



7 2007 TARIFF

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DTS Demand Transmission Service Page 1 of 2

Applicable to: Demand Customers.

5 Rate: Charges for DTS in any one Billing Period shall be the sum of the Interconnection Charge, the Operating Reserve Charge, the Voltage Control Charge, and the Other System Support Services Charge, where:

10 The **Interconnection Charge** equals:

(1) a **System Charge** of

- **\$1,176.00/MW/month** of Billing Capacity in the Billing Period, plus
- **\$2.42/MWh** of Metered Energy during the Billing Period;

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(2) a **Point of Delivery Charge** of

20 (a) **\$3,129.00/MW/month** for the first 7.5 MW of Billing Capacity in the Billing Period, multiplied by the Substation Fraction, plus

(b) **\$776.00/MW/month** for all Billing Capacity over 7.5 MW in the Billing Period, plus

25 (c) **\$4,762.00/month** in the Billing Period, multiplied by the Substation Fraction.

Billing Capacity shall be the highest of:

- 30 (i) the highest fifteen (15) minute Metered Demand in the Billing Period;
- (ii) 90% of the highest Metered Demand in the 24-month period including and ending with the Billing Period; or
- (iii) 90% of the Contract Capacity,

The **Operating Reserve Charge** equals:

- 35 • Metered Energy in each hour \times **3.33%** \times **Pool Price**.

The **Voltage Control Charge** equals:

- **\$0.93/MWh** of Metered Energy during the Billing Period.

40 The **Other System Support Services Charge** equals:

- **\$77.00/MW/month** of highest Metered Demand in the Billing Period, plus
 - **\$400.00/MVA** of Apparent Power Difference when Power Factor is less than 90% during the interval of highest Metered Demand in the Billing Period,
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DTS

Demand Transmission Service

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where "Apparent Power Difference" is calculated during the interval of highest Metered Demand in the Billing Period as the difference between the metered Apparent Power and 111% of the Metered Demand.

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Terms:

(a) References to Metered Energy in this Rate Schedule shall mean the amount of Metered Energy attributable to service under this Rate Schedule, which shall be determined in accordance with Article 10.4 of the Terms and Conditions.

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(b) The DTS rate is separately applicable at each POD.

(c) When invoked by the AESO, Rate Riders B and C apply to customers under this Rate Schedule.

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(d) When invoked by the AESO, Rate Rider F applies to customers under this Rate Schedule with the exception of the City of Medicine Hat.

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(e) The Terms and Conditions form part of this Rate Schedule.



FTS Fort Nelson Demand Transmission Service Page 1 of 2

Applicable to: BC Hydro for demand service to Fort Nelson, British Columbia.

5 Rate: Charges for FTS in any one Billing Period shall be the sum of the Interconnection Charge, the Operating Reserve Charge, the Voltage Control Charge, and the Other System Support Services Charge, where:

- 10 The **Interconnection Charge** equals:
- **\$2,264.00/MW/month** of Billing Capacity in the Billing Period, plus
 - **\$4.68/MWh** of Metered Energy during the Billing Period;

- Billing Capacity shall be the highest of:
- 15 (i) the highest fifteen (15) minute Metered Demand in the Billing Period;
- (ii) 90% of the highest Metered Demand in the 24-month period including and ending with the Billing Period; or
- (iii) 90% of the Contract Capacity,

- 20 The **Operating Reserve Charge** equals:
- Metered Energy in each hour \times **3.33%** \times **Pool Price**.

- The **Voltage Control Charge** equals:
- **\$0.93/MWh** of Metered Energy during the Billing Period.

- 25 The **Other System Support Services Charge** equals:
- **\$77.00/MW/month** of highest Metered Demand in the Billing Period, plus
 - **\$400.00/MVA** of Apparent Power Difference when Power Factor is less than 90% during the interval of highest Metered Demand in the Billing Period,
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where "Apparent Power Difference" is calculated during the interval of highest Metered Demand in the Billing Period as the difference between the metered Apparent Power and 111% of the Metered Demand.

- 35 Terms: (a) References to Metered Energy in this Rate Schedule shall mean the amount of Metered Energy attributable to service under this Rate Schedule, which shall be determined in accordance with Article 10.4 of the Terms and Conditions.

40 (b) The FTS rate is separately applicable at each POD.

- (c) When invoked by the AESO, Rate Riders B and C apply to customers under this Rate Schedule.



FTS

Fort Nelson Demand Transmission Service

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(d) The Terms and Conditions form part of this Rate Schedule.



DOS 7 Minutes Demand Opportunity Service (7 Minutes)

Page 1 of 2

Applicable to: Qualified Opportunity Service Customers who are recallable within seven (7) minutes.

Available: For quantities of Metered Energy taken within the Opportunity Capacity for the relevant System Access Service Agreement for Demand Opportunity Service, and when sufficient transmission capacity exists to accommodate such quantity. This service will be available a minimum of one (1) hour for Customers deemed eligible in the pre-qualification process, following the execution of a System Access Service Agreement.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

- (a) (i) **\$4.71/MWh** of Metered Energy during the Billing Period; plus
- (ii) Incremental Losses Charge, calculated as the sum over each transaction hour of the Billing Period of the following:
 - Metered Energy in hour \times location specific loss factor \times Pool Price for the hour,
where "location specific loss factor" is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

(b) A minimum charge equal to:

- Opportunity Capacity under this Rate Schedule \times number of hours in total transactions in the Billing Period \times 75% \times **\$4.71/MWh**.

Plus

(2) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) The rate is separately applicable at each POD.

(b) A Customer's pre-qualified eligibility for Demand Opportunity Service will be available for a maximum of one (1) year. The term for a System Access Service Agreement for Demand Opportunity Service will be:

- (i) no less than a continuous eight hours from 0:00 hr midnight to 24:00 hr, or such other minimum term as the AESO may, at its discretion set; and
- (ii) no greater than one (1) calendar month.



DOS 7 Minutes Demand Opportunity Service (7 Minutes)

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(c) To the extent practicable, service for Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service for Non-Recallable Customers in an Emergency.

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(d) In the event that a Customer's service is recalled, the Customer shall be required to curtail load by the amount directed by the System Controller, which can be an amount up to the Opportunity Capacity, subject to no requirement on the Customer to curtail to below the DTS Contract Capacity. Curtailment of such amount shall be achieved within seven (7) minutes of receiving a directive from the System Controller.

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(e) References to Metered Energy in this Rate Schedule shall mean the amount of Metered Energy attributable to service under this Rate Schedule, which shall be determined in accordance with Article 10.4 of the Terms and Conditions.

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(f) When invoked by the AESO, Rate Riders E applies to customers under this Rate Schedule. When involved by the AESO, Rate Rider F applies to customers under this Rate Schedule with the exceptions of the City of Medicine Hat and BC Hydro at Fort Nelson.

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(g) The Terms and Conditions form part of this Rate Schedule.



DOS 1 Hour Demand Opportunity Service (1 Hour) Page 1 of 2

Applicable to: Qualified Opportunity Service Customers who are recallable within one (1) hour.

Available: For quantities of Metered Energy taken within the Opportunity Capacity for the relevant System Access Service Agreement for Demand Opportunity Service, and when sufficient transmission capacity exists to accommodate such quantity. This service will be available a minimum of one (1) hour for Customers deemed eligible in the pre-qualification process, following the execution of a System Access Service Agreement.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

(a) (i) **\$5.99/MWh** of Metered Energy during the Billing Period; plus

(ii) Incremental Losses Charge, calculated as the sum over each transaction hour of the Billing Period of the following:

- Metered Energy in hour \times location specific loss factor \times Pool Price for the hour,

where "location specific loss factor" is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

(b) A minimum charge equal to:

- Opportunity Capacity under this Rate Schedule \times number of hours in total transactions in the Billing Period \times 75% \times **\$5.99/MWh**.

Plus

(2) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) The rate is separately applicable at each POD.

(b) A Customer's pre-qualified eligibility for Demand Opportunity Service will be available for a maximum of one (1) year. The term for a System Access Service Agreement for Demand Opportunity Service will be:

(i) no less than a continuous eight hours from 0:00 hr midnight to 24:00 hr, or such other minimum term as the AESO may, at its discretion set; and

(ii) no greater than one (1) calendar month.



DOS 1 Hour

Demand Opportunity Service (1 Hour)

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(c) To the extent practicable, service for Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service for Non-Recallable Customers in an Emergency.

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(d) In the event that a Customer's service is recalled, the Customer shall be required to curtail load by the amount directed by the System Controller, which can be an amount up to the Opportunity Capacity, subject to no requirement on the Customer to curtail to below the DTS Contract Capacity. Curtailment of such amount shall be achieved within one (1) hour of receiving a directive from the System Controller.

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(f) References to Metered Energy in this Rate Schedule shall mean the amount of Metered Energy attributable to service under this Rate Schedule, which shall be determined in accordance with Article 10.4 of the Terms and Conditions.

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(f) When invoked by the AESO, Rate Riders E applies to customers under this Rate Schedule. When involved by the AESO, Rate Rider F applies to customers under this Rate Schedule with the exceptions of the City of Medicine Hat and BC Hydro at Fort Nelson.

(h) The Terms and Conditions form part of this Rate Schedule.



DOS Term **Demand Opportunity Service (Term)** Page 1 of 2

Applicable to: Qualified Opportunity Service Customers who are recallable within seven (7) minutes.

Available: For quantities of Metered Energy taken within the Opportunity Capacity for the relevant System Access Service Agreement for Demand Opportunity Service, and when sufficient transmission capacity exists to accommodate such quantity. This service will be available a minimum of one (1) hour for Customers deemed eligible in the pre-qualification process, following the execution of a System Access Service Agreement.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

- (a) (i) **\$23.79/MWh** of Metered Energy during the Billing Period; plus
- (ii) Incremental Losses Charge, calculated as the sum over each transaction hour of the Billing Period of the following:
 - Metered Energy in hour × location specific loss factor × Pool Price for the hour,where “location specific loss factor” is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

- (b) A minimum charge equal to:
 - Opportunity Capacity under this Rate Schedule × number of hours in total transactions in the Billing Period × 75% × **\$23.79/MWh**.

Plus

(2) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) The rate is separately applicable at each POD.

(b) A Customer’s pre-qualified eligibility for Demand Opportunity Service will be available for a maximum of one (1) year. The term for a System Access Service Agreement for Demand Opportunity Service will be:

- (i) no less than a continuous eight hours from 0:00 hr midnight to 24:00 hr, or such other minimum term as the AESO may, at its discretion set; and
- (ii) no greater than one (1) calendar month.



DOS Term

Demand Opportunity Service (Term)

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(c) To the extent practicable, service for Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service for Non-Recallable Customers in an Emergency.

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(d) In the event that a Customer's service is recalled, the Customer shall be required to curtail load by the amount directed by the System Controller, which can be an amount up to the Opportunity Capacity, subject to no requirement on the Customer to curtail to below the DTS Contract Capacity. Curtailment of such amount shall be achieved within seven (7) minutes of receiving a directive from the System Controller.

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(e) References to Metered Energy in this Rate Schedule shall mean the amount of Metered Energy attributable to service under this Rate Schedule, which shall be determined in accordance with Article 10.4 of the Terms and Conditions.

20

(f) When invoked by the AESO, Rate Riders E applies to customers under this Rate Schedule. When involved by the AESO, Rate Rider F applies to customers under this Rate Schedule with the exceptions of the City of Medicine Hat and BC Hydro at Fort Nelson.

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(g) The Terms and Conditions form part of this Rate Schedule.



XTS **Export Transmission Service** Page 1 of 2

Applicable to: Customers exporting electric energy from the AIES over the Alberta-British Columbia or Alberta-Saskatchewan inter-ties.

Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Export Transmission Service.

Rate: Charges for XTS in any one Billing Period shall be the sum of the Interconnection Charge, the Operating Reserve Charge, the Voltage Control Charge, and the Other System Support Services Charge, where:

The **Interconnection Charge** equals the greater of (a) and (b) below:

- (a) (i) **\$4.98/MWh** of Energy Transfer during the Billing Period; plus
(ii) Incremental Losses Charge, calculated as the sum over all transaction hours in the Billing Period of the following:
- Energy Transfer in hour \times location specific loss factor \times Pool Price for the hour,
where "location specific loss factor" is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

- (b) A minimum charge calculated as the sum over all transactions in the Billing Period of the following (where capacity scheduled is the hour-ahead scheduled amount for the transaction):
- $90\% \times$ capacity scheduled for Customer for the transaction \times hours in the transaction \times (**\$4.98/MWh** + Incremental Losses Charge / Energy Transfer in the Billing Period).

The **Operating Reserve Charge** equals:

- Energy Transfer in each hour \times **2.29%** \times **Pool Price**.

The **Voltage Control Charge** equals:

- **\$0.93/MWh** of Energy Transfer during the Billing Period.

The **Other System Support Services Charge** equals:

- **\$0.14/MWh** of Energy Transfer during the Billing Period.

Terms: (a) Rate XTS is separately applicable at each Point of Exchange.

(b) The minimum term for Rate XTS is one (1) calendar year.



XTS

Export Transmission Service

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(c) When invoked by the AESO, Rate Riders B, C, and E apply to Customers under this Rate Schedule.

(d) The Terms and Conditions form part of this Rate Schedule.



XOS 1 Hour Export Opportunity Service (1 Hour) Page 1 of 2

Applicable to: Customers exporting electric energy from the AIES over the Alberta-British Columbia or Alberta-Saskatchewan inter-ties.

Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Export Opportunity Service.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

- (a) (i) **\$4.71/MWh** of Energy Transfer during the Billing Period; plus
- (ii) Incremental Losses Charge, calculated as the sum over all transaction hours in the Billing Period of the following:

- Energy Transfer in hour × location specific loss factor × Pool Price for the hour,

where “location specific loss factor” is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

- (b) A minimum charge calculated as the sum over all transactions in the Billing Period of the following (where capacity schedule is the hour-ahead scheduled amount for the transaction):

- $75\% \times \text{capacity scheduled for Customer for the transaction} \times \text{hours in the transaction} \times (\$4.71/\text{MWh} + \text{Incremental Losses Charge} / \text{Energy Transfer in the Billing Period})$.

Plus

- (2) An Operating Reserve charge or other System Support Service charge when, in the opinion of the AESO, the transaction requires the procurement of incremental System Support Services and/or Operating Reserve.

Plus

- (3) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) System Access Service provided pursuant to this Rate Schedule is recallable on one (1) hour’s notice. To the extent practical, service for Export Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service provided under Rate XOS 1 Month and Rate XTS in an Emergency.



XOS 1 Hour

Export Opportunity Service (1 Hour)

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(b) Rate XOS 1 Hour is separately applicable at each Point of Exchange.

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(c) The minimum term for Rate XOS 1 Hour is one (1) hour. The maximum term is one (1) calendar month.

(d) When invoked by the AESO, Rate Rider E applies to customers under this rate schedule.

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(e) The Terms and Conditions form part of this Rate Schedule.



XOS 1 Month Export Opportunity Service (1 Month) Page 1 of 2

Applicable to: Customers exporting electric energy from the AIES over the Alberta-British Columbia or Alberta-Saskatchewan inter-ties.

Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Export Opportunity Service.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

- (a) (i) **\$5.99/MWh** of Energy Transfer during the Billing Period; plus
- (ii) Incremental Losses Charge, calculated as the sum over all transaction hours in the Billing Period of the following:

- Energy Transfer in hour × location specific loss factor × Pool Price for the hour,

where “location specific loss factor” is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

- (b) A minimum charge calculated as the sum over all transactions in the Billing Period of the following (where capacity schedule is the hour-ahead scheduled amount for the transaction):

- $75\% \times \text{capacity scheduled for Customer for the transaction} \times \text{hours in the transaction} \times (\mathbf{\$5.99/MWh} + \text{Incremental Losses Charge} / \text{Energy Transfer in the Billing Period})$.

Plus

- (2) An Operating Reserve charge or other System Support Service charge when, in the opinion of the AESO, the transaction requires the procurement of incremental System Support Services and/or Operating Reserve.

Plus

- (3) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) System Access Service provided pursuant to this Rate Schedule is recallable on one (1) hour’s notice. To the extent practical, service for Export Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service provided under Rate XTS in an Emergency.



XOS 1 Month

Export Opportunity Service (1 Month)

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(b) Rate XOS 1 Month is separately applicable at each Point of Exchange.

(c) The minimum term for Rate XOS 1 Month is one (1) calendar month. The maximum term is one (1) calendar year.

(d) When invoked by the AESO, Rate Rider E applies to customers under this rate schedule.

(e) The Terms and Conditions form part of this Rate Schedule.

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MTS **Merchant Transmission Service** Page 1 of 2

Applicable to: Customers exporting electric energy from the AIES over an inter-tie other than the Alberta-British Columbia and Alberta-Saskatchewan inter-ties.

Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Export Transmission Service.

Rate: Charges for XTS in any one Billing Period shall be the sum of the Interconnection Charge, the Operating Reserve Charge, the Voltage Control Charge, and the Other System Support Services Charge, where:

The **Interconnection Charge** equals the greater of (a) and (b) below:

- (a) (i) **\$4.32/MWh** of Energy Transfer during the Billing Period; plus
(ii) Incremental Losses Charge, calculated as the sum over all transaction hours in the Billing Period of the following:
- Energy Transfer in hour \times location specific loss factor \times Pool Price for the hour,
where "location specific loss factor" is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

- (b) A minimum charge calculated as the sum over all transactions in the Billing Period of the following (where capacity scheduled is the hour-ahead scheduled amount for the transaction):
- $90\% \times$ capacity scheduled for Customer for the transaction \times hours in the transaction \times (**\$4.32/MWh** + Incremental Losses Charge / Energy Transfer in the Billing Period).

The **Operating Reserve Charge** equals:

- Energy Transfer in each hour \times **2.29%** \times **Pool Price**.

The **Voltage Control Charge** equals:

- **\$0.93/MWh** of Energy Transfer during the Billing Period.

The **Other System Support Services Charge** equals:

- **\$0.14/MWh** of Energy Transfer during the Billing Period.

Terms: (a) Rate MTS is separately applicable at each Point of Exchange.

(b) The minimum term for Rate MTS is one (1) calendar year.



MTS

Merchant Transmission Service

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(c) When invoked by the AESO, Rate Riders B, C, and E apply to Customers under this Rate Schedule.

(d) The Terms and Conditions form part of this Rate Schedule.



MOS 1 Hour Merchant Opportunity Service (1 Hour) Page 1 of 2

Applicable to: Customers exporting electric energy from the AIES over an inter-tie other than the Alberta-British Columbia and Alberta-Saskatchewan inter-ties.

Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Export Opportunity Service.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

(a) (i) **\$4.39/MWh** of Energy Transfer during the Billing Period; plus
(ii) Incremental Losses Charge, calculated as the sum over all transaction hours in the Billing Period of the following:

- Energy Transfer in hour \times location specific loss factor \times Pool Price for the hour,

where "location specific loss factor" is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

(b) A minimum charge calculated as the sum over all transactions in the Billing Period of the following (where capacity schedule is the hour-ahead scheduled amount for the transaction):

- $75\% \times$ capacity scheduled for Customer for the transaction \times hours in the transaction \times (**\$4.39/MWh** + Incremental Losses Charge / Energy Transfer in the Billing Period).

Plus

(2) An Operating Reserve charge or other System Support Service charge when, in the opinion of the AESO, the transaction requires the procurement of incremental System Support Services and/or Operating Reserve.

Plus

(3) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) System Access Service provided pursuant to this Rate Schedule is recallable on one (1) hour's notice. To the extent practical, service for Merchant Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service provided under Rate MOS 1 Month and Rate MTS in an Emergency.



MOS 1 Hour

Merchant Opportunity Service (1 Hour)

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(b) Rate MOS 1 Hour is separately applicable at each Point of Exchange.

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(c) The minimum term for Rate MOS 1 Hour is one (1) hour. The maximum term is one (1) calendar month.

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(d) When invoked by the AESO, Rate Rider E applies to customers under this rate schedule.

(e) The Terms and Conditions form part of this Rate Schedule.



MOS 1 Month Merchant Opportunity Service (1 Month) Page 1 of 2

Applicable to: Customers exporting electric energy from the AIES over an inter-tie other than the Alberta-British Columbia and Alberta-Saskatchewan inter-ties.

Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Export Opportunity Service.

Rate: The charges for service per Billing Period shall be as follows:

(1) The greater of (a) and (b) below:

- (a) (i) **\$5.50/MWh** of Energy Transfer during the Billing Period; plus
(ii) Incremental Losses Charge, calculated as the sum over all transaction hours in the Billing Period of the following:

- Energy Transfer in hour × location specific loss factor × Pool Price for the hour,

where “location specific loss factor” is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

- (b) A minimum charge calculated as the sum over all transactions in the Billing Period of the following (where capacity schedule is the hour-ahead scheduled amount for the transaction):

- $75\% \times \text{capacity scheduled for Customer for the transaction} \times \text{hours in the transaction} \times (\mathbf{\$5.50/MWh} + \text{Incremental Losses Charge} / \text{Energy Transfer in the Billing Period})$.

Plus

- (2) An Operating Reserve charge or other System Support Service charge when, in the opinion of the AESO, the transaction requires the procurement of incremental System Support Services and/or Operating Reserve.

Plus

- (3) Transaction Fee: **\$500.00** per Billing Period.

Terms: (a) System Access Service provided pursuant to this Rate Schedule is recallable on one (1) hour’s notice. To the extent practical, service for Merchant Opportunity Service Customers taking service under this Rate Schedule shall be recallable in advance of service provided under Rate MTS in an Emergency.



MOS 1 Month

Merchant Opportunity Service (1 Month)

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(b) Rate MOS 1 Month is separately applicable at each Point of Exchange.

(c) The minimum term for Rate MOS 1 Month is one (1) calendar month. The maximum term is one (1) calendar year.

(d) When invoked by the AESO, Rate Rider E applies to customers under this rate schedule.

(e) The Terms and Conditions form part of this Rate Schedule.

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UFLS Demand Under-Frequency Load Shedding Credit Page 1 of 1

Purpose: The under-frequency load shedding credits compensate those Demand Customers who are connected to under-frequency load shedding devices and therefore face a higher risk of outage. In order to maintain the integrity of the AIES, the AESO shall have the right to require each Demand Customer to maintain a minimum of 50% of that Customer's aggregate load (across all PODs through which the Customer takes System Access Service) connected to an under-frequency load shedding device.

Available to: Customers served under the DTS Rate Schedule who, as directed by the AESO, install and activate an under-frequency load shed relay satisfactory to the AESO.

Rate: The credit is based on the relay setting and UFLS Capacity for each relay setting. The AESO provides no assurance as to the number or duration of any future outages.

UFLS Capacity shall be the share of the DTS Contract Capacity (expressed in MW) for each setting for which the Customer has agreed to be shed. The AESO from time to time may revise a Customer's total UFLS obligation to maintain the minimum of 50% of that Customer's aggregate load. The Customer must ensure the aggregate UFLS Capacity across all PODs through which the Customer takes System Access Service continues to meet the revised total UFLS obligation.

Relay Trip Setting	Credit (\$/MW of UFLS Capacity/month)
59.1 Hz	\$65.00
58.9 Hz	\$60.00
58.7 Hz	\$55.00
58.5 Hz	\$50.00
58.3 Hz	\$45.00
58.1 Hz	\$40.00
58.0 Hz	\$35.00

Terms: The Terms and Conditions form part of this Rate Schedule.



PSC **Primary Service Credit** Page 1 of 1

5 Purpose: The Primary Service Credit compensates customers whose interconnection does not include conventional transformation facilities owned by the TFO (including interconnections for customers who have purchased, own, and operate their transformers). The Primary Service Credit is provided in conjunction with a reduced maximum Local Investment in accordance with the Terms and Conditions of Service.

10 Available to: DTS Customers supplied under suitable long term contract, whose interconnection does not require or does not otherwise include TFO-owned transformation which steps the voltage down from transmission voltage to 25 kV or less, and associated low-voltage facilities.

15 Rate: The **Primary Service Credit** is a credit of:

20 (a) **\$1,252.00/MW/month** for the first 7.5 MW of Billing Capacity in the Billing Period, multiplied by the Substation Fraction, plus

(b) **\$310.00/MW/month** for all Billing Capacity over 7.5 MW in the Billing Period, plus

25 (c) **\$1,905.00/month** in the Billing Period, multiplied by the Substation Fraction.

Billing Capacity is as defined in Rate DTS.

30 Terms: (a) A reduced maximum Local Investment is available to Customers receiving this credit.

(b) The Terms and Conditions form part of this Rate Schedule.



STS **Supply Transmission Service** Page 1 of 1

Applicable to: Customers who supply electrical energy to the AES from within Alberta.

5 Rate: Charges for STS in any one Billing Period shall be the Losses Charge, where:

The **Losses Charge** equals:

- 10
- Metered Energy in each hour × location specific loss factor × Pool Price

where “location specific loss factor” is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

15 For the purpose of calculating the Losses Charge under this STS Rate Schedule, Metered Energy shall be measured on a 15-minute interval.

Regulated Generating Unit Connection Costs:

20 An additional charge of **\$304.00/MW** per month for each MW of unit MCR applicable only to Regulated Generating Units, as identified in the Rate Appendix and only to the end of the base life year of the Regulated Generating Units as provided in the Terms and Conditions.

- 25 Terms:
- (a) The STS rate is separately applicable at each POS.
 - (b) When invoked by the AESO, Rate Rider E applies to customers under this rate schedule.
 - (c) The Terms and Conditions form part of this Rate Schedule.
- 30



IOS **Import Opportunity Service** Page 1 of 1

Applicable to: Customers importing electric energy into the AIES.

5 Available: When sufficient transmission capacity exists to accommodate the capacity scheduled for service. This service shall be available a minimum of twenty-four (24) hours following execution of a System Access Service Agreement for Import Opportunity Service.

10 Rate: The charges for service per Billing Period shall be as follows:

(1) The **Losses Charge** equals:

- Energy Transfer in each hour × location specific loss factor × Pool Price

15 where “location specific loss factor” is defined in the ISO Rules and determined in accordance with ISO Rule 9.2.

20 For the purpose of calculating the Losses Charge under this IOS Rate Schedule, Energy Transfer shall be measured on a 15-minute interval.

Plus

(2) Transaction Fee: **\$500.00** per Billing Period.

25 Terms: (a) System Access Service provided pursuant to this Rate Schedule is recallable on one (1) hour’s notice.

(b) The rate is separately applicable at each Point of Exchange.

30 (c) When invoked by the AESO, Rate Rider E applies to customers under this rate schedule.

35 (d) The Terms and Conditions form part of this Rate Schedule.



Rider A1 **Transmission Duplication Avoidance Adjustment** Page 1 of 2
Dow Chemical Canada Inc. / Dow Hydrocarbons / ASU2

Applicable to: TransAlta Utilities Corporation / FortisAlberta

5

Available: At certain Points of Delivery associated with Dow's facility, as more particularly described in Board Decision U98125 (Grid Company of Alberta Inc. — Transmission Avoidance Rate — Dow Transmission Bypass).

10

Rate: Adjustment to otherwise applicable rates to be made in each Billing Period pursuant to the Decision.

Terms: The Terms and Conditions form part of this Rate Rider.

15



Rider A1 Transmission Duplication Avoidance Adjustment Page 2 of 2
Dow Chemical Canada Inc. / Dow Hydrocarbons / ASU2

Transmission Duplication Avoidance Adjustment
Dow Chemical Canada Inc. / Dow Hydrocarbons / ASU2

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Forecast of the benefit to the AESO arising from the customer contributions made by Dow Chemicals Canada Inc. to TransAlta Utilities Corporation.

Year	Forecast Benefit to AESO (Annual)	Forecast Benefit to AESO (Monthly)
1998	\$544,093	\$45,341
1999	\$865,378	\$72,115
2000	\$836,603	\$69,717
2001	\$807,828	\$67,319
2002	\$779,053	\$64,921
2003	\$750,278	\$62,523
2004	\$721,503	\$60,125
2005	\$692,728	\$57,727
2006	\$663,953	\$55,329
2007	\$635,178	\$52,932
2008	\$606,403	\$50,534
2009	\$577,628	\$48,136
2010	\$548,853	\$45,738
2011	\$520,078	\$43,340
2012	\$491,303	\$40,942
2013	\$462,528	\$38,544
2014	\$433,754	\$36,146
2015	\$404,979	\$33,748
2016	\$376,204	\$31,350
2017	\$347,429	\$28,952
2018	\$318,654	\$26,554
2019	\$289,879	\$24,157
2020	\$261,104	\$21,759
2021	\$232,329	\$19,361

10



Rider A2 **Transmission Duplication Avoidance Adjustment** Page 1 of 5
NOVA Chemical Corporation — Joffre Industrial System

Applicable to: NOVA Chemicals Corporation (NOVA Chemicals)

Available: To NOVA Chemicals' Joffre Industrial System, as designated by the AEUB Order No. HE 9826, for System Access Service to NOVA Chemicals at the 535S transmission station Point of Demand (POD) and Point of Supply (POS).

Rate: For each metering time interval, the Metered Demand and Metered Energy for the POS and POD at the 535S transmission station will be totalized for the purpose of billing under Rate DTS and Rate STS, as described in the Totalization section below. Charges under Rate DTS and Rate STS will be calculated using the totalized Metered Demand and the totalized Metered Energy. The meters to be totalized are 330 Line-1, 330 Line-2, 298L, 297L, 535ST1, and 535ST2.

NOVA Chemicals will make the following payments to the AESO:

1. Capital Charge:
A lump-sum payment of \$2,375,000 to be made immediately upon implementation of this rate rider;
2. Incremental Losses Charge:
Commencing on January 1, 2001, Metered Demand and Metered Energy will be adjusted through the metering balance calculation for the 535S transmission station, using the loss factors in the attached Schedule 1. If the Metered Demand in a metering interval is between two levels in Schedule 1, the applicable loss factor will be calculated by interpolating between the loss factors for the two levels of Metered Demand. If the Metered Demand in a metering interval is less than 10 MW, including 0 MW, the incremental loss will be deemed to be 0.14 MW. The meters to be compensated in the metering balancing calculation are on 298L, 297L, 535ST1, and 535ST2.

For each billing period, commencing on the effective date of this rate rider, a payment equal to the totalized Metered Energy multiplied by the applicable loss factor and multiplied by the Pool Price, calculated on an hourly basis. The applicable loss factor for each hour will be the loss factor in the attached Schedule 1 that corresponds with the totalized Metered Energy for the hour; and



Rider A2 **Transmission Duplication Avoidance Adjustment** Page 2 of 5
NOVA Chemical Corporation — Joffre Industrial System

3. Other Expenses Charge:

For each Billing Period commencing on January 1, 2001, an amount equal to the “Annual Payment” in the attached Schedule 2 for the applicable year, divided by 12.

Terms: All terms in the AESO’s 23 June Application for a Duplication Avoidance Tariff for NOVA Chemicals Corporation Joffre Industrial System will be applicable.

Metering and Totalizing: See Application, Section 2.5: Terms for the Duplication Avoidance Tariff; Section 2.5.1: Metering and Totalizing.

If NOVA Chemicals were to build the Duplicate Facilities, the 535S transmission station would be a Point of Supply for metering when the Joffre Site power generation exceeds the load requirements. Likewise, it would be a Point of Demand when the Joffre Site generation does not meet the load requirements. The Duplication Avoidance Tariff will simulate this result by deeming the separate Point of Demand and Point of Supply at the 535S transmission station to be a single Point of Exchange for the purpose of totalizing Metered Demand and Metered Energy in applying the AESO’s Rate DTS and Rate STS.

During the Term of the Duplication Avoidance Tariff, the AESO would totalize the metered data at the 535S transmission station for the load of NOVA Chemicals’ Existing Facilities and the generation from its Cogeneration Facility. The totalized metered data would also include a debit to NOVA Chemicals to account for the deemed duplicate transformer losses. This would ensure that payments by NOVA Chemicals to the AESO under Rate DTS and Rate STS are equivalent to the costs NOVA Chemicals would have incurred had they built the Duplicate Facilities.

The amount of load of the Existing Facilities included in the totalizing calculation would be limited to the deemed capacity of the duplicate transformer in NOVA Chemicals’ Duplicate Facilities design, which is 80 MVA. If the Metered Demand at the 535S transmission station for the Existing Facilities exceed this deemed capacity of 80 MVA, additional costs of upgrading the deemed duplicate transformer would be estimated and invoiced to NOVA Chemicals.

An example of the totalizing calculation follows.



Rider A2 Transmission Duplication Avoidance Adjustment Page 3 of 5
NOVA Chemical Corporation — Joffre Industrial System

5 Example of Totalizing:

See Application, Appendix C: Example of Totalizing
 The following is an example of the totalizing calculation for Metered Demand and Metered Energy for two different metering time intervals.

	Time Interval 1	Time Interval 2
535S Point of Demand (A)	+65 MW	+130 MW
535S Point of Supply (B) (Co-generation Facility)	-365 MW	0 MW
Totalized Meter Demand and Energy (C)	-300 MW	+130 MW

10 In Time Interval 1, under the Duplication Avoidance Tariff, NOVA Chemicals' demand requirement is 65 MW at the 535S transmission station. At the same time, NOVA Chemicals' Cogeneration Facility is delivering 365 MW of power to the AIES at the 535S transmission station. If NOVA Chemicals built the Duplicate Facilities, the Metered Energy delivered from the AIES for NOVA Chemicals' load requirement at point A would be zero MW, and the Metered Energy received by the AIES from the generator output at point B would be 300 MW. This energy balance is simulated by the proposed totalizing procedure. Combining the Point of Demand (A) and Point of Supply (B) produces a totalized Metered Demand of -300 MW, where the negative sign signifies a net energy receipt by the AIES.

25 In Time Interval 2, the Cogeneration Facility is not operating, supplying zero MW of power, and NOVA Chemicals' load remains at 65 MW for the Existing Facilities and 65 MW for the new facilities. The result is a net load of +130 MW for that time interval, where the positive sign signifies a net energy delivery from the AIES.



Rider A2 Transmission Duplication Avoidance Adjustment Page 4 of 5
NOVA Chemical Corporation — Joffre Industrial System

Schedule 1 — Incremental Loss Factors

5

Metered Demand of Existing Facilities (MW)	Loss Factor (% of Metered Demand of Existing Facilities)
> 0 ≤ 10	1.41 %
> 10 ≤ 20	0.76 %
> 20 ≤ 30	0.57 %
> 30 ≤ 40	0.49 %
> 40 ≤ 50	0.46 %
> 50 ≤ 60	0.45 %
> 60 ≤ 70	0.45 %
> 70 ≤ 80	0.47 %



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**Transmission Duplication Avoidance Adjustment
 NOVA Chemical Corporation — Joffre Industrial System**

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Schedule 2 — Other Expenses Charge

5

12 Month Period	Monthly Payment
Jan. 1, 2001 – Dec. 31, 2001	\$ 2,142
Jan. 1, 2002 – Dec. 31, 2002	\$ 2,107
Jan. 1, 2003 – Dec. 31, 2003	\$ 2,179
Jan. 1, 2004 – Dec. 31, 2004	\$ 2,152
Jan. 1, 2005 – Dec. 31, 2005	\$ 2,234
Jan. 1, 2006 – Dec. 31, 2006	\$ 4,013
Jan. 1, 2007 – Dec. 31, 2007	\$ 2,162
Jan. 1, 2008 – Dec. 31, 2008	\$ 3,283
Jan. 1, 2009 – Dec. 31, 2009	\$ 2,204
Jan. 1, 2010 – Dec. 31, 2010	\$ 3,219
Jan. 1, 2011 – Dec. 31, 2011	\$ 2,131
Jan. 1, 2012 – Dec. 31, 2012	\$ 5,305
Jan. 1, 2013 – Dec. 31, 2013	\$ 2,185
Jan. 1, 2014 – Dec. 31, 2014	\$ 2,141
Jan. 1, 2015 – Dec. 31, 2015	\$ 11,723
Jan. 1, 2016 – Dec. 31, 2016	\$ 4,343
Jan. 1, 2017 – Dec. 31, 2017	\$ 2,151
Jan. 1, 2018 – Dec. 31, 2018	\$ 4,745
Jan. 1, 2019 – Dec. 31, 2019	\$ 2,211
Jan. 1, 2020 – Dec. 31, 2020	\$ 6,835
Jan. 1, 2021 – Dec. 31, 2021	\$ 2,264
Jan. 1, 2022 – Dec. 31, 2022	\$ 2,225
Jan. 1, 2023 – Dec. 31, 2023	\$ 2,172
Jan. 1, 2024 – Dec. 31, 2024	\$ 7,790
Jan. 1, 2025 – Dec. 31, 2025	\$ 2,417
Jan. 1, 2026 – Dec. 31, 2026	\$ 2,184
Jan. 1, 2027 – Dec. 31, 2027	\$ 2,300
Jan. 1, 2028 – Dec. 31, 2028	\$ 2,256
Jan. 1, 2029 – Dec. 31, 2029	\$ 2,197
Jan. 1, 2030 – Dec. 31, 2030	\$ 36,105
Jan. 1, 2031 – Dec. 31, 2031	\$ 2,273
Jan. 1, 2032 – Dec. 31, 2032	\$ 5,154
Jan. 1, 2033 – Dec. 31, 2033	\$ 2,340
Jan. 1, 2034 – Dec. 31, 2034	\$ 2,291
Jan. 1, 2035 – Dec. 31, 2035	\$ 2,440
Jan. 1, 2036 – Dec. 31, 2036	\$ 7,595
Jan. 1, 2037 – Dec. 31, 2037	\$ 2,310
Jan. 1, 2038 – Dec. 31, 2038	\$ 2,239
Jan. 1, 2039 – Dec. 31, 2039	\$ 2,386
Jan. 1, 2040 – Dec. 31, 2040	\$ 4,518



Rider A3 **Transmission Duplication Avoidance Adjustment** Page 1 of 5
Shell Canada Corporation — Scotford Industrial System

Applicable to: Shell Canada Limited (Shell Canada)

Available: To Shell Canada's Scotford Industrial System, as designated by AEUB Order No. U2000-109 for System Access Service to Shell Canada at the 409S transmission station Point of Delivery (POD) and Point of Supply (POS).

