Generating Units will terminate on the PPA Effective Date, with the exception of Regulated Generating Units that are not sold at the PPA auction and the Regulated Hydro Generating Units outlined in the Appendix to the Rate Schedules.
- 30 (b) System Access Service Agreements with an effective date after the PPA Effective Date between the AESO and Customers who operate Regulated Generating Units or who have entered into a Power Purchase Arrangement with the owner of a Regulated Generating Unit will terminate at the end of the base life year of the Regulated Generating Unit as outlined in Appendix B.
- 35 (c) **Subject to 14.6 (c) i) & ii) the RGUCC as outlined in rate schedule STS will not apply to Customers after their Regulated Generating Units are decommissioned, even if this occurs prior to end of the base life year as outlined in Rate Schedule Appendix**
- 40 i) **The Customer sufficiently demonstrates to the AESO the Regulated Generating Unit has been decommissioned and no longer makes use of the existing interconnection facilities and no longer requires system access service.**
- 45 ii) **If the Regulated Generating Unit is re-energized prior to the base year, the RGUCC in rate schedule STS will be charged to the Customer requesting System Access Service.**
- iii) **If a customer with a non-regulated Generating Unit makes use of the existing interconnection facilities previously used to provide system access service to a Regulated Generating Unit, the RGUCC on rate schedule STS will be charged to the Customer**

requesting System Access Service to the end of the base year of the Regulated Generating Unit previously using those interconnection facilities.

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6.8 Article 15 – Financial Security, Billing and Payment Terms

10 The AESO proposes changes to Article 15.2 in order to provide additional clarity around credit requirements for customers. In accordance with the Tariff, Article 15.1 (b), the AESO may obtain financial security from a customer for up to three months in advance for System Access Service. The AESO is concerned that in situations where additional financial security is required as per Article 15.1 (c) and the customer does not comply, the only remedy is to withhold or suspend service. The AESO feels that the current treatment for non-compliance (Article 15.2) in such cases may be unnecessarily punitive to the customer. 15 As such the AESO proposes a financial penalty as a reasonable intermediary step prior to withholding service. The proposed financial penalty is intended to resemble the financial penalties assessed a customer when a customer fails make payment to the AESO on the due date of such payment.

Existing Article 15.2

15.2 Effect of Non-Compliance

25 If the Customer fails to provide adequate security as required by Article 15.1, the AESO may immediately withhold or suspend the Customer's System Access Service. Any such withholding or suspension will not relieve the Customer from its obligation to pay any rate, charge or other amount that has accrued, or is accruing, to the AESO.

Proposed Article 15.2

15.2 Effect of Non-Compliance

30 If the Customer fails to provide adequate security outlined in Article 15.1 then 15.2 (a), 15.2 (b) or both may apply.

- 35 (a) The AESO, at its sole discretion, may invoke a financial penalty, which will be calculated at the Toronto Dominion Canadian prime rate plus 6%; until such time as the security has been provided to the AESO
- (b) The AESO may immediately withhold or suspend the Customer's System Access Service.

40 Any such withholding or suspension will not relieve the Customer from its obligation to pay any rate, charge or other amount that has accrued, or is accruing, to the AESO.

45 The AESO is also proposing to amend Article 15.8 to provide clarity on the application of late payment charges. The existing wording below (emphasis added) can incorrectly be

5 interpreted to mean that the full 1.5% late payment charge would apply even in circumstances where payment is late for less than one month. The proposed wording is intended to outline the calculation method and amount of the late payment charge, where the customer would not be charged the full weight of the charge but rather a charge commensurate with number of days the payment is not received.

Existing Article 15.8

10 **15.8 Late Payment Charge**

Late payments by the Customer are subject to a late payment charge of 1.5% per month for each month or part thereof for which such payment is late. The AESO will also assess the defaulting Customer for all administrative and collection costs relating to the recovery by the AESO of amounts owed. The AESO, at its sole discretion, may suspend System Access Service and realize upon any security provided by the defaulting Customer if the Customer is not in compliance with Article 15.7 in full or partial satisfaction (as the case may be) of all amounts owing to the AESO. System Access Service to the Customer will not be re-instated until the Customer has paid all amounts owing to the AESO in full and has restored or secured its credit facility in a manner satisfactory to the AESO, at the AESO's sole discretion. (Emphasis added.)

