Applicability

1 Rider A1 applies to **system access service** provided to Dow Chemical Canada ~~Inc.~~ULC (Dow) at certain **points of delivery** associated with Dow's facility, as more particularly described in Alberta Energy and Utilities Board Decision U98125 (Grid Company of Alberta Inc. – Transmission Avoidance Rate – Dow Transmission Bypass).

Rate

2(1) For each metering time interval, the **metered demand** and **metered energy** for certain **points of delivery** and **points of supply** associated with Dow's facility, as more particularly described in Board Decision U98125, will be totalized for the purpose of settlement under Rate DTS of the **ISO tariff**, *Demand Transmission Service,* and Rate STS of the **ISO tariff**, *Supply Transmission Service*, as described in subsections 4 and 5 below.

2(2) Dow must make the following payments to the **ISO**:

~~(a) Capital Charge: A lump-sum payment of $5,071,038 collected upon implementation of this rider, and which Dow paid in full by December 31, 1998;~~

~~(b) Losses and~~ (a) Losses: calculated each hour and as described in subsection 6 below; and

(b) Other Expenses Charge: For each **settlement period**, commencing on January 1, 2022, an amount equal to the "Monthly Payment" in subsection ~~6~~7 below for the applicable year.

Terms

3(1) All terms in the **ISO**'s July 24, 1998 Application for Transmission Bypass Avoidance Rate Dow Transmission Bypass and the **ISO**'s 2020 Rider A1 Extension Application will be applicable.

3(2) Rider A1 Extension expires on December 31, ~~2021~~2041, the date at which the physical bypass option, had it been constructed, ~~would have reached~~is expected to reach its end of life.

Metering and Totalizing

4(1) Had Dow built the duplicate transmission facilities, the Dow Chemical ~~(~~166S~~)~~ transmission substation would be a **point of supply** when the Dow site power generation exceeds the load requirements, and a **point of delivery** when the generation does not meet the load requirements. The duplication avoidance tariff will simulate these conditions by deeming the **points of delivery** at the Dow ~~Hydro Carbons (~~Hydrocarbons 258S~~),~~, Dow Chemical ~~(~~166S~~)~~ and Ross Creek ~~(~~906S~~)~~ transmission substations, and the **points of supply** at the Dow ~~Gen (~~Fort Saskatchewan 218S~~)~~ and Dow ~~Hydro Carbons (258S)~~Chemical 166S transmission substations, to be a single **point of delivery** and **point of supply** for the purpose of totalizing **metered demand** and **metered energy** in applying Rate DTS and Rate STS.

4(2) During operation of the duplication avoidance tariff, the **ISO** will totalize the metered data for Dow's load and generation served from the Dow ~~Hydro Carbons (~~Hydrocarbons 258S~~),~~, Dow Chemical ~~(~~166S~~),~~, Ross Creek ~~(~~906S~~)~~ and Dow ~~Co-Gen (~~Fort Saskatchewan 218S~~)~~ transmission substations. This will ensure that payments by Dow to the **ISO** under Rate DTS and Rate STS are equivalent to the costs Dow would have incurred for the duplicate facilities.

Alberta Electric System Operator, Calgary Place, 2500, 330 – 5th Avenue SW Calgary, AB T2P 0L4
Phone: 403-539-2450 Fax: 403-539-2949 www.aeso.ca @theaeso

4(3) Charges under Rate DTS and Rate STS will be calculated using the totalized **metered demand** and the totalized **metered energy** for Dow at the Dow ~~Hydro Carbons (~~Hydrocarbons 258S~~),~~ Dow Chemical ~~(~~166S~~),~~ Ross Creek ~~(~~906S~~)~~ and Dow ~~Co-Gen (~~Fort Saskatchewan 218S~~)~~ transmission substations. The meters to be totalized at Dow ~~Hydro Carbons (~~Hydrocarbons 258S~~)~~ are ~~258S,~~at T1 and T2. The meters to be totalized at Dow Chemical ~~(~~166S~~)~~ are ~~166S,~~at T1, T2, T3A and T3B. The meters to be totalized at Ross Creek ~~(~~906S~~)~~ are ~~906S,~~at T1 and T3. The meters to be totalized at Dow ~~Co-Gen (~~Fort Saskatchewan 218S~~)~~ are ~~218S,~~at TR1 and TR2. These **meter** points may change from time to time.

Example of Totalizing

5(1) The following is an example of the totalizing calculation for **metered demand** for two different metering time intervals.

	Time Interval 1	Time Interval 2
Point of delivery (A) (Dow ~~Hydro Carbons (~~Hydrocarbons 258S~~))~~	+25 MW	+30 MW
Point of supply ~~and **point of delivery**~~ (B) (Dow Chemical ~~(~~166S~~))~~	–45 MW	0 MW
Point of delivery (C) (Ross Creek ~~(~~906S~~))~~	+35 MW	+30 MW
Point of supply (D) (Dow ~~Cogen (~~Fort Saskatchewan 218S~~))~~	–100 MW	0 MW
Totalized **metered demand** (E)	–85 MW	+60 MW

5(2) In time interval 1, under the duplication avoidance tariff, Dow's **demand** requirement is 25 MW at ~~Dow Hydro Carbons (258S~~(A) and 35 MW at ~~Ross Creek (906S) transmission substations.~~(C), for a total of 60 MW. At the same time, Dow cogeneration facilities are producing ~~145 MW of power,~~ 45 MW at ~~Dow Chemical (166S~~(B) and 100 MW at ~~Dow Cogen (218S).~~(D), for a total of 145 MW. The net delivery to the **interconnected electric system** is 85 MW ~~at the Dow Chemical (166S~~from (B) and ~~Dow Cogen (218S) transmission substations.~~(D). Had Dow built the duplicate facilities, the **metered energy** delivered by the **interconnected electric system** to ~~Dow~~Dow's requirement at the ~~Dow Chemical (166S) transmission substation~~PODs (A) and (C) would be zero~~,~~ MWh (assuming the time interval is 1 hour), and the **metered energy** received by the **interconnected electric system** from the generator output at ~~the Dow Chemical (166S) (B)~~ and ~~Dow Cogen (218S) transmission substations~~(D) would be 85 MW (145 MW of total generation minus 60 MW of total load). This energy balance is simulated by the proposed totalizing procedure. Combining the ~~**point**~~**points of delivery** (A) and ~~**point**~~(C); and **points of supply** (B) and (D) produces an adjusted **metered demand** of –85 MW for that time interval, where the negative sign signifies a net energy receipt by the **interconnected electric system**.