Rate: For each metering time interval, the Metered Demand and Energy for each POS and POD (409ST1, 409ST2, 337S and 746L feeders) around the 409S transmission station will be synchronized, totalized and adjusted to measure electricity at the 138 kV bus for the purpose of billing under the Transmission Tariff. Charges under the Transmission Tariff will be calculated using the totalized Metered Demand and Energy.

Shell Canada will make the following payments to the AESO:

1. Capital Charge:
A payment of \$2,907,800 is due immediately upon implementation of this rate rider.
2. Incremental Losses Charge:
Commencing on the effective date of this rate rider, Metered Demand and Metered Energy will be adjusted through the metering balancing calculation for the 409S transmission station, using the loss factors in the attached Schedule 1. If the Metered Demand in a metering interval is between two levels in Schedule 1, the applicable loss factor will be calculated by interpolating between the loss factors for the two levels of Metered Demand. If the Metered Demand in a metering interval is less than 10 MW, including 0 MW, the incremental loss will be deemed to be 0.083 MW. The meters to be compensated in the metering balancing calculation are on 409ST1, 409ST2, 337S and 746L.

For each billing period, commencing on the effective date of this rate rider, a payment equal to the totalized Metered Energy multiplied by the applicable loss factor and multiplied by the Pool Price, calculated on an hourly basis. The applicable loss factor for each hour will be the loss factor in the attached Schedule 1 that corresponds with the totalized Metered Energy for the hour; and



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**Transmission Duplication Avoidance Adjustment
Shell Canada Corporation — Scotford Industrial System**

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3. Other Expenses Charge:

The Other Expenses Charge is shown in the attached Schedule 2.

Shell Canada will receive a Customer-Owned Transmission Station Credit in respect of the Duplicate Facilities as is provided to other DTS customers of the AESO who provide their own Transmission Station, pending the decision of the Board on the AESO's 2002 tariff application.

Term:

All Terms and Conditions in the AESO's Tariff apply in addition to the terms in this Application for a Duplication Avoidance Tariff for Shell Canada's Scotford Industrial System. If either the AESO or Shell Canada were to terminate the Duplication Avoidance Tariff at a future date, Shell Canada would receive a partial refund of the lump sum Capital Charge payment. The amount of the partial refund would be the deemed remaining undepreciated dollar amount of the avoided Duplicate Facilities, in the year that the AESO or Shell Canada gives notice to terminate the Duplication Avoidance Tariff. The undepreciated dollar value would be calculated based on the lump sum Capital Charge payment using a straight-line depreciation over the first 24 years of the Term of the Duplication Avoidance Tariff. At the end of 24 years, the undepreciated value would be zero. The termination notice period, for both the AESO and Shell Canada, will be 24 months.

**Metering and
Totalizing**

Totalization should proceed on the basis of economic indifference to Shell Canada between the DAT and the construction of Duplicate Facilities and a net positive benefit to other transmission customers. These principles are met by the terms proposed for the Duplication Avoidance Tariff.

There is no direct relationship between the size of 409S (sized for a prior, smaller load-only Scotford site) and the larger scale operations now reflected in the industrial system. The Duplication Avoidance Tariff for 409S is the most advantageous arrangement for the AESO compared to construction of Duplicate Facilities.

If Shell Canada were to build the Duplicate Facilities, the 409S transmission station would be a Point of Supply when the Scotford Site power generation exceeds the load requirements. Likewise, it would be a Point of Delivery when the Scotford Site generation does not meet the load requirements. The Duplication Avoidance Tariff will simulate this result by deeming the separate Point of Delivery and Point of Supply at



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**Transmission Duplication Avoidance Adjustment
 Shell Canada Corporation — Scotford Industrial System**

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5

the 409S transmission station to be a single Point of Exchange for the purpose of totalizing Metered Demand and Metered Energy.

10

During the Term of the Duplication Avoidance Tariff, the AESO would totalize the metered data at the 409S transmission station for the load of Shell Canada’s Load Facilities and the generation from its Cogeneration Facility. This would ensure that payments by Shell Canada to the AESO under the AESO’s Tariff are equivalent to the costs that Shell Canada would have incurred had they built the Duplicate Facilities.

15

The level of load of the Load Facilities included in the totalization calculation would be limited to the deemed capacity of the Duplicate Facilities in Shell Canada’s Duplicate Facilities design. Given that the capacity of the Duplicate Facilities would be identical to that of the 409S transmission station, if the transformer requires upgrading in order to serve additional load from the Load Facilities, Shell Canada will be responsible for the cost of the upgrade.

20

Example of
 Totalizing

The following is an example of the totalizing calculation for Metered Demand and Metered Energy for two different metering time intervals.

	Time Interval 1	Time Interval 2
409S Point of Demand (A)	+60 MW	+60 MW
409S Point of Supply/ Point of Demand (B)	-70 MW	+20 MW
Totalized Metered Demand and Energy (C)	-10 MW	+80 MW

25

In Time Interval 1, under the Duplication Avoidance Tariff, Shell Canada’s load requirement is 60 MW from the 409S transmission station. At the same time, Shell Canada’s Cogeneration Facility is delivering a net supply of 70 MW to the AIES at the 409S transmission station. This is net of load directly served from the Cogeneration Facility downstream of the 409S. If Shell Canada built the Duplicate Facilities, the level of energy delivered from Shell Canada to the AIES would be 10 MW. This energy balance is simulated through the proposed totalizing procedure.

30

35

Combining the Point of Demand (A) and Point of Supply (B) produces a totalized Metered Demand of -10 MW, where the negative sign signifies a net energy receipt by the AEIS.



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**Transmission Duplication Avoidance Adjustment
 Shell Canada Corporation — Scotford Industrial System**

Page 4 of 5

In time Interval 2, the load served from Point of Demand (A) remains at 60 MW but there is a reduced supply of energy from the Cogeneration Facility. Due to load requirements directly served from the Cogeneration Facility (net of partial load shedding), energy flows at (B) are reversed, resulting in 20 MW of energy delivered from the AIES to Shell Canada. Thus (B) is also a Point of Demand. If Shell Canada built the Duplicate Facilities, the level of energy delivered from the AIES to Shell Canada at (A) and (B) would be 80 MW. Through the proposed totalizing procedure the totalized Metered Demand would be +80 MW, where the positive sign signifies a net energy delivery from the AEIS to Shell Canada.

Schedule 1 — Incremental Loss Factors

Metered Demand of Load Facilities (MW)	Loss Factor (% of Metered Demand of Load Facilities)
> 0 ≤ 10	0.84%
> 10 ≤ 20	0.46%
> 20 ≤ 30	0.35%
> 30 ≤ 40	0.31%
> 40 ≤ 50	0.30%
> 50 ≤ 60	0.30%
> 60 ≤ 70	0.30%
> 70 ≤ 80	0.32%
> 80 ≤ 90	0.33%
> 90 ≤ 100	0.35%



Rider A3

Transmission Duplication Avoidance Adjustment
 Shell Canada Corporation — Scotford Industrial System

Schedule 2 — Other Expenses Charge

5

12 Month Period	Monthly Payment
Jan. 1, 2002 – Dec. 31, 2002	\$ 1,779
Jan. 1, 2003 – Dec. 31, 2003	\$ 1,673
Jan. 1, 2004 – Dec. 31, 2004	\$ 1,723
Jan. 1, 2005 – Dec. 31, 2005	\$ 1,669
Jan. 1, 2006 – Dec. 31, 2006	\$ 1,820
Jan. 1, 2007 – Dec. 31, 2007	\$ 3,405
Jan. 1, 2008 – Dec. 31, 2008	\$ 1,655
Jan. 1, 2009 – Dec. 31, 2009	\$ 4,055
Jan. 1, 2010 – Dec. 31, 2010	\$ 1,701
Jan. 1, 2011 – Dec. 31, 2011	\$ 4,264
Jan. 1, 2012 – Dec. 31, 2012	\$ 1,626
Jan. 1, 2013 – Dec. 31, 2013	\$ 4,954
Jan. 1, 2014 – Dec. 31, 2014	\$ 1,605
Jan. 1, 2015 – Dec. 31, 2015	\$ 1,637
Jan. 1, 2016 – Dec. 31, 2016	\$ 16,504
Jan. 1, 2017 – Dec. 31, 2017	\$ 5,665
Jan. 1, 2018 – Dec. 31, 2018	\$ 1,737
Jan. 1, 2019 – Dec. 31, 2019	\$ 4,222
Jan. 1, 2020 – Dec. 31, 2020	\$ 1,807
Jan. 1, 2021 – Dec. 31, 2021	\$ 15,946
Jan. 1, 2022 – Dec. 31, 2022	\$ 1,954
Jan. 1, 2023 – Dec. 31, 2023	\$ 1,918
Jan. 1, 2024 – Dec. 31, 2024	\$ 1,956
Jan. 1, 2025 – Dec. 31, 2025	\$ 9,933
Jan. 1, 2026 – Dec. 31, 2026	\$ 2,265
Jan. 1, 2027 – Dec. 31, 2027	\$ 2,076
Jan. 1, 2028 – Dec. 31, 2028	\$ 2,201
Jan. 1, 2029 – Dec. 31, 2029	\$ 2,160
Jan. 1, 2030 – Dec. 31, 2030	\$ 2,203
Jan. 1, 2031 – Dec. 31, 2031	\$ 59,074
Jan. 1, 2032 – Dec. 31, 2032	\$ 2,292
Jan. 1, 2033 – Dec. 31, 2033	\$ 7,777
Jan. 1, 2034 – Dec. 31, 2034	\$ 2,479
Jan. 1, 2035 – Dec. 31, 2035	\$ 2,432
Jan. 1, 2036 – Dec. 31, 2036	\$ 2,761



Rider A4 **Transmission Duplication Avoidance Adjustment** Page 1 of 5
Imperial Oil Resources Limited — Cold Lake Industrial System

Applicable to: Imperial Oil Resources Limited (Imperial Oil)

Available: To Imperial Oil's Cold Lake Industrial System, as designated by AEUB Order No. HE 9901, plus any expansions to this Industrial System as may be approved by the AEUB, for System Access Service to Imperial Oil at the 715S transmission station Point of Demand and Point of Supply and the 837S transmission station Point of Demand.

Rate: For each metering time interval, the Metered Demand and Metered Energy for the POS and PODs, at the 837S and 715S transmission stations, will be totalized for the purpose of billing under Rate DTS and Rate STS, as described in the AESO's June 22, 2001 Application for a Duplication Avoidance Tariff for Imperial Oil Resources Limited Cold Lake Site. Charges under Rate DTS and Rate STS will be calculated using the totalized Metered Demand and the totalized Metered Energy. The meters at the 837S transmission station to be totalized are 5L408, 5L409, and 5L410. The meters at the 715S transmission station to be totalized are 5L242, 5L335, 5L367, 5L395, and the future metering point for Imperial Oil's Cogeneration Facility.

Imperial Oil shall make the following payments to the AESO:

1. **Capital Charge:**
A lump-sum payment of \$5,968,800 to be made immediately upon implementation of this rate rider;
2. **Incremental Losses Charge:**
For each billing period, commencing on the effective date of this rate rider, a payment equal to the totalized Metered Energy multiplied by the applicable loss factor and multiplied by the Pool Price, calculated on an hourly basis. The applicable loss factor for each hour will be the loss factor in the attached Schedule 1 that corresponds with the totalized Metered Energy for the hour; and
3. **Other Expenses Charge:**
For each Billing Period, commencing on the effective date of this rate rider, an amount equal to the "Monthly Payment" in the attached Schedule 2 for the applicable year.



Rider A4 **Transmission Duplication Avoidance Adjustment** Page 2 of 5
Imperial Oil Resources Limited — Cold Lake Industrial System

5 **Terms:** All terms in the AESO's June 22, 2001 Application for a Duplication Avoidance Tariff for Imperial Oil Resources Limited Cold Lake Site and in the AESO's August 17, 2005 Application for Amendment will be applicable.

10 **Metering and Totalizing** If Imperial Oil were to build the Duplicate Facilities, the Leming Lake transmission station would be a Point of Supply when the Cold Lake Site power generation exceeds the load requirements, and a Point of Demand when the generation does not meet the load requirements. The Duplication Avoidance Tariff will simulate these conditions by deeming the Points of Demand at the Mahihkan and Leming Lake transmission stations, and the Point of Supply at the Leming Lake transmission station, to be a single Point of Connection for the purpose of totalizing Metered Demand and Metered Energy in applying Rates DTS and STS.

20 During operation of the Duplication Avoidance Tariff, the AESO will totalize the metered data for Imperial Oil's load and generation served from the Mahihkan and Leming Lake transmission stations. This will ensure that payments by Imperial Oil to the AESO under Rate DTS and Rate STS are equivalent to the costs Imperial Oil would have incurred for the Duplicate Facilities.

25 The amount of load included in the totalizing calculation will be limited to 138 MW from November through April and 115 MW from May through October, which is the maximum amount of load that the Duplicate Facilities would be able to serve, based on the deemed winter and summer capacities, respectively, of the duplicate transmission line in Imperial Oil's design. If the combined Metered Demand at the Mahihkan and Leming Lake transmission stations for the Load Facilities exceeds the 138 MW winter or 115 MW summer limit, the costs that would have been required to service the additional load under the Duplicate Facilities alternative will be estimated and invoiced to Imperial Oil.

Rider A4 **Transmission Duplication Avoidance Adjustment** Page 3 of 5
Imperial Oil Resources Limited — Cold Lake Industrial System

5 Example of
 Totalizing

The following is an example of the totalizing calculation for Metered Demand and Metered Energy for two different metering time intervals.

	Time Interval 1	Time Interval 2
Point of Demand (A) (Mahihkan)	+45 MW	+45 MW
Point of Supply / Point of Demand (B) (Leming Lake)	-100 MW	+60 MW
Totalized Metered Demand and Energy (C)	-55 MW	+105 MW

10 In Time Interval 1, under the Duplication Avoidance Tariff, Imperial Oil's demand requirement is 45 MW at each of the Mahihkan and Leming Lake transmission stations. At the same time, Imperial Oil's Cogeneration Facility is producing 160 MW of power, of which 15 MW is used to directly serve other load requirements. The net delivery to the AIES is 145 MW at the Leming Lake transmission station. If Imperial Oil built the Duplicate Facilities, the Metered Energy delivered by the AIES to Imperial Oil's load requirement at the Mahihkan transmission station would be zero, and the Metered Energy received by the AIES from the generator output at the Leming Lake transmission station would be 55 MW (160 MW of generation minus 105 MW of load). This energy balance is simulated by the proposed totalizing procedure. Combining the Point of Demand (A) and Point of Supply (B) produces an adjusted Metered Demand of -55 MW, where the negative sign signifies a net energy receipt by the AIES.

25 In Time Interval 2, the Cogeneration Facility is not operating and Imperial Oil's load remains at 105 MW (45 MW at the Mahihkan station, and 45 MW plus 15 MW at Leming Lake station). The result is a net load of +105 MW for that time interval, where the positive sign signifies a net energy delivery from the AIES.



Rider A4 Transmission Duplication Avoidance Adjustment Page 4 of 5
 Imperial Oil Resources Limited — Cold Lake Industrial System

Schedule 1 — Incremental Loss Factors

5

Metered Demand of Load Facilities (MW)	Loss Factor (% of Metered Demand of Load Facilities)
> 0 ≤ 10	1.88%
> 10 ≤ 20	1.31%
> 20 ≤ 30	0.64%
> 30 ≤ 40	0.54%
> 40 ≤ 50	0.60%
> 50 ≤ 60	0.73%
> 60 ≤ 70	0.90%
> 70 ≤ 80	1.09%
> 80 ≤ 90	1.29%
> 90 ≤ 100	1.51%
> 100 ≤ 110	1.72%
> 110 ≤ 115	1.91%
> 115 ≤ 120	1.99%
> 120 ≤ 125	2.08%
> 125 ≤ 130	2.16%
> 130 ≤ 135	2.25%
> 135 ≤ 138	2.33%



Rider A4 Transmission Duplication Avoidance Adjustment Page 5 of 5
Imperial Oil Resources Limited — Cold Lake Industrial System

Schedule 2 — Other Expenses Charge

5

12 Month Period	Monthly Payment
Jan. 1, 2003 – Dec. 31, 2003	\$ 4,223
Jan. 1, 2004 – Dec. 31, 2004	\$ 6,323
Jan. 1, 2005 – Dec. 31, 2005	\$ 4,286
Jan. 1, 2006 – Dec. 31, 2006	\$ 4,225
Jan. 1, 2007 – Dec. 31, 2007	\$ 5,791
Jan. 1, 2008 – Dec. 31, 2008	\$ 7,651
Jan. 1, 2009 – Dec. 31, 2009	\$ 5,189
Jan. 1, 2010 – Dec. 31, 2010	\$ 6,835
Jan. 1, 2011 – Dec. 31, 2011	\$ 4,500
Jan. 1, 2012 – Dec. 31, 2012	\$ 8,367
Jan. 1, 2013 – Dec. 31, 2013	\$ 4,457
Jan. 1, 2014 – Dec. 31, 2014	\$ 10,648
Jan. 1, 2015 – Dec. 31, 2015	\$ 5,059
Jan. 1, 2016 – Dec. 31, 2016	\$ 5,430
Jan. 1, 2017 – Dec. 31, 2017	\$ 19,466
Jan. 1, 2018 – Dec. 31, 2018	\$ 10,660
Jan. 1, 2019 – Dec. 31, 2019	\$ 4,765
Jan. 1, 2020 – Dec. 31, 2020	\$ 10,594
Jan. 1, 2021 – Dec. 31, 2021	\$ 5,565
Jan. 1, 2022 – Dec. 31, 2022	\$ 29,055
Jan. 1, 2023 – Dec. 31, 2023	\$ 5,799
Jan. 1, 2024 – Dec. 31, 2024	\$ 5,905
Jan. 1, 2025 – Dec. 31, 2025	\$ 5,366
Jan. 1, 2026 – Dec. 31, 2026	\$ 19,095
Jan. 1, 2027 – Dec. 31, 2027	\$ 6,492
Jan. 1, 2028 – Dec. 31, 2028	\$ 5,695
Jan. 1, 2029 – Dec. 31, 2029	\$ 5,962
Jan. 1, 2030 – Dec. 31, 2030	\$ 7,811
Jan. 1, 2031 – Dec. 31, 2031	\$ 6,043



Rider B **Working Capital Deficiency/Surplus Rider** Page 1 of 1

5

Purpose: The Working Capital Deficiency/Surplus Rider is to recover unexpected increases in the AESO's working capital deficiency or to refund unexpected surpluses of working capital.

