

with the Mahihkan-837S substation. Although the DAT metering totalization will be expanded to include the new transmission line out of the Mahihkan substation, that is scheduled to be connected on May 31, 2008, the AESO explained there were no new Duplication Facilities.

In support of the current application the AESO explained that IOL had asked the AESO to re-examine the summer and winter line ratings approved by Order U2005-019. The AESO has conducted the review and was of the opinion that IOL's Duplication Avoidance facilities should be rated using parameters that are consistent with industry standards, and in MVA rather than in MW.

Using the House and Tuttle model for transmission line rating¹ the transmission line ratings were 130 MVA in the summer and 157 MVA in the winter. The summer period, as outline in Rider A4 of the AESO's current (2006) Tariff, is from April to October and the winter period is from November to March. In the AESO's view these transmission line ratings are reasonable and consistent with industry practice.

The AESO also provided incremental loss factors to be applied to the increased transmission line ratings.² IOL is responsible for increased losses.

The AESO stated that no additional facilities under the DAT will have to be constructed to allow for the increase in capacity. Also, no additional contribution was required from IOL under the Duplication Avoidance Tariff, as the lump sum contribution of \$5,968,800 previously paid, plus the monthly payment over the 29-year term represented the cost of the duplicate facilities (as outlined in Rider A4). IOL has, however, made a contribution to cover the full cost for the interconnection of the IOL facilities to the AIES at the Mahihkan-837S substation through a separate AESO Customer Contribution Decision that was not part of this DAT application.

4 DECISION

The Commission notes that no party filed an objection to the Application. The Commission also notes that the Application is consistent with other DAT approvals. Based upon the evidence filed by the AESO, the Commission considers the Application to be reasonable and it is approved as filed. A copy of the amended and approved DAT (Rider A4) is embedded at the end of this Order as Appendix A.

5 ORDER

THEREFORE, it is ordered that the Imperial Oil Limited Duplication Avoidance Tariff (Rider A4), as amended, is approved as filed.

ATTACHMENT

¹ Table 1 of the Application

² Application, Table 2

APPENDIX A – REVISED RIDER A4



U2008-122 Appendix
A.doc

(consists of 5 pages)

Revised Rider A4

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 and expanded by U2006-207, plus any expansions to this Industrial System as may be approved by the AUC, for System Access Service to Imperial Oil at the Leming Lake-715S transmission station Point of Demand and Point of Supply and the Mahihkan-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 Metering and Totalizing section.

Imperial Oil shall make the following payments to the AESO:

1. Capital Charge:
A lump-sum payment of \$5,968,800 collected 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

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 2008 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.

Charges under Rate DTS and Rate STS will be calculated using the totalized Metered Demand and the totalized Metered Energy for Imperial Oil at the Mahihkan-837S transmission station and the Leming Lake-715S transmission station. The meters to be totalized at Mahihkan-837S are 5L408, 5L409, 5L410, and 7L105. The meters to be totalized at Leming Lake-715S are 5L335, 5L408, 5L575, 5L395, 5L242, and 7L95. These meter points may change from time to time.

The amount of load included in the totalizing calculation will be limited to 157 MVA from November through April and 130 MVA 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 157 MVA winter or 130 MVA 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
Imperial Oil Resources Limited — Cold Lake Industrial System**

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.

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

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 ≤ 140	2.33%
> 140 ≤ 145	2.48%
> 145	2.66%

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

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