Proposed Article 15.8

25 **15.8 Interest and Other Charges**

In the event of non-payment under the terms of Article 15.7, interest and late payment penalties will be charged to defaulting customers.

- 30 (i) Where non-payment exists, interest charges will be calculated on the day following the applicable Transmission settlement date. The interest will be calculated at the Toronto Dominion Canadian prime rate plus 6%. Interest will be calculated from the due date to the date on which bank value is received.
- 35 (ii) In addition to the interest charge, a penalty charge will be assessed based on 2 days interest on the outstanding amount owing and calculated at the Toronto Dominion Canadian prime rate plus 6%.

40 The AESO will also assess the defaulting Customer for all administrative and collection costs relating to the recovery by the AESO of amounts owed. The AESO, at its sole discretion, may suspend System Access Service and realize upon any security provided by the defaulting Customer if the Customer is not in compliance with Article 15.7 in full or partial satisfaction (as the case may be) of all amounts owing to the AESO. System Access Service to the Customer will not be re-instated until the Customer has paid all

amounts owing to the AESO in full and has restored or secured its credit facility in a manner satisfactory to the AESO, at the AESO's sole discretion.

6.9 Other Changes to the Terms and Conditions of Service

Definitions and Interpretation (Article 1) — Revisions are discussed in Section 6.1. Other revisions can be reviewed via the blackline copy of the current 2006 Terms and Conditions as provided in Appendix H.

Application of Tariff (Article 2) — The content of this Article remains unchanged.

Provision of System Access Service (Article 3) — Material amendments to this Article are discussed in Section 6.2. Article 3 has also been updated to include revisions to defined terms as outlined in Section 6.1.

Customer Interconnection Requirements (Article 4) — Article 4.4 has been updated to include the term "Reliability Standards". The AESO also notes the following, also in relation to reliability standards going forward.

The AESO is responsible for ensuring the reliable operation of the Alberta Interconnected Electric System and currently operates in accordance with NERC and WECC reliability standards, as specified in the Transmission Regulation. Article 4.4 of the Terms and Conditions enables the AESO to pass through to the responsible generator any penalty assessed to it by WECC, that is the result of non-compliance by that generator. Generators are required to have a PSS in service and an AVR operated in voltage control mode for all hours in which the generating unit is operating.

Where a generator is operating under a PPA, the AESO applies the terms of the Tariff to the PPA Buyer, since that is the party taking on the rights and responsibilities relating to System Access Service. This is supported in EUB Decision 2002-048 as follows:

"As the only eligible person in respect of that energy, the PPA Buyer has both the right to reasonable access to the transmission system and the corresponding obligation to pay the rates of the TA for that service" (pp. 12-13)

and,

"Accordingly, it is the PPA Buyer who must contract with the TA for SAS in respect of that energy. If the PPA Buyer must contract for SAS with the TA, the PPA Buyer is bound by the applicable T&C approved by the Board as part of the TA's Tariff." (p. 20).

Notwithstanding, it has been brought to the AESO's attention by some participants that the operation of the generating unit is generally not within the control of the PPA Buyer, but

rather the PPA Owner, and therefore applying the penalty provisions of Article 4.4 to a PPA Buyer is not appropriate.

5 In response to this, the AESO notes that it is embarking on a complete review of roles and responsibilities in relation to meeting reliability standards, as part of its plan to progress towards the implementation of Mandatory Reliability Standards (MRS), as follows.

10 In July 2006, the North American Electric Reliability Council (NERC) was certified as the Electric Reliability Organization (ERO) to develop and enforce Mandatory Reliability Standards (MRS) in the United States. NERC is also seeking international recognition as the ERO in Mexico and all Canadian provinces. Alberta, as a member of the Bilateral Group that consists of representation from the Canadian provinces and territories, the US Department of Energy and the Federal Energy Regulatory Commission (FERC), has participated in the development of principles to be used for establishing an ERO that can operate on an
15 international basis.

20 The AESO supports the implementation of North America-wide reliability standards as the means to maintain and improve reliability of the North American grid. As such, the AESO is leading a project to implement MRS in Alberta and to develop a compliance monitoring and enforcement program for the province. The AESO is working with the Alberta Department of Energy and the EUB to clarify roles and responsibilities as they relate to the reliable operation of the Alberta electric system and to implement the MRS framework. The AESO is also participating in organizations such as the ISO/RTO Council and the Canadian Electricity Association, and is liaising with NERC and the Western Electricity Coordinating Council (WECC). Stakeholder involvement is part of MRS and as such, stakeholders will be invited
25 to participate in MRS consultations.