10

Applicable to: Customers receiving service under the following Rate Schedule:

- DTS
- FTS
- XTS
- MTS

15

Effective: The rider will be invoked for the current Billing Period when, on the last Business Day of the current Billing Period:

- the AESO's working capital balance either exceeds or falls short of the AESO's annual average forecast by an amount equal to or greater than \$7.0 Million.

20

Rate: A percentage increase or decrease, that when invoked will restore the AESO's working capital deficiency to the AESO's annual average forecast, applied to charges under the rate schedules listed above in the current Billing Period.

25

Terms: The Terms and Conditions form part of this Rate Schedule.



Rider E **Losses Calibration Factor Rider** Page 1 of 1

Purpose: To adjust loss factors to ensure that the actual cost of losses is reasonably recovered through charges and credits on an annual basis.

5

Applicable to: Customers receiving service under the following Rate Schedules:

10

- DOS
- XTS
- XOS
- MTS
- MOS
- STS
- IOS

15

Effective: The rider is effective for all billing periods, effective January 1, 2006.

20

Rate: An additional calibration factor percentage (%) will be added to or subtracted from all location-specific loss factors on the DOS, XTS, XOS, MOS, STS. and IOS Rate Schedules.

25

Every quarter a calibration factor is determined to recover or refund all accumulated and forecast differences between the anticipated costs of transmission system losses and the actual costs of transmission system losses, on a calendar year basis. Any balance remaining at the end of a year would carry forward to be recovered or refunded in the following year.

Terms: The Terms and Conditions form part of this Rate Schedule.



Rider F **Balancing Pool Consumer Allocation Rider** Page 1 of 1

Purpose: To collect from or refund to AESO Customers an annualized amount estimated by the Balancing Pool and transferred to the AESO under section 82 of the *Electric Utilities Act*.

5

Applicable to: Customers receiving service under the following Rate Schedules:

- DTS, with the exception of the City of Medicine Hat
- DOS, with the exceptions of the City of Medicine Hat and BC Hydro at Fort Nelson

10

Effective: The rider is effective for all billing periods from January 1, 2007 to December 31, 2007.

Rate: A credit of **\$3.00/MWh** of Metered Energy during the Billing Period.

15

Terms: The Terms and Conditions form part of this Rate Schedule.



Rider G Bill Impact Mitigation Rider (Preliminary) Page 1 of 1

Purpose: To limit the increase in bills due to the application of Rate Schedule DTS at specified Points of Delivery.

5

Applicable to: The Points of Delivery specified below for service under Rate Schedule DTS.

Effective: The rider is effective for all billing periods from the effective data of this tariff to December 31, 2008.

10

Rate: The System Charge and Point of Delivery Charge specified in Rate Schedule DTS will be reduced by being multiplied by the following amounts when applied at the following Settlement Points:

15

<u>Settlement Point ID</u>	<u>Multiplier</u>
DTS 9	26%
DTS 17	90%
DTS 194	43%
DTS 197	72%
DTS 198	59%
DTS 200	64%
DTS 205	94%
DTS 206	90%
DTS 209	89%
DTS 211	93%

20

25

Terms: (a) All other charges in Rate Schedule DTS apply without modification.

30

(b) The Terms and Conditions form part of this Rate Schedule.

Rate Appendix Regulated Generating Units

Generating Unit	Owner	Type of Plant	MCR (MW)	Base Life
Barrier	TAU	Hydro	11.2	2020
Battle River 3	AE	Coal-fired thermal	147.3	2013
Battle River 4	AE	Coal-fired thermal	147.3	2013
Battle River 5	AE	Coal-fired thermal	368.2	2020
Battle River POS Total			662.8	
Bearspaw	TAU	Hydro	16.0	2020
Bighorn 1	TAU	Hydro	60.0	2020
Bighorn 2	TAU	Hydro	60.0	2020
Bighorn POS Total			120.0	
Brazeau 1	TAU	Hydro	160.0	2020
Brazeau 2	TAU	Hydro	190.0	2020
Brazeau POS Total			350.0	
Cascade 1	TAU	Hydro	17.0	2020
Cascade 2	TAU	Hydro	17.0	2020
Cascade POS Total			34.0	
Clover Bar 1	EPGI	Gas-fired thermal	157.2	2010
Clover Bar 2	EPGI	Gas-fired thermal	157.2	2010
Clover Bar 3	EPGI	Gas-fired thermal	157.2	2010
Clover Bar 4	EPGI	Gas-fired thermal	157.2	2010
Clover Bar POS Total			628.8	
Genesee 1	EPGI	Coal-fired thermal	384.1	2020
Genesee 2	EPGI	Coal-fired thermal	384.1	2020
Genesee POS Total			768.2	
Ghost 1	TAU	Hydro	1.0	2013
Ghost 2	TAU	Hydro	14.0	2020
Ghost 3	TAU	Hydro	14.0	2020
Ghost 4	TAU	Hydro	25.0	2020
Ghost POS Total			54.0	
H. R. Milner	AE	Coal-fired thermal	144.3	2012
Horseshoe 1	TAU	Hydro	5.0	2020
Horseshoe 2	TAU	Hydro	3.0	2020
Horseshoe 3	TAU	Hydro	3.0	2020
Horseshoe 4	TAU	Hydro	5.0	2020
Horseshoe POS Total			16.0	

Rate Appendix Regulated Generating Units (cont'd)

Generating Unit	Owner	Type of Plant	MCR (MW)	Base Life
Interlakes	TAU	Hydro	5.0	2020
Kananaskis 1	TAU	Hydro	5.0	2020
Kananaskis 2	TAU	Hydro	5.0	2020
Kananaskis 3	TAU	Hydro	9.0	2020
Kananaskis POS Total			19.0	
Keephills 1	TAU	Coal-fired thermal	381.1	2020
Keephills 2	TAU	Coal-fired thermal	381.1	2020
Keephills POS Total			762.2	
Pocaterra	TAU	Hydro	14.0	2013
Rainbow 1	AE	Gas turbine	25.9	2005
Rainbow 2	AE	Gas turbine	39.8	2005
Rainbow 3	AE	Gas turbine	21.4	2005
Rainbow POS Total			87.1	
Rossdale 10	EPGI	Gas-fired thermal	70.6	2003
Rossdale 8	EPGI	Gas-fired thermal	66.7	2003
Rossdale 9	EPGI	Gas-fired thermal	70.6	2003
Rossdale POS Total			207.9	
Rundle 1	TAU	Hydro	17.0	2020
Rundle 2	TAU	Hydro	33.0	2020
Rundle POS Total			50.0	
Sheerness 1	AE	Coal-fired thermal	378.2	2020
Sheerness 2	AE	Coal-fired thermal	378.2	2020
Sheerness POS Total			756.4	
Spray 1	TAU	Hydro	47.5	2020
Spray 2	TAU	Hydro	52.0	2020
Spray POS Total			99.5	
Sturgeon 1	AE	Gas turbine	10.0	2005
Sturgeon 2	AE	Gas turbine	8.0	2005
Sturgeon POS Total			18.0	



Rate Appendix Regulated Generating Units (cont'd)

Generating Unit	Owner	Type of Plant	MCR (MW)	Base Life
Sundance 1	TAU	Coal-fired thermal	278.6	2017
Sundance 2	TAU	Coal-fired thermal	278.6	2017
Sundance 3	TAU	Coal-fired thermal	353.2	2020
Sundance 4	TAU	Coal-fired thermal	353.2	2020
Sundance 5	TAU	Coal-fired thermal	353.2	2020
Sundance 6	TAU	Coal-fired thermal	364.2	2020
Sundance POS Total			<u>1,981.0</u>	
Three Sisters	TAU	Hydro	2.7	2020
Wabamun 1	TAU	Coal-fired thermal	63.7	2003
Wabamun 2	TAU	Coal-fired thermal	63.7	2003
Wabamun 3	TAU	Coal-fired thermal	139.3	2003
Wabamun 4	TAU	Coal-fired thermal	278.6	2003
Wabamun POS Total			<u>545.3</u>	

AESO TERMS AND CONDITIONS OF SERVICE

Number	Description
5	Article 1 Definitions and Interpretation
	Article 2 Application of Tariff
	Article 3 Provision of System Access Service
	Article 4 Customer Interconnection Requirements
	Article 5 System Access Application
10	Article 6 Security and Customer Agreements
	Article 7 Metering
	Article 8 Provision of Information by Customers
	Article 9 Customer Contribution Policy
	Article 10 Opportunity Service
15	Article 11 Ancillary Services
	Article 12 Under-Frequency Load Shedding
	Article 13 Contract Capacity Increases & Allocation
	Article 14 Reductions or Termination of Contract Capacity
	Article 15 Credit, Billing, and Payment Terms
20	Article 16 Peak Metered Demand Waiver
	Article 17 Service Interruptions and Force Majeure
	Article 18 Limitation of Liability
	Article 19 Dispute Resolution
	Article 20 Confidentiality
25	Article 21 Miscellaneous
	Appendix A Metering Equipment Information
	Appendix B System Access Service Agreement Proformas
	System Access Service Agreement: Demand Transmission Service
30	System Access Service Agreement: Supply Transmission Service
	System Access Service Agreement: Import Opportunity Service
	System Access Service Agreement: Export Service – BC / Saskatchewan
	Interties
	System Access Service Agreement: Export Service – Alberta / Montana
35	Intertie
	System Access Service: Demand Opportunity Service
	Construction Commitment Agreement

ARTICLE 1 DEFINITIONS AND INTERPRETATION

1.1 The following terms shall have the following meanings in this Tariff:

5
“**Act**” means the Electric Utilities Act, S.A. 2003, c. E-5.1 and regulations made thereunder, as amended from time to time.

10
“**AESO**” means Alberta Electric System Operator, and is a trade name under which the ISO carries on business in fulfillment of its roles, responsibilities, and duties pursuant to the Act.

15
“**AESO Measurement System Standard**” means the standards contained in the document titled *Alberta Electric System Operator Measurement System Standards*, made available by the AESO, which defines the accountabilities and obligations of the AESO, metering service providers, and metering data providers in respect of the provision and operation of the measurement system required for the measurement, acquisition, processing, and delivery of measurement data, as amended from time to time.

20
“**AESO Person**” means “Independent System Operator person” and has the meaning ascribed to it in the Act.

25
“**AESO Standard Facilities**” mean the least-cost interconnection facilities which meet good transmission practice including applicable reliability, protection, and operating criteria and standards, and generally consist of a single radial transmission circuit and a single transformer to supply an individual Point of Connection.

30
“**AIES**” means Alberta’s “Interconnected Electric System” and has the meaning ascribed to it in the Act.

35
“**Affiliate**” has the meaning ascribed to it in the Business Corporations Act (Alberta), S.A. 1981, c. B-15, as amended.

“**Ancillary Services**” has the meaning ascribed to it in the Act.

40
“**Apparent Power**” means the product of the volts and amperes, comprising both real and reactive power, usually expressed in kilovoltamperes (“kVA”) or megavoltamperes (“MVA”).

45
“**Application Fee**” means the refundable interconnection application fee a Customer pays to the AESO when the Customer submits a request for interconnection to the AIES. Application Fees are set out in Article 5.

“**Area Control Error**” means the instantaneous difference between actual and scheduled interchange, taking into account the effects of frequency bias (and time error or unilateral inadvertent energy, if automatic correction for either is part of the AGC).

5

“**Automatic Generation Control**” or “**AGC**” means equipment that automatically adjusts a Control Area’s generation to maintain its frequency or interchange schedule plus or minus frequency bias.

10

“**Automatic Voltage Regulator**” or “**AVR**” means automatic control equipment that changes the Generating Unit excitation level to maintain voltage levels.

“**Billing Capacity**” has the meaning ascribed to it in Rate Schedule DTS.

15

“**Billing Period**” means a period of time starting on the first day of each calendar month at 00:00 hours and ending on the last day of the same calendar month at 24:00 hrs, during which a Customer is supplied with System Access Service.

20

“**Business Day**” means a day other than a Saturday, a Sunday, a Statutory Holiday, or a Monday when a Statutory Holiday occurs on a Saturday or Sunday and the following Monday is a day during which financial banking privileges are suspended.

25

“**Commercial Operation**” means the date upon which a load or Generating Unit begins to operate on the transmission system in a manner which is acceptable to the AESO and which is expected to be normal for it to so operate, after energization and Commissioning.

30

“**Commissioning**” means those limited activities (as approved in advance by the AESO and subject to written agreement) conducted after interconnection which are required to ensure that a facility can satisfactorily enter Commercial Operation and that a facility meets the AESO’s requirements. The term of such written agreement will not extend beyond a three month period unless otherwise agreed to by the AESO.

35

“**Confidential Information**” means information provided to the AESO that has been specifically identified as being confidential in nature by the provider of such information and information provided pursuant to Article 8 of these Terms and Conditions of Service.

40

“**Constrained On**” means a condition where a Generating Unit has been dispatched on load while Out of Merit, as a result of a Dispatch Instruction by the AESO.



5
“**Construction Commitment Agreement**” means a financial security agreement made between the Customer and the TFO or between the Customer and the AESO prior to arrangements for new facilities required to accommodate the provision of System Access Service to the Customer or an increase thereto.

“**Contract Capacity**” means the peak demand or supply capability (expressed in MW), as set out in the System Access Service Agreement.

10
“**Control Area**” means a geographic area comprised of an electric system or systems, bounded by interconnection metering and telemetry, capable of controlling generation to maintain its interchange schedule with other control areas, and contributing to frequency regulation of the interconnection, such as the AIES.

15
“**Customer**” is an Eligible Person who takes, or applies to take, System Access Service from the AESO and satisfies the conditions provided in Article 3.1 below.

20
“**Customer’s Facilities**” or “**Customer Facilities**” means all facilities interconnecting with the AIES on the Customer’s side of the POD or POS.

“**Customer Contribution**” means the amount required to be paid by a Customer taking service under Rate Schedule DTS or Rate Schedule STS pursuant to Article 9 hereof.

25
“**Demand Customers**” are load customers and generation customers, the latter for the purposes of obtaining their back up supply.

30
“**Demand Opportunity Service Business Practices**” means the business practices contained in the Business Practices – Demand Opportunity Service (DOS) document, made available by the AESO, as may be amended from time to time in accordance with the provisions of Article 10 below.

“**Direct Loss or Damage**” has the meaning ascribed to it in the Act.

35
“**Dispatch Instruction**” means in respect of any Generating Unit, all dispatch instructions issued by the AESO from time to time, designating such unit to provide Ancillary Services, by changing the output or manner of operation of a unit, or by another method or procedure, and giving any necessary details as to the service to be provided.

40
“**Dispute**” means any dispute, claim, or difference that arises in respect of the Tariff between the AESO and the Customer.

45
“**Distributor**” means a party providing “Distribution Access Service”.

“**Distribution Access Service**” has the meaning ascribed to it in the Act.

5 “**DOS**” or “**Demand Opportunity Service**” means service under either Rate Schedule Demand Opportunity Service (DOS 7 Minutes) or Demand Opportunity Service (DOS Term).

“**DTS**” or “**Demand Transmission Service**” means service under Rate Schedule Demand Transmission Service.

10 “**E&G Act**” means the Electricity and Gas Inspection Act (Canada) and regulations made thereunder, as amended from time to time, or such replacement legislation as may be enacted.

15 “**Eligible Person**” means any of the following: the owner of a Generating Unit; the owner of an electric distribution system; an importer or exporter; the owner of an industrial system; a direct access customer, or the purchaser of a PPA.

20 “**Emergency**” means, as declared by the AESO, either: any abnormal system condition which requires immediate manual or automatic action to prevent abnormal system frequency deviation, abnormal voltage levels, equipment damage, or tripping of system elements which might result in cascading effects; or a state in which the AESO lacks sufficient Ancillary Services.

25 “**Energy Transfer**” shall mean the quantity of energy transfer attributable to a transaction for service under Export Rate Schedules (XTS, XTS 1 hour, XTS 1 month, MTS, MTS 1 hour & MTS 1 month) or Rate Schedule Import Opportunity Service, based on the capacity at a Point of Interconnection and allocated to a Customer.

30 “**EUB**” means the Alberta Energy and Utilities Board.

35 “**Force Majeure**” means: acts of God; strikes; lockouts or other industrial disturbances; vandalism; wars; riots; epidemics; landslides; lightning; earthquakes; explosions; fires; storms; intervention of federal, provincial, or local government (or from any of their agencies or boards); the order or direction of any court; inability to obtain, interruption, suspension, curtailment or other diminution of, supply of materials, utilities, or services from any supplier (including, without limitation, TFOs, Ancillary Service Providers or the AESO) and any other causes, whether of the kind herein enumerated or otherwise, not within
40 the control of the AESO and which by the exercise of due diligence the AESO is unable to prevent or overcome. Notwithstanding the foregoing, a decision, direction, or order made by the EUB in the normal course of it exercising its authority shall not be an event of force majeure.

45 “**Generating Unit**” has the meaning as ascribed to it in the Act.