5(3) In time interval 2, the cogeneration facility is not operating, and Dow's load ~~remains at 60 MW (~~is 30 MW at ~~the Dow Hydro Carbons (258S) transmission substation,~~(A) and 30 MW at ~~the Ross Creek (906S) transmission substation).~~(C), for a total of 60 MW. The result is a net ~~load~~**metered demand** of +60 MW for that time interval, where the positive sign signifies a net energy delivery from the **interconnected electric system**.

Incremental Loss Factor

6(1) The **ISO** must determine the charge under this rider in a **settlement period** as the losses charge calculated as the sum, over all hours in the **settlement period**, of the **pool price** multiplied by 0.3 MWh.[1]

Schedule 1 — ~~Losses and~~ Other Expenses Charge

7(1) The forecast of the benefit to the ISO arising from Dows forecasted annual O&M are provided in the following table.

~~6~~

12-**Month** Period	~~Forecast Benefit to **ISO** (Annual)~~	~~Forecast Benefit to **ISO**~~ (Monthly) Payment	
Jan. 1, ~~1998~~2022 – Dec. 31, ~~1998~~2022		$~~544,093~~ 21,037	~~$45,341~~
Jan. 1, ~~1999~~2023 – Dec. 31, ~~1999~~2023		$~~865,378~~ 21,458	~~$72,115~~
Jan. 1, ~~2000~~2024 – Dec. 31, ~~2000~~2024		$~~836,603~~ 21,887	~~$69,717~~
Jan. 1, ~~2001~~2025 – Dec. 31, ~~2001~~2025		$~~807,828~~ 22,325	~~$67,319~~
Jan. 1, ~~2002~~2026 – Dec. 31, ~~2002~~2026		$~~779,053~~ 22,772	~~$64,921~~
Jan. 1, ~~2003~~2027 – Dec. 31, ~~2003~~2027		$~~750,278~~ 23,227	~~$62,523~~
Jan. 1, ~~2004~~2028 – Dec. 31, ~~2004~~2028		$~~721,503~~ 23,691	~~$60,125~~
Jan. 1, ~~2005~~2029 – Dec. 31, ~~2005~~2029		$~~692,728~~ 24,165	~~$57,727~~
Jan. 1, ~~2006~~2030 – Dec. 31, ~~2006~~2030		$~~663,953~~ 24,649	~~$55,329~~
Jan. 1, ~~2007~~2031 – Dec. 31, ~~2007~~2031		$~~635,178~~ 25,142	~~$52,932~~
Jan. 1, ~~2008~~2032 – Dec. 31, ~~2008~~2032		$~~606,403~~ 25,644	~~$50,534~~
Jan. 1, ~~2009~~2033 – Dec. 31, ~~2009~~2033		$~~577,628~~ 26,157	~~$48,136~~
Jan. 1, ~~2010~~2034 – Dec. 31, ~~2010~~2034		$~~548,853~~ 26,680	~~$45,738~~
Jan. 1, ~~2011~~2035 – Dec. 31, ~~2011~~2035		$~~520,078~~ 27,214	~~$43,340~~
Jan. 1, ~~2012~~2036 – Dec. 31, ~~2012~~2036		$~~491,303~~ 27,758	~~$40,942~~
Jan. 1, ~~2013~~2037 – Dec. 31, ~~2013~~2037		$~~462,528~~ 28,314	~~$38,544~~
Jan. 1, ~~2014~~2038 – Dec. 31, ~~2014~~2038		$~~433,754~~ 28,880	~~$36,146~~

[1] Dow Chemical Canada ULC, Application for an Industrial System Designation Dow Chemical Canada ULC Fort Saskatchewan, at page 5.

Jan. 1, ~~2015~~2039 – Dec. 31, ~~2015~~2039	$~~404,979~~ 29,457	~~$33,748~~
Jan. 1, ~~2016~~2040 – Dec. 31, ~~2016~~2040	$~~376,204~~ 30,047	~~$31,350~~
Jan. 1, ~~2017~~2041– Dec. 31, ~~2017~~2041	$~~347,429~~ 30,647	~~$28,952~~
~~Jan. 1, 2018 – Dec. 31, 2018~~	~~$318,654~~	~~$26,554~~
~~Jan. 1, 2019 – Dec. 31, 2019~~	~~$289,879~~	~~$24,157~~
~~Jan. 1, 2020 – Dec. 31, 2020~~	~~$261,104~~	~~$21,759~~
~~Jan. 1, 2021 – Dec. 31, 2021~~	~~$232,329~~	~~$19,361~~

Revision History

Effective	Description
~~2020-XX-01~~	~~Revised and reformatted all subsections, as applied for in the 2018 **ISO tariff** compliance application.~~
~~2011-07~~2022-01-01	~~Revised and reformatted all subsections,~~Initial release; forecast benefit table to 2041 as approved in Commission Decision ~~2011-275~~[Placeholder] issued on ~~June 24, 2011.~~[Placeholder].