30 In the meantime, until this work is complete, the AESO suggests the provisions of Article 4.4 and the application thereof to PPA Buyers remains appropriate. The AESO understands that both the Owner and Buyer of a PPA are generally obligated to do all things necessary to assure performance by it of its obligations including entering into and maintaining necessary TA and Pool Participant (now AESO) Agreements, and complying with applicable laws. Moreover, if a buyer feels the owner should be subject to certain incentives / penalties in recognition of the practical role it performs, the AESO is of the opinion that the terms of
35 the PPA do not preclude buyers and owners from establishing Terms and Conditions or entering into agreements of their own, to address those matters as they believe is appropriate.

40 **System Access Application** (Article 5) — Revisions are discussed in Section 6.3.

Security and Customer Agreements (Article 6) — This Article remains unchanged in intent and content.

45 **Metering** (Article 7) — Revisions are discussed in Section 6.4.



Provision of Information by Customers (Article 8) — The content of this Article remains unchanged.

5 **Customer and System Contribution Policy** (Article 9) — Revisions are discussed in Section 6.5.

10 **Demand Opportunity Service** (Article 10) — Article 10 has been updated to reflect changes to the DOS rate. In addition, Article 10.1 has been revised to include language outlining that there must also be sufficient transmission “capacity” available in order to grant DOS service to the customer.

Ancillary Services (Article 11) — The content of this Article remains unchanged.

15 **Under-Frequency Load Shedding** (Article 12) — The content of this Article remains unchanged.

Contract Capacity Allocation (Article 13) — Revisions are discussed in Section 6.6.

20 **Reductions or Termination of Contract Capacity** (Article 14) — Article 14 has been expanded to include the provision for RGUCC requirements and greater clarity regarding contract reductions or terminations. This is discussed in Section 6.7.

25 **Financial Security, Billing, and Payment Terms** (Article 15) — Revisions are discussed in Section 6.8.

Peak Metered Demand Waiver (Article 16) — The content of this Article remains unchanged.

30 **Service Interruptions and Force Majeure** (Article 17) — Proposed amendments to Article 17.1 do not change the intent of the Article but rather clarify that there may be events other than what is described which may cause a disruption in service. The remainder of the Article remains unchanged in intent and content.

35 **Limitation of Liability** (Article 18) — The content of this Article remains unchanged.

Dispute Resolution (Article 19) — The content of this Article remains unchanged.

Confidentiality (Article 20) — The content of this Article remains unchanged.

40 **Miscellaneous** (Article 21) — Article 21.2 has been revised to reflect the inclusions of all contract types, rather than an STS or DTS contract, on the subject of assignment. The proposed revision is “In the event a **System Access Service Agreement** has been assigned, all rights and obligations associated with the service, including any and all retrospective adjustments due to deferral account reconciliation or any other adjustments
45 will be applied to the account of the assignee”. Article 21.4 contains two revisions.

Department reference has been changed from Customer Relations to Customer Services. Notices have been expanded to include email as an acceptable form of notification. The remainder of the Article remains unchanged in intent and content.

5 **Metering Equipment Information** (Appendix A) — The content of the Appendix remains unchanged.

10 **Regulated Generating Units** (Appendix B) — Removed from the Terms and Conditions and combined with the existing information in the Rate Schedule Appendix.

15 **System Access Service Agreement Proformas** (Appendix C) – The proposed revisions are as follows:

- Renamed as Appendix B as the information in the original Appendix B has been moved to the Rate Schedules
- The export pro-formas are updated to accommodate the proposed export rates
- The system access service agreement for demand opportunity service is also provided as the removal of the agreement was an unintended omission during the AESO's 2005/2006 GTA refiling
- A new Construction Commitment Agreement pro-forma has been proposed. The new pro-forma does not change the intent of the original agreement but provides additional clarity regarding the roles and responsibilities of the parties involved in the agreement.