5
“**Governor**” or “**Governor System**” means automatic control equipment with speed droop characteristics to control Generating Unit speed and/or electric power output.

“**ISO**” or “**Independent System Operator**” has the meaning ascribed to it in the Act.

10
“**ISO Rules**” has the meaning ascribed to it in the Act.

“**Looped**” refers to transmission facilities that increase the number of electrical paths between any two POCs other than the POC that serves the Customer for whom the facilities are being or have been constructed.

15
“**Losses**” means the energy that is lost through the process of transmitting electric energy.

20
“**Maximum TMR Compensation**” means the maximum amount to be paid by the AESO for Transmission Must-Run (TMR) service that would result in the recovery of fixed, operating, and maintenance costs, including a reasonable rate of return for the TMR service provider, based on the following components determined monthly:

- 25
30
35
40
45
- (a) Undepreciated Capital Investment (UCI) reflecting the Customer’s property, plant, and equipment for the specific generating asset providing the TMR service less accumulated depreciation for the specific generating asset;
 - (b) amortization and depreciation amounts associated with the Customer’s investment in the generating asset providing TMR service over the economic life of the asset and consistent with amounts reported in the Customer’s audited financial statements;
 - (c) capital structure reflecting debt, equity, or other financing of the Customer’s investment in the generating asset at a deemed capital structure of 70% debt and 30% common equity;
 - (d) a 12% rate of return on equity and an interest rate on debt equal to a 10-year Government of Canada Bond interest rate plus 0.5%;
 - (e) income tax costs reflecting the marginal income tax rates for both federal and provincial portions of income tax;
 - (f) a prorated share of total return costs reflecting one-twelfth of the sum of:
 - annual amortization and depreciation amounts,

- the product of UCI times the debt percentage of capital structure times the interest rate,
- the product of UCI times the equity percentage of capital structure times the rate of return on equity, and
- the product of the tax rates times the equity return amount determined above,

unless the generating asset is at or near the end of its life and the UCI amount is at zero, in which case total return costs will reflect a reasonable minimum return amount and;

where the prorated share is based on the number of hours of TMR service compared to the total of hours of TMR service and a reasonable portion of hours in-merit in the energy market;

- (g) total operation and maintenance costs reflecting direct as well as a prorated share of indirect or fixed operation and maintenance costs associated with the generating asset, where the prorated share is based on the number of hours of TMR service compared to the total of hours of TMR service and a reasonable portion of hours in-merit in the energy market;
- (h) total fuel costs reflecting direct as well as a prorated share of indirect or fixed fuel costs associated with the generating asset, where the prorated share is based on the number of hours of TMR service compared to the total of hours of TMR service and a reasonable portion of hours in-merit in the energy market;
- (i) a prorated share of credits for common costs, if applicable, reflecting revenues or benefits attributable to a service in addition to the TMR service and associated with the generating asset where the prorated share is based on the number of hours of TMR service compared to the total of hours of TMR service and a reasonable portion of hours in-merit in the energy market; and
- (j) adjustment for partial use of the generating asset where the asset is only partially directed for TMR service and the remainder of the unit's capacity is available to provide other electric services.

"MCR" or **"Maximum Continuous Rating"** is the maximum net power output that can be sustained by a generator over a long period.

"Metered Demand" means the rate at which electric energy is delivered to a POD, or from a POS, expressed in MW, averaged over a 15-minute, 1-minute, or other interval as deemed necessary by the AESO.

5
“**Metered Energy**” means the quantity of energy, expressed in MWh, reflected by the relevant Metering Equipment as having been transferred in a particular period of time.

10
“**Metering Equipment**” means any current transformers, potential transformers, interconnecting wiring, meters, remote metering communication facilities, and records used by the owner of the Metering Equipment in connection with these Terms and Conditions to measure Metered Demand.

15
“**Non-Dispensated Metering Equipment**” means Metering Equipment installed after May 31, 1998 which is not the subject of a waiver or dispensation by Industry Canada of requirements under the E&GI Act.

20
“**Non-Recallable Service**” means System Access Service pursuant to Rate Schedule DTS or Rate Schedule STS.

25
“**Opportunity Capacity**” means the incremental amount of transmission capacity that is available under a System Access Service Agreement for Demand Opportunity Service to provide capacity in addition to Contract Capacity for DTS.

30
“**Opportunity Service**” means System Access Service offered to any Customer who can establish to the AESO’s satisfaction that it would not take System Access Service pursuant to Rate Schedule DTS and with respect to which, therefore, the service requirement presents the opportunity for incremental revenue with which the AESO can offset transmission costs.

35
“**Opportunity Service Customers**” means those Customers that meet the criteria for Opportunity Service, as defined.

40
“**Physical Capacity**” means the maximum amount of electric power that a transmission facility, as rated by a TFO, is able to transmit.

“**POC**” or “**Point of Connection**” means a point at which electric energy is transferred between the Customer’s facility and the AIES. A Point of Connection may be a Point of Supply (POS), a Point of Delivery (POD), or both.

“**POD**” or “**Point of Delivery**” means the point at which electric energy is transferred from the AIES to a Customer’s Facilities.

“**Point of Interconnection**” means the point at which electrical energy is transferred from the AIES to a neighbouring jurisdiction and where the electric energy so transferred is measured.



“**Pool Price**” shall have the meaning ascribed to that term in the Act, and when used in the context of a particular hour, shall mean the pool price for that hour.

5 “**POS**” or “**Point of Supply**” means the point which electric energy is transferred from a Customer’s Facilities to the AIES.

“**Power Factor**” means the ratio of Real Power to Apparent Power.

10 “**PPA**” or “**Power Purchase Arrangement**” has the meaning ascribed to it in the Act.

“**PPA Effective Date**” means January 1, 2001 or such other dates as the Power Purchase Arrangement becomes effective.

15 “**PSC**” or “**Primary Service Credit**” means the credit set forth in Rate Schedule Primary Service Credit.

“**PSS**” means power system stabilizer.

20 “**Radial**” facilities are those transmission facilities that are not Looped.

“**Ratchet Level**” has the meaning ascribed to it in Rate Schedule Demand Transmission Service.

25 “**Rate Schedules**” means the schedules attached to and forming part of the Tariff, which set out the respective rates to be charged, and credits to be attributed, for each type of System Access Service.

30 “**Rated Capacity**” means the maximum amount of electric power which a transmission facility is rated by the manufacturer to be able to transmit.

35 “**Reactive Power**” means the portion of electricity that establishes and sustains the electric and magnetic fields of alternating current equipment, expressed in megavars (“MVA_r”).

“**Real Power**” means the rate of producing, transferring, or using electrical energy, expressed in megawatts (“MW”).

40 “**Regulated Generating Unit**” is a generating unit listed in Appendix B.

“**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

5 “**Representatives**” means the directors, officers, employees, consultants, and agents of the AESO.

10 “**Statutory Holiday**” means New Year’s Day, Family Day, Good Friday, Victoria Day, Canada Day, Heritage Day, Labour Day, Thanksgiving Day, Remembrance Day, Christmas Day, and Boxing Day.

15 “**STS**” or “**Supply Transmission Service**” means the service provided under Rate Schedule Supply Transmission Service.

20 “**STS Capacity**” means the Contract Capacity as set out in the System Access Service Agreement for Supply Transmission Service.

25 “**System Access Service**” has the meaning ascribed to it in the Act.

30 “**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.

35 “**System Access Service Agreement**” means an agreement, in the form made available by the AESO, entered into between the AESO and a Customer for System Access Service.

40 “**System Contribution**” means the amount required to be paid by Customers taking service under Rate Schedule STS pursuant to Article 9.11 hereof.

45 “**System Security**” means the ability of the AIES to withstand events such as electric short circuits, unanticipated loss of AIES components, and switching operations without experiencing cascading loss of AIES components or uncontrolled loss of load.

50 “**Tariff**” means these Terms and Conditions and Appendices attached hereto and the Rate Schedules as approved by the EUB.

55 “**TFO**” or “**Transmission Facilities Owner**” has the meaning ascribed to it in the Act.

60 “**TMR**” or “**Transmission Must-Run**” means Constrained On dispatch of a Generating Unit to a specific level in accordance with a Dispatch Instruction issued to maintain System Security.

5 “**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, currently contained in the 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.

20 “**Transmission Regulation**” means the Transmission Regulation, A.R. 174/2004, as amended from time to time.

25 “**UFLS**” or “**Under-Frequency Load Shedding Credit**” means the under-frequency load shedding provisions as set forth in Rate Schedule Demand Under-Frequency Load Shedding and the credits therefor.

30 “**Western Interconnection**” means the area comprising those states and provinces, or portions thereof, in Western Canada, Northern Mexico, and the Western United States in which members of the WECC operate synchronously connected transmission systems.

“**WECC**” means the Western Electricity Coordinating Council and any successor organization.

35 1.2 Unless otherwise expressly provided, any definition of a word or expression in the Act shall apply to the use of such word or expression in this Tariff.



ARTICLE 2 APPLICATION OF TARIFF

2.1 **Tariff Application**

5 This Tariff sets forth the rates and Terms and Conditions of Service under which the AESO will provide System Access Service to its Customers. By accepting service from the AESO, a Customer is deemed to have accepted this Tariff. In the event of any conflicts between the Terms and Conditions and the Rate Schedules, the Terms and Conditions govern.

2.2 **EUB Approval**

10 This Tariff has been approved by the EUB, defines service to be delivered by the AESO and binds all of the AESO's Customers. This Tariff defines the basic rights of the AESO and all its Customers with respect to all services provided by the AESO.

2.3 **Effective Date**

15 This Tariff becomes effective on the later of January 1, 2006 or the first day of the month after the EUB approves it and remains in effect until replaced or amended pursuant to Section 124 of the Act.

2.4 **Powers Under the Act**

20 Nothing in this Tariff shall in any way restrict or limit the powers, duties, and responsibilities of the AESO as described in the Act.

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ARTICLE 3 PROVISION OF SYSTEM ACCESS SERVICE

3.1 Provision of Service

5 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
10 System Access Service Agreement contingent upon any applicable ISO Rules,
OPPs or Abnormal Operating Conditions as defined in the Transmission
Regulation.

3.2 Withholding Service

15 The AESO, at its sole discretion, may withhold, limit, or discontinue System
Access Service if the Customer fails to abide by this Tariff. If requested by the
Customer, the AESO will provide a written explanation for withholding, limiting, or
discontinuing System Access Service. Any such withholding, limiting, or
discontinuing will not relieve the Customer from its obligation to pay any rate,
20 charge, or other amount that has accrued, or is accruing, to the AESO.

3.3 Reliability Standards

25 The AESO will maintain the reliability of the AIES and the Western
Interconnection in accordance with the Reliability Standards.

3.4 Reasonable Exercise of Discretion

30 Where the AESO or a Customer is granted any discretion pursuant to these
terms and conditions (whether with respect to granting its consent or withholding
its consent to a particular matter or otherwise), the AESO, the Customer or both
will, in every instance, exercise its discretion acting reasonably.



ARTICLE 4 CUSTOMER INTERCONNECTION REQUIREMENTS

4.1 Compliance

5 All Customers must comply with the Transmission Interconnection Requirements.

4.2 Customer Facilities

10 All facilities interconnecting with the AIES on the Customer's side of the POD or POS are the responsibility of the Customer and the AESO has no responsibility in respect of service provided over Customer Facilities.

4.3 Use of Service

15 No Customer or any other person may rearrange, disconnect, remove, interconnect with, or otherwise interfere with any transmission facility without the AESO's prior written consent.

4.4 Generating Units

20 Any Customer whose facilities include a Generating Unit which is operated in parallel to the electric system, whether connected at a transmission voltage or a distribution voltage, must have, for all hours in which the Generating Unit is operating, a PSS in service and an AVR operated in a voltage control mode. Any Customer that has a Generating Unit connected to the electric system without a PSS in service, or that has an AVR operating in any condition other than Voltage control, must notify the AESO of those conditions. The Customer must report to the AESO on a monthly basis, no later than the 5th Business Day of the month following the month to which the report relates, the AVR operation (voltage control or other) and PSS in-service periods for the preceding month. In the event that the AESO becomes aware of a failure to comply with this requirement, the AESO shall report the non-compliance to the WECC and any penalties assessed by the WECC that result from the non-compliance will be borne by the relevant Customer. Article 4.4 does not apply to Generating Units that are exempt from PSS requirements in accordance with WECC policy.

35 If the AESO requires PSS or AVR to be added to a currently regulated generator in the future, the AESO will pay any costs prudently incurred in the installation of the PSS or AVR and will recover prudently incurred costs from tariff(s) approved by the EUB. In the event the EUB determines that costs incurred by the currently regulated generators in the installation of the PSS or AVR cannot be recovered in rates charged by the AESO, then the Customer who has received the benefit of such amounts shall reimburse the AESO for such amounts. If the excitation system of an existing regulated or unregulated generator to which Article 4.4 does not apply is rebuilt or replaced, the new excitation system must be suitable for PSS, and a PSS/AVR must be installed.



4.5 **Effect of Non-Compliance**

Failure to comply with the Transmission Interconnection Requirements or Reliability Standards may result in the AESO withholding, suspending or terminating System Access Service. Where non-compliance with the Transmission Interconnection Requirements, Reliability Standards or the requirements of Article 4.4 would not have a detrimental affect on system reliability, the AESO may, in its sole discretion, waive compliance therewith for any existing Customer for whom, in the AESO's reasonable opinion, the imposition thereof would create severe hardship or unnecessary costs.

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ARTICLE 5 SYSTEM ACCESS APPLICATION

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

- 5 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.
- 10 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.
- 15 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.
- 20 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**

- 25 a) Applications for new System Access Service shall be made to the AESO and include an interconnection proposal, prepared by the Distributor and TFO.
- 30 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.
- 35 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**

- 40 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.

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

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- 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.

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5.4 Application to the AESO

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At the sole discretion of the AESO and only in exceptional circumstances, the Customer may proceed with the application for System Access Service through the AESO and, in conjunction therewith, must provide the information, financial security, and Construction Commitment Agreement required by the AESO.

5.5 Loss Factor Calculations and Other Studies

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A Customer or potential Customer that requests a preliminary loss factor calculation (only) must complete a loss factor calculation application form and pay the AESO a non-refundable fee of twenty-five hundred dollars (\$2,500). For additional services requested by the Customer that the AESO agrees to perform, the Customer must pay the AESO's actual costs to prepare and provide the requested information. The AESO will conduct all detailed studies in the order that payment is received.

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5.6 Facility Changes

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The AESO is not liable to any Customer or potential Customer for changes to the actual or planned facilities that occur between the date upon which the TFO or the AESO, as the case may be, issues the Project Specifications and the date upon which the Customer commits, in writing, to construction of the applied-for System Access Service.

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5.7 System Application Disputes

Disputes in respect of a Customer System Application must be referred to the AESO, in writing. The AESO will review the dispute and provide the Customer and any other affected parties with a proposed resolution within 30 Business Days of receipt thereof. In the event mutual agreement cannot be reached, any

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of the affected parties may then enter into the Dispute Resolution process as set out in Article 19 of this Tariff.

ARTICLE 6 SECURITY AND CUSTOMER AGREEMENTS

6.1 Construction

5 The AESO will arrange construction of new facilities only after the Customer has satisfied all necessary requirements in Article 5 and this Article 6.

6.2 Security for New Transmission Facilities

10 (a) If requested by the AESO, the Customer must provide security in an amount determined by the AESO, which amount will not exceed the estimated cost of construction. Security must be in the form of a guarantee, cash deposit, or an irrevocable letter of credit from a Canadian chartered bank, credit union, trust company, or other financial institution with a minimum A- credit rating as determined by Standard & Poor's or equivalent credit rating agency. The security must be satisfactory to the AESO, at its sole discretion, in form, substance, and amount.

15 (b) The AESO may request, at its sole discretion, at any time after execution of the Customer Commitment Agreement, additional or replacement security based on the AESO's estimate of the appropriate security required. Required additional or replacement security must be provided to the AESO within two business days of such request. Customers must report any event of default for borrowed funds or material adverse changes in their financial position to the AESO within two Business Days of such event.

20 (c) Security will not be required for transmission facilities requested by distributors regulated by the EUB.

6.3 Effect of Non-Compliance

30 If the Customer fails to provide adequate security as requested by the AESO, the AESO may immediately withhold or suspend the Customer's System Access Service pursuant to Article 3.2. 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.

6.4 Cancellations

35 (a) If new transmission facilities are no longer required for any reason after the Construction Commitment Agreement is executed, the Customer must pay to the AESO all costs incurred in the procurement and construction of facilities as of the termination date, all cancellation costs, penalties, and other related costs including those for material salvage and reclamation of the construction site. If the Customer fails to make payment on the payment due date, the AESO at its discretion may realize on any security provided by the Customer.

40 (b) The AESO may, but is not required to, deduct any amounts owing by the AESO to the Customer under any agreement between the AESO and the

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Customer on partial or full (as the case may be) satisfaction of such costs, penalties or other claims. Such amounts may include, but are not limited to, debts, liquidated demands, unliquidated demands, damages or other obligations.

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6.5 **System Access Service Agreement**

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Prior to Commissioning of new facilities, the Customer for whom the transmission facilities were built must execute a System Access Service Agreement for each POD or POS. The AESO will provide System Access Service during Commissioning at the Rate Schedule named in the System Access Service Agreement.

ARTICLE 7 METERING

7.1 Metering Standards

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

7.2 Meter Testing

10 (a) The Customer may request that the AESO arrange for any Metering Equipment testing including, at the Customer's cost, the calibration of any Non-Dispensated Metering Equipment to the System Accuracy Standard. If the Customer requests a test and the meter is subsequently found to be accurate within the System Accuracy Standard, then the Customer will pay for the cost of the testing as invoiced in its next Statement of Accounts.

15 (b) The AESO may require testing of Metering Equipment at any time. If the Metering Equipment meets the System Accuracy Standard, the AESO will bear the cost of such testing. Otherwise, the Customer will pay for the cost of testing and any necessary recalibration.

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7.3 Access

The Customer must allow the AESO, including its Representatives, access to enter the Customer's premises, at any reasonable time and at the Customer's cost, to read or install Metering Equipment thereon.

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7.4 Direction to Install Metering

The AESO may require the Customer to install Metering Equipment on the Customer's premises, at the Customer's sole cost. If the Customer fails to comply with such requirement in a timely manner, the AESO may, at the Customer's sole cost, enter and install Metering Equipment on the Customer's premises.

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7.5 Meter Data

35 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.

