



**Rider A4 Transmission Duplication Avoidance Adjustment
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.

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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.

**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.

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.

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.

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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

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.

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.

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Schedule 1 — Incremental Loss Factors

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%



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Schedule 2 — Other Expenses Charge

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