20
25 The following table provides a comparative illustration of the current and proposed Construction Commitment Agreements:

Section Reference	Original CCA	Revised CCA
Section 1 "Cancellation Costs"	See section 1(b)	Remains the same as original CCA definition found in section 1(b), just moved to a definition section of its own
Section 1 "Material Adverse Change"	Did not exist	Section 5 allows the AESO to upgrade requirements to Security based upon notice of a Material Adverse Change. The definition was added in order to provide clarity of what would constitute a Material Adverse Change
Section 2 "Term of Agreement"	Section 1(a) of original CCA states that the agreement terminates when the Project is energized and in-service	Section 2 states that agreement terminates when the Project is energized and in-service as well as all amounts owing to the AESO have been paid in full.
Section 3 "AESO Tariff"	See Section 2	Section 3 confirms the delegation to the AESO and that the AESO tariff is still binding upon the Customer in respect of the Project
Section 4 "Security"	See Section 3	Section 4 outlines the requirement to

Section Reference	Original CCA	Revised CCA
		provide security and is qualified by "up to the maximum of the estimated costs of the Project Work", which is the concept taken directly from the AESO's tariff
Section 5	Did not exist	Section 5 requires that the Customer notify the AESO of any Material Adverse Change that may adversely affect the Project or the Customer's ability to pay for the Project
Section 6	Did not exist	The AESO is not required to commence work on the Project without satisfactory security
Section 7 "Cancellation of Proposed Project"	See Section 1(b) (short and not specific)	Specifically details the events which will give rise to the cancellation of the Project and the calculation of Cancellation costs and includes: <ul style="list-style-type: none"> (a) failure to provide security; (b) customer terminates the project; (c) EUB rejects the project; (d) failure to sign AESO's system access service agreement; (e) customer or guarantor breach any term of the CCA or and security agreement; (f) reps and warranties are proven to be incorrect or cease to be true; (g) customer or guarantor are insolvent; (h) proceedings are taken to dissolve or liquidate the customer or guarantor; (i) customer or guarantor cease to carry on business; (j) receiver is appointed over customer or guarantor; (k) customer creates or permits a charge or security to rank in priority to or pari passu with the Security; and (l) a holder of any charge or security interest against the collateral charged under the Security does anything to enforce or realize on such charge.
Section 8	Did not exist	Outlines the AESO remedies upon occurrence of a Cancellation Event, including: <ul style="list-style-type: none"> (a) refusing to perform any Project

Section Reference	Original CCA	Revised CCA
		Work; (b) demand immediate payment of Cancellation Costs; (c) demand immediate payment under any guarantee; (d) exercise rights under Security; and (e) commence legal actions or proceedings against the customer
Section 9	See Section 1(d)	Revised to match the proposed changes revisions to Article 15 as outlined in Section 6.8
Section 10	See Section 1(c)	Same as section 1(c) of original CCA providing that The AESO shall use reasonable commercial efforts to minimize Cancellation Costs
Section 11	Did not exist	Section 11 contains standard commercial representations and warranties from the Customer such as being duly incorporated or organized, Security is provided to the AESO free and clear, that the agreement has been duly authorized and is not in contravention of any laws or constating documents
Section 12 “General”	Did not exist	The Customer will pay for the AESO's legal fees (on a solicitor and his own client basis) and other costs, charges and expenses in respect of the enforcement of this Agreement and the Security by the AESO
Section 13	Did not exist	Standard notice provisions
Section 14	Section 4 (The AESO may assign the agreement to the AESO without the consent of the customer)	The Customer acknowledges and agrees that the AESO may assign all or part of this Agreement, and all collateral agreements, documents or instruments delivered hereunder (including the Security) to the AESO, free from any right of set-off or counterclaim or equity, subject only to the AESO's notification of such assignment being given in writing to the Customer. This Agreement may not be assigned by the Customer without the prior written consent of the AESO
Section 15	Did not exist	Agreement is binding on successors and



Section Reference	Original CCA	Revised CCA
		assigns
Section 16	Did not exist	No failure or delay on the AESO's part in exercising any power or right hereunder will operate as a waiver thereof
Section 17	Did not exist	The AESO's rights and remedies hereunder are cumulative and not exclusive of any rights or remedies at law or in equity
Section 18	Did not exist	Time is of the essence of this Agreement and all documents or instruments delivered hereunder
Section 19	Did not exist	Severability of agreement
Section 20	Did not exist	Interpretation under laws of Alberta
Section 21	Did not exist	Amendments to agreement can only be made in writing
Section 22	Did not exist	Schedules attached hereto will be deemed fully a part of this Agreement.
Section 23	Did not exist	This Agreement may be signed in one or more counterparts, originally or by facsimile, each such counterpart taken together will form one and the same agreement.