7.6 Metering Signals

40 Metering signals in the form of energy pulses, reactive energy pulses, and analog values of energy and reactive energy can be provided to the Customer, upon written request and at the Customer's cost. This cost will be included in the Customer's Statement of Accounts.

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7.7 **Effect of Non-Compliance**

Notwithstanding Article 3.2, the AESO will not withhold, suspend or terminate System Access Service unless and until:

- (a) the metering non-compliance has first been referred to the dispute resolution procedures found in Article 19,
- (b) the Customer has failed to adhere to any resolution mutually achieved or the decision of an arbitrator, as the case may be, in a timely manner, and
- (c) the AESO has provided the Customer with five days prior written notice of its intention to withhold, suspend, or terminate System Access Service.

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ARTICLE 8 PROVISION OF INFORMATION BY CUSTOMERS

8.1 System Access Information

Customers must provide, upon request, all information that the AESO requires in order to discharge its duties and functions under the Act or in compliance with any external agency's reporting requirements. Such information includes, but is not limited to:

- (a) information required by the AESO in respect of new or expanding System Access Service;
- (b) technical information during construction and prior to energization (pre-commissioning information requirements can be obtained from the AESO); and
- (c) Metering Equipment information outlined in Appendix A.

8.2 Forecast Information

On October 1st of each calendar year and whenever new information arises, all Customers must provide the AESO with:

- (a) a copy of the Customer's operating procedures;
- (b) a schedule of planned or maintenance outages for the following two calendar years; and
- (c) forecast information for the following five years, including:
 - (i) forecast Maximum Contract Capacity by POD or POS by month,
 - (ii) the location and size of any new POD and POS required, and
 - (iii) the name and location of existing POD and POS which may no longer be required.

The appropriate forms for provision of forecast and update information can be obtained from the AESO.

8.3 Effect of Non-Compliance

Failure to provide information that may have an impact on safety or system security will result in suspension, termination or delay of System Access Service until such time that the information is provided to the AESO.

The AESO is not responsible for any delay, interruption, damage or other problems caused by a delay in the provision of information required from a Customer.

ARTICLE 9 CUSTOMER AND SYSTEM CONTRIBUTION POLICY

9.1 Service Requirements

In considering requests to provide service to a new POC, or to increase the capacity of or improve the service to an existing POC, the AESO will determine the appropriate means of delivering the requested service.

- (a) If the Customer's request primarily represents a shift of supply or demand from an existing POC, then the Customer will pay the full cost of the transmission upgrade or extension ("the project")
- (b) If the AESO determines that the most economic option for providing service to a Customer is a facility other than a transmission facility (such as a distribution-level extension or isolated generation), then the customer will pay the difference in cost between the most economic option and the transmission upgrade or extension in addition to any customer contribution required under Articles 9.3 through 9.6.

Otherwise:

- (c) for a Point of Delivery Customer, the Customer's contribution to project costs will be determined in accordance with Articles 9.3 through 9.6, and
- (d) for a Point of Supply Customer, the Customer's contribution to project costs will be determined in accordance with Articles 9.3 through 9.6, and the Customer's System Contribution will be determined in accordance with Article 9.11.

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.

9.3 Classification of System and Customer-Related Costs

The AESO will classify project costs as either system-related costs or Customer-related costs, as follows.

- (a) For a Point of Delivery Customer, subject to Article 9.3(c), Customer-related costs are those costs of a contiguous project in respect of Radial transmission extensions and enhancements at existing adjacent substations. Such costs will normally include the point of interconnection, new transmission line, communication at the point of interconnection, communication enhancements at adjacent substations, a new breaker at an existing substation if required, and other enhancements required to complete the customer's interconnection.
- (b) For a Point of Supply Customer, subject to Article 9.3(c), Customer-related costs are those costs of a contiguous project in respect of Radial

transmission extensions. Such costs will normally include the point of interconnection, new transmission line, communications at the point of interconnection back to the existing system, and a new breaker at an existing substation if required.

- 5 (c) System-related costs are those project costs associated with:
- (i) Looped transmission facilities;
 - (ii) Radial transmission extensions if the transmission development plan (as that plan exists on the date the project is Commissioned) proposes that the Radial transmission extension becomes Looped within five years. The Customer will pay the cost of advancing that part of the project from the date established in the transmission development plan, calculated as the difference between the present values of the capital costs of the advanced and as-planned projects using the discount rate as determined under Article 9.14; and
 - (iii) Where, in the sole opinion of the AESO, economics or system planning dictate that a facility larger than that required to serve the Customer is to be installed, then the AESO will classify that portion of the project deemed to be in excess of the Customer's needs as system-related costs. As the need to serve additional POCs arises, these system-related costs may be reclassified as Customer-related costs and allocated to the new Customers. The capacity between the Customer's requirements and the minimum size of facilities required to serve the Customer is not considered to be in excess of the Customer's requirements.
- 20 (d) Where the Customer requests an interconnection configuration that, in the sole opinion of the AESO, exceeds AESO Standard Facilities, the Customer must pay all customer and system costs in excess of AESO Standard Facilities.

30 **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.

35 **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:

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

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.

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 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.

(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.

(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

5 (iv) the DTS contract term = 5 to 20 years, as determined by the Customer;

and

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

9.7 Staged Load & Contract Capacity Increases

15 (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:

20 (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;

25 (iii) The discount rate used in the present value calculation of Article 9.7(a) shall be determined in accordance with Article 9.14.

30 (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:

35 (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.

9.8 Changes to Project Costs

40 The cost estimate used in the calculation of project costs will be based on certain assumptions including, but not limited to, assumptions about the method of construction, the routing of facilities, and the approvals and rights of way required to serve the Customer in accordance with the Customer's requests. In the sole opinion of the AESO, where a request for service is changed by a Customer or
45 any assumptions are changed for reasons beyond the reasonable control of the

AESO or the TFO, and a variance in the cost of the required facilities over the original estimate results, then:

- (a) subject to (b), where there is an increase in the Customer Contribution, this amount is immediately payable to the AESO, or
- (b) if feasible, the Customer and the AESO may modify the DTS System Access Service Agreement to adjust the contract term and/or the Contract Capacity, or
- (c) the Customer will have the right to cancel the request for service by paying to the AESO, and/or the TFO, all costs then incurred or required to be incurred to discharge the AESO, and/or the TFO, of all obligations and to satisfactorily cancel the request for System Access Service.

9.9 Changes to Customer Contribution

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.

9.10 Shared Facilities

- (a) If the AESO installs facilities to serve a Customer that is required to pay a contribution, and then uses those facilities to serve other Customers within 20 years of their Commissioning, the AESO will adjust the original

Customer's contribution and assess each of the new Customers a contribution, as follows:

- (i) the DTS contract terms of the original and new Customers;
- (ii) the Contract Capacities of the original and new Customers;
- (iii) the extent of shared facilities; and
- (iv) the time interval between the Commissioning of the original and new Customers.

(b) If the interval described in (a)(iv) is not greater than five years, then the original Customer is eligible for the full amount of the adjustment. If the interval is greater than five years, then for the remaining 15 years the adjustment will be determined on a straight-line, declining-balance basis.

(c) Commencing in year 11 any project whose remaining contribution adjustment is less than \$50,000 shall be deemed to have an adjustment balance of zero, and no further refunds shall be due.

(d) An adjustment as described above will also apply to situations in which the AESO subsequently deems that all or part of an original Customer's facilities have become system-related.

9.11 Determination of System Contribution

(a) In addition to the Customer Contribution determined in Articles 9.3 through 9.6, a Customer taking service under Rate STS is required to pay a System Contribution for:

- (i) new STS Capacity requirements at a new Point of Supply, and
- (ii) new STS Capacity requirements at an existing Point of Supply where such additional requirements are the result of the addition of a new Generating Unit.

(b) The System Contribution is the sum of the following:

- (i) \$10,000/MW multiplied by the amount of new STS Contract Capacity, plus
- (ii) \$40,000/MW multiplied by the amount of new STS Contract Capacity multiplied by the Customer's System Contribution Factor. System Contribution Factors will be determined by the AESO for areas of the transmission system where generation exceeds load in accordance with Section 17 of the Transmission Regulation, and will be made publicly available by the AESO in advance of their effective dates.

(c) System Contributions are not required for STS Capacity requirements for which a System Access Service Agreement was signed before January 1, 2006.

9.12 Refund of System Contribution

(a) A Customer's System Contribution will be refunded to the Customer if the Customer's generating unit meets the ISO Rules regarding satisfactory annual performance, in accordance with the provisions of this Article 9.12.

- 5 (b) The System Contribution will be refunded in annual amounts within a maximum of 10 calendar years following the date it was paid, but not before the planned Commercial Operation date of the generating unit. The planned Commercial Operation date is the date requested by the Customer and agreed to by the AESO at the time of payment of the System Contribution. The planned Commercial Operation date may be adjusted due to delays in the availability of System Access Service clearly attributable to matters for which the AESO or the TFO is reasonably accountable.
- 10 (c) A base amount will be determined by dividing the System Contribution by the number of years in the "Refund Period". The Refund Period is the period from January 1 following the planned Commercial Operation date of Article 9.12(b) to December 31 of the tenth calendar year after the System Contribution was paid.
- 15 (i) The annual amount in the first half of the Refund Period will be 50% of the base amount.
- (ii) The annual amount in the last half of the Refund Period will be 150% of the base amount.
- 20 (iii) Where the Refund Period includes an odd number of calendar years, the annual amount in the mid-point year will be 100% of the base amount.
- (d) If Commercial Operation of the generating unit is delayed for any reason beyond December 31 of the year of the planned Commercial Operation date of Article 9.12(b), then for each calendar year or fraction thereof during the Refund Period that Commercial Operation is delayed, the annual amount for that year or fraction thereof will be forfeited.
- 25 (e) For each calendar year or fraction thereof during the Refund Period in which the ISO Rules regarding satisfactory annual performance are met after Commercial Operation of the generating unit, the Customer will receive a refund of the annual amount determined in (c) for that year or fraction thereof. If the ISO Rules regarding satisfactory annual performance are not met, the annual amount for that year or fraction thereof will be forfeited.
- 30 (f) For each year of the Refund Period, the Customer must report the unit's annual performance to the AESO by January 31 of the following year.
- 35 (g) For each year of the Refund Period where the Customer has reported annual performance and where the ISO Rules regarding satisfactory annual performance are met, the AESO will pay the System Contribution refund annual amount to the Customer by February 28 of the following year.
- 40

9.13 Limitations

45 The AESO reserves the right to exercise its discretion, acting reasonably, in the application of the contribution policy. Without limiting the generality of this discretion, the AESO may:

- 5
- (a) Determine costs to be system-related in certain circumstances that might, under strict application of the foregoing, have been classified as Customer-related.
- (b) Determine that a refund of a Customer Contribution or a System Contribution may not be given or that a refund may be deferred pending the attainment of certain specified conditions. Upon attainment of the specified conditions, the Customer may be eligible for a full or partial refund.
- 10 (c) Determine that a refund of a Customer Contribution or a System Contribution must be returned to the AESO where it is demonstrated that an error was made or that an inappropriate refund was given.

15 **9.14 Discount Rate**

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

- 20 (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:

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

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.

- 30 (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.

35 **9.15 Miscellaneous**

- (a) Where relocation of transmission facilities is required, the AESO will ensure that all reasonable costs in relocating any transmission facilities are paid for by the Customer.
- (b) Where new facilities between adjacent Control Areas are required, the cost of such facilities will be shared equally between the AESO and the party responsible for costs in the other Control Area.
- 40 (c) The Customer must pay the cost of any Customer requested facilities that, in the sole opinion of the AESO, exceed the AESO Standard Facilities required to provide service to the Customer.

ARTICLE 10 DEMAND OPPORTUNITY SERVICE

10.1 Eligibility

5 To qualify for Demand Opportunity Service, the Customer must meet the commercial eligibility criteria and submit the required applications as set out in the Demand Opportunity Service Business Practices. The AESO must be satisfied that the Customer's use of the Demand Opportunity Service would not proceed on any other applicable rate. Eligibility is also contingent upon sufficient transmission capacity and suitable system operation conditions capable of
10 accommodating the request.

10.2 Fees

15 In conjunction with the DOS Stage 2 application, which must be submitted at least 30 days prior to taking Demand Opportunity Service, the Customer must pay a non-refundable \$5,000 fee to the AESO for evaluation of the Customer's commercial eligibility for DOS.

10.3 Recallable Service

20 Demand Opportunity Service is recallable:
(a) in accordance with the Rate Schedules;
(b) in accordance with the provisions of Article 17; and
(c) whenever sufficient transmission system capacity becomes temporarily or permanently unavailable.
25

10.4 Metered Energy

30 Any Metered Energy taken by the Customer in a Billing Period that exceeds the aggregate Metered Energy allowed under the Customer's Demand Opportunity Service System Access Service Agreements will be added to the Customer's DTS Metered Energy in the same Billing Period. Where the Customer has not executed a System Access Service Agreement for DTS services, the Customer will be deemed to have executed such an agreement effective with the beginning of the relevant Billing Period.

10.5 Effect of Disqualification

35 From time to time, the AESO may audit the Customer's eligibility for Demand Opportunity Service. If the AESO finds that the Customer no longer qualifies for Demand Opportunity Service, the Customer will be deemed to have executed an agreement for Non-Recallable Service effective on the date of disqualification and the AESO will terminate billing under a DOS Rate Schedule. The AESO
40 may, in its sole discretion, recover retroactive amounts for the period during which such Customer did not qualify for, but was billed under, a DOS Rate Schedule.

ARTICLE 11 ANCILLARY SERVICES

- 5 11.1 During a state in which the AESO lacks sufficient Ancillary Services and for the purposes of maintaining system security, the AESO may require a Customer to operate its generating unit to provide Ancillary Services. For the period during which the conscription persists, Customers required by AESO to provide Ancillary Services shall be compensated as provided in Article 11.2 or Article 11.3, whichever is applicable. Notwithstanding the foregoing, the compensation shall not exceed the Maximum TMR Compensation.
- 10
- 11.2 If at the time the Customer is directed to provide Ancillary Services the Customer has an existing contract with the AESO, either directly or indirectly, to provide the Ancillary Services in question from the directed facility (the "Existing Contract"), then the amount to be paid to the Customer by the AESO for the Ancillary Services shall be determined according to the terms of the Existing Contract.
- 15
- 11.3 If at the time the Customer is directed to provide an Ancillary Service, the Customer does not have an Existing Contract, then the amount to be paid to the Customer by the AESO in respect of each Ancillary Service provided shall be the greater of the following monthly amounts. Each amount is the sum for the month of hourly compensation amounts.
- 20
- (a) The product of the MW hour directed and the highest price paid in the hour to Customers providing the same Ancillary Service pursuant to Article 11.2 provided the service was not a TMR service and that the Existing Contract was the result of a competitive process conducted in the prior 12 months; or
- 25
- (b) For thermal units, the sum of the following:
- 30
- (i) An out-of-merit payment, when Pool Price is less than the Benchmark Price; (Benchmark Price minus Pool Price) multiplied by the energy generated (MWh) in compliance with the directive; plus
- 35
- (ii) A capacity payment equal to Average Monthly Fixed cost multiplied by Directed Out-of-Merit Ratio as defined below.
- 40
- (c) The verifiable net opportunity cost related to foregone electricity sales incurred by the Customer to supply the directed Ancillary Services taking into account all offsetting revenues from any source, such as pool energy receipts.



11.4 For the purposes of this Article, MW directed means the amount of an Ancillary Service (expressed in MW) that is provided by the Customer in response to a direction by the AESO.
Defined Terms:

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Benchmark Price (\$/MWh) equals (Heat Rate multiplied by Fuel Cost) plus Variable STS Charges plus Variable O&M Proxy where:

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Heat Rate (GJ/MWh) equals the actual heat rate of the Customer's generating unit during the period when the unit was complying with the directive.

15

Fuel Cost for a gas generating unit is Market Gas Price (\$/GJ) is the "Daily Spot Price at AECO C and NIT", excluding weekends, as published in Canadian Gas Price Reporter, for natural gas on the applicable day.

Fuel Cost for a coal generating unit will be provided by the Customer.

20

Variable STS Charges (\$/MWh) is the actual cost of all variable charges from Rate Schedule STS of the AESO's applicable tariff, including the applicable loss factor charge or credit.

Variable O&M Proxy (\$/MWh) is the all in cost, fixed at \$4/MWh, of providing incremental output from the unit, excluding fuel costs and STS charges.

25

Directed Out-of-Merit Ratio (%) is the ratio for all hours of the month, including hours when TMR service was not directed, of (1) the number of hours in the month when TMR service was directed and the Benchmark price exceeded the pool price; to (2) the sum of the number of hours in (1) above, and the number of remaining hours in the month that the pool price exceeded the average benchmark price for the month. The number of hours in the month that the pool price exceeds the average benchmark will be reasonably adjusted to reflect the physical characteristics of the Customer's unit and its ability to capture the "in-merit" hours.

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Average Monthly Fixed Cost is equal to the maximum amount of TMR compensation as defined for purposes of Section 23 of the Transmission Regulation, before prorating for joint use, and less the variable portion of such costs, a portion of all of which may be included in the Benchmark Price.



ARTICLE 12 UNDER-FREQUENCY LOAD SHEDDING

12.1 Requirement to Supply

5 From and after the effective date of the Tariff, certain Customers may be eligible and required to provide under-frequency load shedding. The provisions with respect to those requirements, and the credits therefore, are set out in Rate Schedule Under-Frequency Load Shedding (UFLS).

10 12.2 Effect of Non-Compliance

15 Failure by any Customer to whom UFLS applies to comply with the requirements thereof may cause the AESO to, at its sole discretion, withhold, limit or discontinue System Access Service to such Customer. Nothing in this paragraph affects or derogates from the right of the WECC to levy penalties or the obligation of the Customer, if any, to pay such penalties as a result of failure to provide Under-Frequency Load Shedding to the AESO.

ARTICLE 13 CONTRACT CAPACITY INCREASES & ALLOCATION

13.1 Available Capacity

- 5 (a) The AESO will Allocate Contract Capacity for a new or expanding POC according to available AIES capacity as of the date the Customer executes a related Construction Commitment Agreement, as set out in Article 5. The AESO will inform the Customer of any AIES constraints in respect of a new or expanding POC.
- 10 (b) For the purposes of this Article 13, "Allocate Contract Capacity" means that the AESO will deem the Customer's project to be on the system in priority with other projects as of the date set out in paragraph (a), above.

13.2 Requirement of Customer to Act

- 15 (a) The AESO and the Customer, in conjunction with the TFO, will agree on critical milestones with respect to project completion.
- (b) For STS customers, milestones will include but not be limited to payment of the System Contribution determined under Article 9.11:
- 20 (i) within 90 days after EUB approval of the local interconnection facilities required to facilitate the interconnection of the STS Capacity; or
- (ii) if construction of local interconnection facilities is not required to facilitate the interconnection of the STS Capacity at an existing POS, within 90 days after execution of an amended System Access Service Agreement for the POS.
- 25 (c) If the Customer fails to meet such milestones, the AESO may:
- (i) cancel, and require the Customer to resubmit, the Customer's application for System Access Service;
- 30 (ii) re-allocate the subject Contract Capacity to another applicant with an in-service date prior to the Customer's revised in-service date; or
- (iii) proceed, with no modification to the allocated Contract Capacity, with the Customer's original application for System Access Service on the basis of amended milestones, as agreed by the
- 35 AESO.

13.3 Limit to Contract Capacity

40 The Contract Capacity for a new POS established by the AESO may not exceed the sum of the MCR of all generators connected to the AIES by the new POS less the sum of all gross loads that offset the energy delivered to the AIES from that POS under normal operating conditions.

13.4 Notice of Contract Capacity Increases

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- 10
- 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.

13.5 Metered Demand Limitations

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- 25
- 30
- (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:
 - (i) the Rated Capacity of any transmission facilities comprising its interconnection; or
 - (ii) the Physical Capacity of any transmission facilities comprising its interconnection.

In the event 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.
 - (b) A DTS Customer may temporarily exceed the level stipulated in subparagraph 13.5(a)(i) only where it has in place a System Access Service Agreement for an Opportunity Service at the applicable POD.
 - (c) Subject to paragraph 13.3, an STS customer may temporarily exceed the level stipulated in subparagraph 13.5(a)(i), with the AESO's consent obtained on a minimum twenty-four hours' notice, provided that the AESO determines that the transmission system can safely accommodate the proposed energy without risk of disturbance to other AESO customers.

ARTICLE 14 REDUCTIONS OR TERMINATION OF CONTRACT CAPACITY

14.1 Eligibility

5 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

10 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

15 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.

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

25 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

30 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.

14.5 Review of STS Contract Capacity

40 At least once per year, the AESO will review the Contract Capacity of STS customers. The AESO may reduce a customer's STS Contract Capacity to:

- (a) The mean metered power delivered to the AIES in the preceding twelve (12) months; or
- (b) For low capacity factor generators, the mean metered power delivered to the AIES over recurrent periods that are shorter than twelve (12) months, as determined by the AESO

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if such deliveries are more than 10% below the existing Contract Capacity or as mutually agreed between the Customer and the AESO.

14.6 **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 the Appendix to the Rate Schedules.
- 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.
- 15 (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
- 20 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.
- 25 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.
- 30 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.

ARTICLE 15 FINANCIAL SECURITY, BILLING, AND PAYMENT TERMS

15.1 Credit Requirements

- 5 (a) The Customer must comply with the AESO's financial security requirements. Prior to receiving service, the Customer must provide the AESO with all financial information that the AESO reasonably requests in order to establish the financial security required from the Customer.
- 10 (b) If requested by the AESO, the Customer must provide financial security in an amount of up to three months' payment in advance for System Access Service. The amount of the financial security will be estimated by the AESO at its sole discretion based on the Customer's historic use or on an estimate where actual use is not available. Such security must be in a form satisfactory to the AESO including but not limited to a guarantee, cash deposit, or an irrevocable letter of credit from a Canadian Chartered Bank, credit union, trust company, or other financial institution with a minimum senior unsecured long-term debt A- credit rating or equivalent as determined by Standard & Poor's or equivalent credit rating agency.
- 15 (c) The AESO may request, at its sole discretion, at any time after initial granting of service, additional or replacement security based on the AESO's estimate of the appropriate security required. Required additional or replacement security must be provided to the AESO within two business days of such request. Customers must report any event of default for borrowed funds or material adverse changes in their financial position to the AESO within two business days of such event.
- 20
- 25

15.2 Effect of Non-Compliance

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

- 30 (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
- 35 (b) 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

15.3 Billing Procedures

- 40 (a) The AESO issues Statements of Account which may include:
- 45 (i) amounts determined on an initial basis in the month following energy flow and no later than fifteen (15) Business Days after the end of the Billing Period;

- (ii) amounts determined on an interim basis in the third month following energy flow; and
- (iii) amounts determined on a final basis in the seventh month following energy flow.

- 5 (b) From time to time the AESO may review a Statement of Account issued in accordance with Article 15.3(a) and may issue a new Statement of Account following that review.
- (c) The AESO may choose not to issue Statements of Account on an interim or final basis that result in a charge or refund of less than \$1,000.
- 10 (d) The AESO may use estimated values to produce a Statement of Account when Metered Demand or Metered Energy data is not available or is incomplete, when Metering Equipment fails, or when the data is under Dispute. The AESO may also use estimated values to produce a Statement of Account if the AESO's billing and settlement system is unable to produce a Statement of Account. In the event that a Statement of Account is based on estimated values, an adjustment will be made on a subsequent Statement of Account issued in accordance with Article 15.1(a) or 15.1(b) to reflect the use of actual or more appropriate estimated values.
- 15 (e) The AESO may, but is not required to, deduct from the Statements of Account any amounts owing by the AESO to the Customer or its Affiliates.
- 20

15.4 **Totalized Billing**

25 Effective January 1, 2002, where a Customer is an industrial facility with multiple POCs, the AESO may totalize the POCs and produce one Statement of Account for the Customer. The AESO will base its decision to totalize on a review of the economics of providing more than one POC, reclassification of the site as an EUB designated industrial system, or the existence of a credible transmission bypass alternative.

30

15.5 **Adjustments**

35 When a Customer requests that a Statement of Account issued in accordance with Article 15.3 be recalculated and reissued forty-five (45) days or more after end of the applicable billing period as a result of:

- (i) unavailable or incomplete meter data, or
- (ii) inaccurate estimates of meter data,
- (iii) reconciliation with updated estimates of meter data,

40 the AESO will recover the cost of recalculating and reissuing the affected Statement of Account from the Customer taking service from the relevant Metering Equipment. The Customer must pay to the AESO \$1,000 for each recalculated and reissued Statement of Account.

15.6 Request for Billing Data

Data required to verify any billing information provided by the AESO may be made available to Customers during regular business hours and the Customer will be responsible to pay for all of the costs of retrieval and provision of the data.

5

15.7 Payment Terms

Notwithstanding any unresolved Dispute between the AESO and the Customer, the Customer must pay the entire amount due, as shown on the Statement of Account, no later than the twentieth Business Day after the end of the Billing Period. Payment must be made by way of electronic funds transfer or wire transfer to the bank account specified by the AESO.

10

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.

15

- (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.
- (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%.

20

25

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.

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ARTICLE 16 PEAK METERED DEMAND WAIVER

16.1 Peak Metered Demand Waivers

5 The AESO may, in its sole discretion, waive Metered Demand for the purposes of calculating the Billing Capacity when the Metered Demand was caused by one of the following.

- 10 (a) For all Customers:
 - (i) Commissioning;
 - (ii) activities required to repair and maintain transmission facilities;
 - (iii) an event of Force Majeure;
 - (iv) compliance with a Dispatch Instruction from the AESO during an Emergency; or
 - 15 (v) load restoration activities following an outage of transmission or distribution facilities or caused by an Emergency on the transmission system.
- 20 (b) In addition for Distributors, pre-scheduled activities required to maintain distribution facilities, provided the Customer has furnished the AESO with written notice at least twenty-four hours in advance of such activities, including reasonable detail describing the type of maintenance and the duration and extent of Metered Demand required to accommodate such activities.



ARTICLE 17 SERVICE INTERRUPTIONS AND FORCE MAJEURE

17.1 **Service Not Guaranteed**

- 5 Although precautions are taken to guard against System Access Service interruptions, the AESO does not guarantee uninterrupted System Access Service. For example interruptions may be caused by, but not limited to, the following:
- 10 (a) scheduled or planned facility maintenance activities;
 - (b) construction, commissioning and facility testing activities;
 - (c) unscheduled or unplanned events (such as, but not limited to, emergency equipment maintenance and Emergencies);
 - (d) Force Majeure;
 - 15 (e) breaches of obligations owed to the AESO by its suppliers or Customers;
or
 - (f) as otherwise expressly allowed by a Rate Schedule.

20 Whenever System Access Service has been interrupted, diminished or reduced for reasons other than a breach of this Tariff by the Customer, the AESO will make all reasonable efforts to ensure that service is restored as soon as practicable after the interruption, diminution or reduction.

17.2 **Interruptions for Construction, Commissioning, and Facility Testing**

25 The AESO will make all reasonable efforts to schedule construction, commissioning, or facility testing activities in conjunction with affected Customers' planned downtime but may, upon six months written notice, interrupt Customers' System Access Service to perform such activities.

17.3 **Continued Obligations**

30 The Customer's obligations to pay for System Access Service, to provide information, and to maintain Transmission Interconnection Requirements are not affected during, or as the result of, any event of Force Majeure or other System Access Service interruption expressly contemplated under this Tariff.



ARTICLE 18 LIMITATION OF LIABILITY

18.1 **Limitation of Liability**

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Notwithstanding anything to the contrary contained in these Terms and Conditions, no action lies against an AESO Person, and an AESO Person is not liable for any act or omission carried out or purportedly carried out in performing its obligations under this Tariff ("AESO Tariff Act") unless such AESO Tariff Act constitutes willful misconduct, negligence, breach of contract or, if the AESO

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Tariff Act is carried out by an AESO Person who is an individual, if such act is not carried out in good faith. If an AESO Person is liable to another person for an AESO Tariff Act, then the AESO Person is liable for only Direct Loss or Damage suffered or incurred by that other person.

ARTICLE 19 DISPUTE RESOLUTION

19.1 **Initiation of Disputes**

Disputes must be submitted, in writing, to the other party in a timely fashion, and clearly set out the subject of the Dispute including:

- (a) a description of the items under dispute,
- (b) the rationale for the Dispute, and
- (c) the time period over which the disputed items occurred.

19.2 **Continued Obligation**

Disputes will be referred to a senior officer from each of the AESO and the relevant Customer for resolution. Pending resolution of any Dispute, the AESO and the Customer will continue to perform their respective obligations under this Tariff.

19.3 **Arbitration**

If the Dispute has not been resolved within thirty (30) days after referral to the senior officers, either the AESO or the Customer may require, by written notice, that the Dispute be resolved through arbitration. The AESO shall advise the EUB of any matter going to arbitration within thirty days of the matter being referred to arbitration. The parties shall appoint a mutually satisfactory arbitrator within ten days of the notice to resolve the Dispute through arbitration. In the event that the parties cannot agree on a single arbitrator within ten (10) days, each party shall appoint an arbitrator within ten days thereafter by written notice, and the two arbitrators shall together appoint a third arbitrator. In the event that a tribunal is required, the third arbitrator shall be appointed within twenty (20) days of written notice for arbitration. The arbitrator or tribunal shall render a decision within thirty days of the last appointment. The AESO shall advise the EUB of the results of the arbitration within thirty days of the Arbitrator's decision. The AESO shall also furnish the EUB with a list of parties potentially affected by the results of the arbitration. The arbitration shall be conducted in accordance with the Arbitration Act (Alberta), as amended from time to time. In the event of a conflict between these Terms and Conditions and the Arbitration Act, these Terms and Conditions shall prevail.

Any interested party adversely and unduly affected by the decision of an arbitrator or a tribunal is entitled to make an application to the EUB requesting a clarification or change to these Terms and Conditions.

ARTICLE 20 CONFIDENTIALITY

20.1 Use of Confidential Information

The AESO,

- (a) shall not disclose the Confidential Information to any person except as permitted under this Tariff;
- (b) shall only use or reproduce the Confidential Information for the purpose for which it was disclosed or another purpose contemplated in this Tariff;
- (c) shall not permit unauthorized persons to have access to the Confidential Information; and
- (d) shall only disclose the Confidential Information to those Representatives who need to know the information and have been informed of the confidential nature of the Confidential Information.

20.2 Exceptions

Exceptions to the AESO's confidentiality obligations stated in Article 20.1 may be made:

- (a) if the relevant information is at the time generally and publicly available other than as a result of breach of confidence by the AESO;
- (b) if the person or persons who provided the relevant information consents to its disclosure, use, or reproduction;
- (c) to the extent the Confidential Information:
 - (i) must be disclosed by law to any agent, government or governmental body, authority or agency having jurisdiction over the AESO;
 - (ii) must be disclosed to the AESO for the purposes of the AESO fulfilling its duties under the Act; and
 - (iii) must be disclosed to a TFO for the purposes of the AESO fulfilling its duties under the Act. All information provided to a TFO shall be subject to the confidentiality provisions in the TFO's Terms and Conditions of service.
- (d) if required in connection with legal proceedings, arbitration, or other dispute resolution mechanism relating to this Tariff;
- (e) if required to protect the safety of personnel or equipment, or to protect the reliability of the AIES; or
- (f) if the relevant information is an unidentifiable component of an aggregate of information.

20.3 Requests for Disclosure

In the case of a request or demand for disclosure under Article 20.2(c)(i) or Article 20.2(d), the AESO will provide notice to those affected by the request or demand as soon as reasonably practicable, so as to afford the opportunity to challenge such request or demand or seek injunctive relief or protection from the request or demand.



20.4 Customer Obligations

No provision of this Tariff obligates the Customer to treat its own information and agreements with the AESO as confidential.

ARTICLE 21 MISCELLANEOUS

21.1 **Binding on the ISO**

5 Each respective System Access Service Agreement executed by the AESO hereunder will be binding on any subsequent ISO for the length of its term.

21.2 **Assignment**

10 A Customer may assign its System Access Service Agreement or any rights thereunder to another Customer who is qualified for the service available under such agreement, but only with the consent of the AESO, such consent not to be unreasonably withheld. In the event an STS or DTS contract 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
15 adjustments will be applied to the account of the assignee.

21.3 **Compliance With the AESO Directives**

20 Customers must comply with dispatches and directives of the AESO which are required for performance of Customers' obligations hereunder in real-time, including, without limitation, those related to Transmission Interconnection Requirements and provision of Ancillary Services.

21.4 **Notifications**

25 All notices given or served upon the AESO in accordance with this Tariff must be in writing and marked "Important" and given by personal service, email, telefax or by registered letter addressed to:

AESO
Attention: Manager, Customer Services – Transmission
30 2500, 330 – 5th Avenue SW
Calgary, Alberta T2P 0L4
Fax (403) 539-2949

35 All notices given or served upon the Customer in accordance with this Tariff must be in writing served by personal service, registered letter or telefax and sent to the address or addresses shown for such Customer in the relevant System Access Service Agreement.

21.5 **SPRDA Generating Units**

40 Generating Units constructed under the Small Power Research and Development Act (Alberta) ("SPRDA") are exempt from the provisions of Rate Schedule STS to the extent the volume of energy sales are conducted under contracts specifically executed pursuant to the provisions of the SPRDA.

APPENDIX A METERING EQUIPMENT INFORMATION

1. For each POS Meter:
 - (a) Company identification
 - (b) Meter type identification
 - (c) Meter serial number
 - (d) Date meter installed
 - (e) Date meter removed
 - (f) Number of elements
 - (g) Manufacturer
 - (h) Model
 - (i) Measurement Canada approval
 - (j) Past test dates
 - (k) Past results (pass/fail information only)
 - (l) Planned test dates

2. For each POS meter recorder:
 - (a) Record identification
 - (b) Recorder type
 - (c) Serial number
 - (d) Date installed
 - (e) Date removed
 - (f) Manufacturer
 - (g) Model
 - (h) Measurement Canada approval
 - (i) Past test dates
 - (j) Past results (pass/fail information only)
 - (k) Planned test dates

3. For each Current Transformer associated with POS metering:
 - (a) Company identification
 - (b) Transformer type
 - (c) Serial number
 - (d) Date installed
 - (e) Date removed
 - (f) Phase location
 - (g) Ratio
 - (h) Accuracy
 - (i) Manufacturer
 - (j) Model
 - (k) Measurement Canada approval



4. For each Potential Transformer associated with POS metering:
- (a) Company identification
 - (b) Transfer type
 - (c) Serial number
 - (d) Date installed
 - (e) Date removed
 - (f) Phase location
 - (g) Ratio
 - (h) Accuracy
 - (i) Manufacturer
 - (j) Model
 - (k) Measurement Canada approval

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APPENDIX B
SYSTEM ACCESS SERVICE AGREEMENT PROFORMAS

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System Access Service Agreement: Demand Transmission Service

System Access Service Agreement: Supply Transmission Service

System Access Service Agreement: Import Opportunity Service

System Access Service Agreement: Export Service – BC / Saskatchewan Interties

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System Access Service Agreement: Export Service – Alberta / Montana Intertie

System Access Service Agreement: Demand Opportunity Service

Construction Commitment Agreement



SYSTEM ACCESS SERVICE AGREEMENT DEMAND TRANSMISSION SERVICE

Date of Issue:

5 The following constitute the terms pursuant to which the Independent System Operator, operating as AESO shall provide System Access Service to the Customer. (Defined terms used herein without definition shall have the meanings ascribed thereto in the Terms and Conditions of the AESO's Tariff).

10 **1.0 TYPE OF SERVICE**

Service under this Agreement shall be provided pursuant to Rate Schedule Demand Transmission Service (DTS).

15 **2.0 POINT OF INTERCONNECTION WITH THE TRANSMISSION SYSTEM**

- a) Point of Delivery (POD): The POD shall be **Substation Name and Number**
- b) Location: **LSD: xx-xx-xx-WxM**

20 **3.0 CONTRACT CAPACITY**

xx MW Dates

25 **4.0 COMMISSIONING PERIOD FOR NEW FACILITIES, IF ANY:**

N/A

30 **5.0 EFFECTIVE DATE**

1 day of month

This agreement supercedes and replaces, as of the Effective Date, any DTS agreement for this POD at **Substation Name and Number**

35 **6.0 CUSTOMER CONTRIBUTION**

The Customer Contribution charge estimated to be \$NIL. This amount has been received by the AESO.

Minimum Term 5 years. The Customer Contribution and/or Minimum Term are subject to change based on final costs.

40 **7.0 RATES AND TERMS OF SERVICE**

The supply of System Access Service pursuant to this Agreement, and the Customer's obligations with respect to connection and supply of System Support Services, shall be subject to the AESO's Tariff, in particular to the Rate Schedule referenced under Paragraph 1.

45



SYSTEM ACCESS SERVICE AGREEMENT SUPPLY TRANSMISSION SERVICE

Date of Issue:

5 The following constitute the terms pursuant to which the Independent System Operator, operating as AESO shall provide System Access Service to the Customer. (Defined terms used herein without definition shall have the meanings ascribed thereto in the Terms and Conditions of the AESO's Tariff).

10 **1.0 TYPE OF SERVICE**

Service under this Agreement shall be provided pursuant to Rate Schedule Supply Transmission Service (STS).

15 **2.0 POINT OF INTERCONNECTION WITH THE TRANSMISSION SYSTEM**

- c) Point of Delivery (POS): The POS shall be **Substation Name and Number**
- d) Location: **LSD: xx-xx-xx-WxM**

20 **3.0 CONTRACT CAPACITY**

xx MW Dates

25 **4.0 COMMISSIONING PERIOD FOR NEW FACILITIES, IF ANY:**

N/A

30 **5.0 EFFECTIVE DATE**

1 day of month

This agreement supercedes and replaces, as of the Effective Date, any STS agreement for this POS at **Substation Name and Number**

35 **6.0 CUSTOMER & SYSTEM CONTRIBUTION**

The Customer Contribution charge estimated to be \$NIL. This amount has been received by the AESO.

Minimum Term 5 years. The Customer Contribution and/or Minimum Term are subject to change based on final costs.

40 **7.0 RATES AND TERMS OF SERVICE**

The supply of System Access Service pursuant to this Agreement, and the Customer's obligations with respect to connection and supply of System Support Services, shall be subject to the AESO's Tariff, in particular to the Rate Schedule referenced under Paragraph 1.

45



8.0 NOTICES

Notices sent to the Customer pursuant to this Agreement shall be as follows:

5 _____ Attention: _____
Address: _____

10 _____ Tel: _____
Fax: _____
Email: _____

By executing in the space below, the Customer and the AESO agree to the foregoing provisions.

15 **Independent System Operator, operating
as AESO**

20 Per: _____ Date: _____

Customer Name

25 Per: _____ Date: _____
Name: _____
Title: _____

30 Per: _____ Date: _____
Name: _____
Title: _____



**SYSTEM ACCESS SERVICE AGREEMENT
IMPORT OPPORTUNITY SERVICE**

Date of Issue:

5 The following constitute the terms pursuant to which the Independent System Operator, operating
as AESO shall provide System Access Service to the Customer. (Defined terms used herein
without definition shall have the meanings ascribed thereto in the Terms and Conditions of the
AESO's Tariff).

10

1. TYPE OF SERVICE

Service under this Agreement shall be pursuant to Rate Schedule Import Opportunity Service
(IOS).

15

2. POINT OF INTERCONNECTION WITH THE TRANSMISSION SYSTEM

British Columbia Intertie Saskatchewan Intertie

20

3. EFFECTIVE DATE

_____ 1, 200_

25

4. TERM

1 Year

30

5. RATES AND TERMS OF SERVICE

35

The supply of System Access Service under this Agreement, shall be pursuant to the AESO's
Tariff, in particular to the Rate Schedule referenced under Paragraph 1.

Market Access is contingent upon receipt of an executed System Access Service Agreement.



**SYSTEM ACCESS SERVICE AGREEMENT
EXPORT SERVICE - BC / SASKATCHEWAN INTERTIES**

Date of Issue:

5 The following constitute the terms pursuant to which the Independent System Operator, operating
as AESO shall provide System Access Service to the Customer. (Defined terms used herein
without definition shall have the meanings ascribed thereto in the Terms and Conditions of the
AESO's Tariff).

10

1. TYPE OF SERVICE

Service under this Agreement shall be pursuant to Rate Schedule Export Opportunity Service
(XOS).

15

2. POINT OF INTERCONNECTION WITH THE TRANSMISSION SYSTEM

British Columbia Intertie Saskatchewan Intertie

20

3. EFFECTIVE DATE

_____ 1, 200_

25

4. TERM

1 Year

30

5. RATES AND TERMS OF SERVICE

35

The supply of System Access Service under this Agreement, shall be pursuant to the AESO's
Tariff, in particular to the Rate Schedule referenced under Paragraph 1.

Market Access is contingent upon receipt of an executed System Access Service Agreement.



**SYSTEM ACCESS SERVICE AGREEMENT
EXPORT SERVICE – ALBERTA / MONTANA INTERTIE**

Date of Issue:

5 The following constitute the terms pursuant to which the Independent System Operator, operating
as AESO shall provide System Access Service to the Customer. (Defined terms used herein
without definition shall have the meanings ascribed thereto in the Terms and Conditions of the
AESO's Tariff).

10

6. TYPE OF SERVICE

Service under this Agreement shall be pursuant to Rate Schedule:

15

- Export Transmission Service (XTS)**
- Export Opportunity Service (1 hour): XOS 1 hour**
- Export Opportunity Service (1 month): XOS 1 month**

20

7. POINT OF INTERCONNECTION WITH THE TRANSMISSION SYSTEM

- British Columbia Intertie** **Saskatchewan Intertie**

25

8. EFFECTIVE DATE

_____ 1, 200_

30

9. TERM

35

10. RATES AND TERMS OF SERVICE

The supply of System Access Service under this Agreement, shall be pursuant to the AESO's
Tariff, in particular to the Rate Schedule referenced under Paragraph 1.

40

Market Access is contingent upon receipt of an executed System Access Service Agreement.



**SYSTEM ACCESS SERVICE AGREEMENT
EXPORT SERVICE**

Date of Issue:

5 The following constitute the terms pursuant to which the Independent System Operator, operating
as AESO shall provide System Access Service to the Customer. (Defined terms used herein
without definition shall have the meanings ascribed thereto in the Terms and Conditions of the
AESO's Tariff).

10

11. TYPE OF SERVICE

Service under this Agreement shall be pursuant to Rate Schedule:

15

- Merchant Transmission Service (MTS)**
- Merchant Opportunity Service (1 hour): MOS 1 hour**
- Merchant Opportunity Service (1 month): MOS 1 month**

20

12. POINT OF INTERCONNECTION WITH THE TRANSMISSION SYSTEM

- Alberta / Montana Intertie**

25

13. EFFECTIVE DATE

_____ 1, 200_

30

14. TERM

35

15. RATES AND TERMS OF SERVICE

The supply of System Access Service under this Agreement, shall be pursuant to the AESO's
Tariff, in particular to the Rate Schedule referenced under Paragraph 1.

40

Market Access is contingent upon receipt of an executed System Access Service Agreement.



System Access Service Agreement Demand Opportunity Service (DOS)

5

_____ - _____
Pre-qualification Number **Request number provided by Customer**

Check this box if this Request overlaps with a previous DOS Request or DOS Transaction

The Customer is to complete this document, and fax it to the System Controller to request a DOS Transaction. The Customer must follow up by phoning the SC.

10

Demand Opportunity Service (DOS), according to the terms herein, will be available only after the System Controller approves this DOS Request.

Identification

15

_____ requests Opportunity Service (subject to confirmation of available or Customer's Agent capacity) in accordance with the Pre-qualification granted by the Alberta Electric System Operator, identified by Pre-qualification Number shown above, at _____
_____ Description of the Point of Delivery

20

Terms of Transaction

The requested service is (indicate one): _____ DOS Term; _____ DOS 7 minutes

The transaction is to begin on: _____ at _____
Start Date **Start time ***

A DOS Transaction must start and end at the top of an hour, and cannot start within 60 minutes of the time the DOS Request is faxed.

25

The transaction will be completed on: _____ at _____
End Date **End time ***

The minimum Term is 8 hours; End Date must occur in the same calendar month as the Start Date.

The requested Capacity is _____ MW (cannot exceed the prequalified DOS capacity)

30

Applicant's Endorsement

Submitted by: _____ on _____ at _____
Customer's Representative (please print) date time

Signature: _____ Phone: _____ Fax: _____

35

_____ Customer's Representative

1. Capitalized terms utilized in the Agreement shall have the meanings ascribed to such terms in the preamble or body of this Agreement, and in addition the following defined terms shall have the meanings ascribed to such terms below:

“Act” means the *Electric Utilities Act*, S.A. 2003, c. E-5.1;

“AESO Tariff” means the tariff of the AESO approved by the Board;

“Board” means the Alberta Energy and Utilities Board established by the *Alberta Energy and Utilities Board Act*;

“**Cancellation Costs**” means all the aggregate amount of costs and expenses, as well as any losses, damages, penalties or other claims the AESO or its contractors may incur or be subject to howsoever arising from the Proposed Project, and which are incurred by the AESO or its contractors relating to facilities planning and design, the competitive procurement process (if any), material and right-of-way procurements and construction of the Proposed Project (including without limitation all cancellation penalties and salvage and reclamation costs).;

“**Material Adverse Change**” means:

- (a) a downgrade in the credit rating of the Customer or a guarantor of the Customer (“Guarantor”) by any credit rating agency; or
- (b) any event, circumstance or change which results, or would reasonably be expected to result, in a material adverse change in:
 - i. the financial condition of the Customer or a Guarantor;
 - ii. the ability of the Customer or a Guarantor to perform its obligations under any Security; or
 - iii. the assets or business of the Customer or a Guarantor.

Term of Agreement

2. This Agreement shall take effect on the Effective Date and shall remain in full force and effect until the Proposed Project is energized and in-service, or, if upon the occurrence of a Cancellation Event (as hereafter defined) the Proposed Project is deemed cancelled and all amounts owing to the AESO hereunder have been paid in full.

AESO Tariff

3. In addition to the obligations of the Customer pursuant to this Agreement, the Customer shall remain fully subject to the AESO's Tariff in respect of the Proposed Project.

Security

4. As security for the payment and performance of all present and future debts, liabilities and obligations of the Customer to the AESO, arising pursuant to this Agreement or the Security (as hereinafter defined), the Customer agrees to provide or cause to be provided to the AESO the guarantee(s), security and other documents set forth and described in Schedule "B" attached hereto (the "**Security**"), which security shall be in an amount adequate to fund the maximum of the estimated cost of the Project Work as determined by the AESO. If the AESO determines at any time that the existing Security is inadequate to fund the maximum of the estimated cost of the Project Work, the AESO shall have the right to require the Customer or any Guarantor to provide such additional guarantee(s), security or other documents as the AESO deems necessary (which shall form part of the Security hereunder), up to the maximum of the estimated cost of the Project Work.
5. If all or part of the obligations of the Customer to the AESO pursuant hereto are unsecured, and the Customer becomes aware of any Material Adverse Change, the Customer shall provide written notice thereof to the AESO within two (2) business day of the occurrence of such Material Adverse Change. Upon the occurrence of a Material Adverse Change, the AESO shall have the right to require the Customer or any Guarantor to provide such additional guarantee(s), security or other documents as the AESO deems necessary (which shall form part of the Security hereunder), up to the maximum of the estimated cost of the Project Work as determined by the AESO.
6. In no event shall the AESO be required to proceed with or cause any Project Work to be undertaken without first receiving the Security, or such additional guarantee(s), security or other documents as the AESO deems necessary contemplated in paragraph 4 or 5, in form and substance satisfactory to the AESO.

Cancellation of Proposed Project

7. The Proposed Project shall be deemed to be cancelled upon the occurrence of any of the following events (each, a "**Cancellation Event**"):
 - (a) the Customer fails to provide or cause to be provided the Security in the form set out in Schedule "B" concurrently with the execution and delivery of this Agreement, or fails to provide or cause to be provided such additional guarantee(s), security or other documents as it may be required to deliver to

the AESO pursuant to the terms and conditions hereof;

- (b) the Customer terminates the Proposed Project, gives notice to the AESO, or the AESO otherwise becomes aware, that the Customer is not proceeding with the Proposed Project, or the Customer otherwise takes such action or inaction to cause the AESO, acting reasonably, to believe that the Customer is not proceeding with the Proposed Project;
- (c) the Board rejects or fails to approve the relevant application for the Proposed Project;
- (d) the Customer fails to:
 - i. execute a system access service agreement (in the AESO's standard form); or
 - ii. enter into an amendment of its existing system access service agreement with respect to the Proposed Project (in AESO's standard form),

within 30 days after the completion of the Proposed Project;

- (e) the Customer or any Guarantor breaches any term, condition, proviso, agreement or covenant under this Agreement or the Security and fails to remedy such breach within five (5) days of receipt of written notice of such breach by the AESO to the Customer;
- (f) any representation or warranty made or given by the Customer in connection with this Agreement is shown to be incorrect as at the date given or ceases to be true and correct during the term of this Agreement;
- (g) the Customer or any Guarantor is found to be insolvent or bankrupt by a court of competent jurisdiction or makes an authorized assignment of its assets or a compromise or arrangement for the benefit of its creditors, makes a proposal to its creditors under the *Bankruptcy and Insolvency Act* (Canada), seeks relief under the *Companies' Creditors Arrangement Act* (Canada), the *Winding Up Act* (Canada) or any other bankruptcy, insolvency or analogous law in Canada or the United States, files a petition or proposal to take advantage of any act of insolvency, consents to or acquiesces in the appointment of a trustee, receiver, receiver and manager, interim receiver, custodian or other person with similar powers over all or any substantial portion of its assets, files a petition or otherwise commences any proceeding seeking any reorganization, arrangement, composition or readjustment under any applicable bankruptcy, insolvency, moratorium, reorganization or other similar law affecting creditor's rights or consents to, or acquiesces in, the filing of such a petition; or if a petition in bankruptcy is filed or presented against the Customer or any guarantor;

- (h) there is instituted by or against the Customer or any Guarantor any formal or informal proceeding for the dissolution or liquidation of, settlement of claims against, or winding up of the affairs of, the Customer or any Guarantor, or a resolution is passed for dissolution, liquidation or winding up the Customer or any Guarantor;
 - (i) the Customer or any Guarantor ceases or threatens to cease to carry on business or makes or agrees to make a bulk sale of assets or commits or threatens to commit an act of bankruptcy;
 - (j) a receiver, receiver and manager or receiver-manager of all or any part of the property, assets or undertaking of the Customer or any Guarantor is appointed;
 - (k) the Customer creates or permits to exist any charge, security interest, lien, encumbrance or claim against any of the collateral charged under the Security which ranks or could in any event rank in priority to or *pari passu* with the Security; or
 - (l) the holder of any charge, security interest, lien, encumbrance or claim against any of the collateral charged under the Security does anything to enforce or realize on such charge, security interest, lien, encumbrance or claim.
8. Upon the occurrence of a Cancellation Event, the Proposed Project shall be immediately deemed to have been cancelled, and the AESO or its agent, contractor or delegate may, without limiting or restricting other rights or remedies under contract, at law or in equity, do any one or more of the following:
- (a) refuse to continue to perform any Project Work;
 - (b) demand immediate payment of all Cancellation Costs;
 - (c) demand immediate payment under any guarantee granted to the AESO;
 - (d) exercise its rights under all or any part of the Security, and any other security in respect of the Proposed Project provided to the AESO by the Customer under separate construction commitment agreements; and
 - (e) commence such legal actions or proceedings against the Customer or the Guarantor as it determines.
9. The Customer shall forthwith, upon demand having been made therefore by the AESO, pay the Cancellation Costs to the AESO. If the Customer fails to pay to the AESO the Cancellation Costs upon demand, the AESO shall be entitled to charge the Customer interest calculated at the Toronto Dominion Canadian prime rate plus 6% on all amounts due from the date of demand to the date of payment to the

AESO.

10. In the event that the Customer terminates the Proposed Project prior to its completion, the AESO shall use, and shall cause its contractors to use, reasonable commercial efforts to minimize the amount of the Cancellation Costs to the extent such is within their control.

Representations and Warranties

11. The Customer represents and warrants to the AESO as follows:
 - (a) the Customer is a duly incorporated or organized, validly existing and in good standing under the laws of its jurisdiction of incorporation or organization;
 - (b) the Security is provided to the AESO free and clear of any and all security interests, mortgages, liens, charges, and encumbrance of any nature;
 - (c) this Agreement has been duly authorized, executed and delivered by the Customer and constitutes a legal, valid and binding obligation of the Customer, enforceable against it in accordance with its terms, except to the extent that such enforceability may be limited by bankruptcy, insolvency, winding-up, reorganization, and similar laws affecting the enforceability of creditors' rights generally and the availability of equitable remedies such as specific performance or injunction; and
 - (d) the authorization, execution and performance by the Customer of this Agreement:
 - i. does not and will not violate any laws applicable to the Customer; and
 - ii. is not in contravention of its constating documents or its by-laws or the provisions of any loan agreement or other agreement to which it is a party or by which it is bound.

General

12. 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.
13. In this Agreement:
 - (a) any notice or communication required or permitted to be given under this Agreement will be in writing and will be considered to have been given if delivered by hand or courier, or transmitted by facsimile transmission address



19. If at any time any one or more of the provisions hereof is or becomes invalid, illegal or unenforceable in any respect under any law, the validity, legality and enforceability of the remaining provisions hereof will not in any way be affected or impaired thereby to the fullest extent possible by law.
20. This Agreement will be governed by and interpreted in accordance with the laws of the Province of Alberta and the laws of Canada applicable therein. The Customer and the AESO submit to the nonexclusive jurisdiction of the Courts of the Province of Alberta and agree to be bound by any suit, action or proceeding commenced in such Courts and by any order or judgment resulting from such suit, action or proceeding, but the foregoing will in no way limit the right of the AESO to commence suits, actions or proceedings based on this Agreement in any jurisdiction it may deem appropriate.
21. This Agreement may be varied or amended only by or pursuant to an agreement in writing signed by the parties hereto.
22. All Schedules attached hereto will be deemed fully a part of this Agreement.
23. 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.

THE AESO AND THE CUSTOMER have executed this Agreement as of the Effective Date:

**INDEPENDENT SYSTEM OPERATOR, operating as
AESO**

Per: _____

Per: _____

(INSERT CUSTOMER'S NAME)

Per: _____

Per: _____



SCHEDULE "A"
To the Construction Commitment Agreement

between

INDEPENDENT SYSTEM OPERATOR, operating as AESO

and

[CUSTOMER]

dated

[DATE]

PROJECT WORK



SCHEDULE "B"

To the Construction Commitment Agreement

between

INDEPENDENT SYSTEM OPERATOR, operating as AESO and

[CUSTOMER]

dated



[DATE]

5

SECURITY